



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Good Practices in Policies/Models for SME Mining Development

APEC Mining Task Force

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APEC Project: MTF 02 2017A

Produced by
Ms Vania Ramirez Jimenez
Chilean Copper Commission +562 2382 8203

For
Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

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Executive Summary

The project Identity Good Practices in Policies/Models for SMR Mining (MTF 02 2017A) intend to gather information regarding policies, laws, programs, or/and models that APEC Economies have to support small and medium miners to face their challenges toward sustainable development. This research covers 5 critical aspects: Economic Development, Environmental protection, Social protection and development, Training programs, and Woman participation.

This project is intended to benefit every APEC Economy that has small and medium size mining companies, because this report will allow to know which tools or initiatives have been applied in other APEC Economies, and get more information from here to adapt some of those tools to improve their sector's situation in the long-term.

Under this project the twenty-one APEC Economies where analyzed. The efforts were focused on those Economies with relevant or specific industrial activities or initiatives regarding mining SME. 7 Economies presented a relevant number of tools and initiatives, and other 7 lower quantities of laws or initiatives to be considered in this report. The remaining Economies were not strong in mining at a significant level or the information was not accessible. For a better and easy understanding of the initiatives and tools found, a summary shown in a table format is presented at the end of each chapter.

Chapter XXII describe 7 initiatives that are “multilateral” because are global international instruments shared among several APEC and Non-APEC Economies. At an advanced stage, a draft was sent to each representative in order to be reviewed voluntarily by MTF group participant, so they can provide their feedback. The last version of the report includes those comments.

Finally, in the chapter of Conclusions, the main findings were highlighted, covering the 5 aspects appointed and the most interesting initiatives and tools were discussed.

Introduction

Small and medium mining companies face certain disadvantages compared to large size ones. These disadvantages limit their potential development, cause environmental and social problems, and causes these sectors to be more vulnerable in general, and specifically during low metal prices cycles. Some of these disadvantages are: the unfavorable scale economics in the extractive process, high initial investment, low access to financing, more likely to cause environmental and social damage, poor woman participation and lack of access to latest technologies, among others.

These difficulties have been maintained through time for several reasons, such as, lack of knowledge of the mining business by the financial system, lack of willingness from banks to give financial credits for considering the mining activity risky, little interest of the mining entrepreneurs to be associated or to open to the stock market, difficulties to develop environmental protection programs, difficulties for women to enter the business, and easy to fall into the black market.

The named disadvantages, mainly for the small size mining, have justified the implementation of diverse tools for development, with different focuses, in many economies. In some of them, these instruments for development have focused on mining producers, while others focused in mining supply companies, and mineral-based product markets, while other focuses on the people that works in mining as well as the people living nearby.

Therefore, this project aims to gather effective policies, laws, programs, or/and models, that APEC mining Economies might have to face the disadvantages that small and medium mining have and help them development in a sustainable way. The benefit of having this information identified and presented will benefit every APEC economy that has small and medium size mining companies, because they will be able to know the successful policies that have been applied in other APEC economies, and adapt some of those tools to improve their sector's situation.

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Objectives

The objectives of this project are:

- i. To revise the models/ public policies/ programs for small (including artisanal) and medium size mining companies' sustainable development. These include anti-environmental-degradation plans, programs to enhance woman participation, and programs to avoid social harms such as black market, along with other policies on small and medium enterprises that could be applied to the mining industry. These tools will be taken for the twenty-one APEC economies, and if there is no information it will be indicated.
- ii. To develop a document or report with all the revised tools, that will include a full description of it, an explanation of how it works, main results of its implementation, the economy where it was implemented (created), and any other special consideration, so it can be replicated with as few difficulties as possible.
- iii. The long-term objective will be to improve small and medium mining sector through the dissemination of the report

Methodology

The methodology will be as follow:

- i. Review of policies, models, programs and others of all MTF member economies. The information will be taken from every economy's institutional web page, or any other official source of information.
- ii. Classification of the different tools in the following categories, considering that every founded tool could fall under one or more of these categories:
 - (1) Economic development,
 - (2) Environmental protection,
 - (3) Social protection and development,
 - (4) Training programs, and
 - (5) Woman participation.
- iii. Every tool will be included in a sub-chapter, which will include: The economy where it belongs, a full description of the tool, timeframe, and any other important aspect to be considered.
- iv. Once the different tools are gathered, these will be reviewed voluntarily by MTF group participant, so they can give their feedback. This is: including information that is missed or give a global vision on how these different tools actually work. Multilateral tools, this means initiatives that are shared for one or more APEC economies will be presented at the end (Chapter XXII).

- v. After the revision of the draft report by the competent economies, the final report will be written and disseminated through the APEC webpage.

Results

The following section includes a description of every tool in every sub-chapter as explained in the methodology. The tools are grouped by economy, in alphabetical order.

- I. Australia
- II. Brunei Darussalam
- III. Canada
- IV. Chile
- V. China
- VI. Hong Kong, China
- VII. Indonesia
- VIII. Japan
- IX. Malaysia
- X. Mexico
- XI. New Zealand
- XII. Papua New Guinea
- XIII. Peru
- XIV. Russia
- XV. Singapore
- XVI. Republic of Korea
- XVII. Chinese Taipei
- XVIII. Thailand
- XIX. The Philippines
- XX. The United States of America
- XXI. Viet Nam

AUSTRALIA

GENERAL CONTEXT

Australia has a robust and world-leading mining industry evidenced by a top five position as a producer for some 17 commodities including gold, bauxite, iron ore, rare earths, mineral sands, zinc, lead and coal. In 2017-18, Australia's mining exports amounted to \$173.8 billion, 55.3 per cent of all export merchandise. In 2018-19, mining accounted for 7.9 per cent of total gross domestic product (GDP) and 21 per cent of Australia's GDP growth. In addition, the mining industry employed over 247,000 people as at May 2019, with many more employed by related industries.

In 2017, Australia had over 300 operating mines producing 35 major and minor mineral commodities. In addition, there were a large number of excavations for a range of industrial materials and gemstones¹.

The data included in this chapter has been provided and reviewed by Investment and Economic Division of the Department of Foreign Affairs and Trade of Australia.

Australian Women in Resources Alliance

- 1.1 Name:** Australian Women in Resources Alliance - AWRA
- 1.2 Type of initiative:** Private organization
- 1.3 Scope:** Transversal to the resources industry
- 1.4 Area of development:** (5) Women participation
- 1.5 Trajectory:** 2011 onwards
- 1.6 Description:**

The Australian Women in Resources Alliance (AWRA) is a domestic workforce gender diversity initiative facilitated by Australia's resource industry employer group, AMMA. AMMA built AWRA in response to the growing aspirations of AMMA members to increase the representation of women at all levels in their organizations. AWRA assists employers on their gender diversity journey with the overarching goal to increase women's participation in the resources, allied and related construction sectors to 25% by 2020, thus delivering a diverse mix of skills and talent to drive productivity and innovation.

AWRA facilitates programs and provides support and guidance materials that help employers attract, retain and develop female talent, build their gender diversity capability, become an employer of choice for women and realize the advantages of a gender diverse workforce. Through a range of support programs, AWRA helps to navigate the challenges of workforce diversity to achieve positive outcomes.

¹ Source of the context: <http://www.ga.gov.au/scientific-topics/minerals/mineral-resources-and-advice/aimr>

Individual support is also provided to women working across Australia's vast resource industry in both professional corporate roles and those out in the field, through the AWRA e-Mentoring Program.

With the importance of a diverse workforce being highlighted more than ever by organizations such as the Diversity Council of Australia, the various initiative that AWRA runs can benefit the productivity, quality and safety dividends of organizations through greater workforce diversity.

- 1.7 References:**
- <https://awra.org.au/>

Workplace Gender Equality Act 2012

- 2.1 Name:** Workplace Gender Equality Act 2012
- 2.2 Type of initiative:** Law
- 2.3 Scope:** Transversal to all industries
- 2.4 Area of development:** (5) Women participation
- 2.5 Trajectory:** 2012 onwards
- 2.6 Description:**

The Workplace Gender Equality Act 2012 requires non-public sector employers with 100 or more employees ('relevant employers') to submit a report to the Workplace Gender Equality Agency between 1 April and 31 May each year for the preceding 12-month period. The report complies with the Act's six gender equality indicators (GEIs) and workplace profile and an online questionnaire.

The Act's main goals are to:

- promote and improve gender equality (including equal remuneration between women and men) in employment and in the workplace
- support employers to remove barriers to the full and equal participation of women in the workforce
- promote, amongst employers, the elimination of discrimination on the basis of gender in relation to employment matters (including in relation to family and caring responsibilities)
- foster workplace consultation between employers and employees on issues concerning gender equality in employment and in the workplace
- improve the productivity and competitiveness of Australian business through the advancement of gender equality in employment and in the workplace.

Women are underrepresented at leadership and management levels in Australian workplaces. Progress towards gender equality has been too slow even though there are strong economic arguments underpinning the case for equality.

The Workplace Gender Equality Agency, who is an Australian Government statutory agency created by the Workplace Gender Equality Act 2012, believes organizations who set voluntary targets can set realistic goals, considering their specific circumstances and environments. Organizations should be given the opportunity to regulate themselves in this area and, as such, the Agency has developed a target-setting tool to assist employers in setting and measuring voluntary targets within their organizations.

- 2.7 References:**
- <https://www.wgea.gov.au/reporting/complying-with-the-act>

Industry Growth Centre Initiatives: METS Ignited

- 3.1 Name:** Industry Growth Centre (IGC): METS Ignited
- 3.2 Type of initiative:** Nonprofit private companies
- 3.3 Scope:** Specific for SMEs
- 3.4 Area of development:** (1) Economic development - (4) Training programs – (5) Women participation
- 3.5 Trajectory:** 2015 onwards
- 3.6 Description:**

The Mining Equipment, Technology and Services Growth Centre, METS Ignited, works with Australian mining industry suppliers, global miners, researchers and capital providers to improve competitiveness and productivity.

The five areas of strategic focus to help strengthen the global competitiveness of the Australian METS sector are:

- Aligned Strategy – Align the strategies and road maps of METS, miners and research institutions, ensuring innovation is characterized by industry needs.
- Global Brand – Develop a stronger sense of identity and branding for Australian METS companies
- Collaborative and Innovative – Accelerate the participation of Australian METS companies in domestic and global supply chains through clustering and collaboration, including with investors
- Internationally Competitive – Establish platforms where METS companies and researchers can collaborate to solve industry problems
- Skilled for 2026 – Support the METS sector with a skilling program to strengthen entrepreneurial and collaboration capabilities and ensure the sector's strong technical skills are continuously evolving.

To support these areas for strategic focus, METS Ignited administers a range of activities including:

- delivering the METS Ignited Sector Competiveness Plan
- supporting collaborative projects with METS SMEs through the Project Funds
- launching the Igniting METS Accelerator Program to improve the commercialization rate of mining technologies
- supporting Austmine’s Women in STEM: METS Career Pathway Program
- helping Australian and Chilean METS firms to collaborate through the METSTech Passport Program
- delivering METS Masterclasses to build management capability in the sector.

Industry Growth Centres (IGCs) are industry-led independent nonprofit companies, established to drive innovation, productivity, and competitiveness by focusing on areas on competitive strength and strategic priority. The government recognized that industry is best placed to drive cultural change and overcome barriers to innovation, productivity and growth. IGCs are funded primarily by the Australian Government, but some also receive funding from State/Territory Governments and industry for specific projects.

IGCs play a unique role by facilitating collaboration, focusing government investment to industry priorities and building connections and linkages. By having a birds-eye view of their sectors, Growth Centres are able to set the long-term strategy and bring together the diverse elements of their sectors.

- 3.7 References:**
- https://www.metsignited.org/Category?Action=View&Category_id=72
 - <https://www.industry.gov.au/strategies-for-the-future/industry-growth-centres>

Junior Minerals Exploration Incentive

- 4.1 Name:** Junior Minerals Exploration Incentive (JMEI) - administered by the Australian Taxation Office
- 4.2 Type of initiative:** Tax benefit
- 4.3 Scope:** Specific for SMEs
- 4.4 Area of development:** (1) Economic development
- 4.5 Trajectory:** 2016 onwards
- 4.6 Description:**
 The Junior Minerals Exploration Incentive (JMEI) encourages investment in small minerals exploration companies that carry out greenfields mineral exploration in Australia.

The JMEI enables eligible exploration companies to generate tax credits by choosing to give up a portion of their losses from greenfields mineral exploration expenditure. These tax credits can then be distributed to investors who purchase newly issued shares in that eligible entity during a certain period.

- 4.7 References:**
- <https://www.ato.gov.au/Business/Junior-Minerals-Exploration-Incentive/>

Minerals Industry Action Plan

- 5.1 Name:** Minerals Industry Action Plan – Regional for New South Wales
- 5.2 Type of initiative:** Regional Initiative
- 5.3 Scope:** Specific for mining industry
- 5.4 Area of development:** (1) Economic development
- 5.5 Trajectory:** 2014 onwards
- 5.6 Description:**

New South Wales is home to a vibrant and prosperous minerals industry that continues to deliver jobs and investment to rural and regional NSW. Their minerals industry, including coal, is the source of almost a third of NSW's total exports (merchandise and services combined, 2014-2015). The NSW Government established the Minerals Industry Taskforce to provide recommendations on strategies to drive growth, innovation and productivity in the sector.

The Minister for Industry, Resources and Energy has released the Taskforce's final Industry Action Plan: NSW Minerals and the Government's Response to the Plan. The response details the Government's position and actions it will take on each of the Taskforce's 12 recommendations.

The Minerals Industry Action Plan focuses on three broad areas:

- a transparent process and integrated policy that provides certainty for mining companies investing in NSW
- to consolidate fees and charges
- develop skills and provide support infrastructure to foster a vibrant mining sector.

- 5.7 References:**
- <https://www.resourcesandgeoscience.nsw.gov.au/miners-and-explorers/programs-and-initiatives/miap>

Exploration Drilling Grant Initiative

- 6.1 Name:** Exploration Drilling Grant Initiative (EDGI) – Tasmania
- 6.2 Type of initiative:** Regional Funding

6.3 Scope: Specific for mining industry

6.4 Area of development: (1) Economic development

6.5 Trajectory: 2018 onwards

6.6 Description:

The Tasmanian State Government, through the Exploration Drilling Grant Initiative (EDGI), is offering grants for co-funded exploration drilling projects. The aim is to provide a stimulus to greenfields exploration for all commodities in Tasmania. The State Government is funding this initiative with \$2 million over four years and the program is administered by Mineral Resources Tasmania (MRT).

Ten grants for the first round of successful EDGI projects were awarded in October 2018. MRT is now seeking proposals from applicants for a second round of projects, to be to be jointly funded by the successful applicants and the State Government. The projects will be undertaken during 2019-20 and completed by May 2020.

The EDGI Program will consider applications from any off-mine-lease location in the state. It will preferentially fund high quality, technically and economically sound "greenfields" projects that promote innovative exploration or new exploration concepts and technology.

6.7 References:

- <http://www.mrt.tas.gov.au/portal/exploration-drilling-grant-initiative-edgi->

TARGET Minerals Exploration Initiative

7.1 Name: TARGET Minerals Exploration Initiative - Victoria

7.2 Type of initiative: Regional Funding

7.3 Scope: Specific for mining industry

7.4 Area of development: (1) Economic development

7.5 Trajectory: 2016 onwards

7.6 Description:

TARGET is a \$15 million Victorian Government initiative designed to encourage investment in exploration for copper, other base metals and gold in Victoria. The Initiative includes government grants for companies to conduct co-funded minerals exploration programs for eligible minerals. TARGET grant funding is made available through a competitive application process. Exploration projects for coal, oil and gas are not eligible for TARGET grants.

TARGET grants cover up to half the cost of eligible exploration activities, which include geophysical surveys, drilling and sampling analysis. Since 2016, 15 projects have been awarded over \$3.4 million in TARGET grants. In October 2018, a further five projects in

the Stavely Arc in western Victoria were selected to share in \$2.3 million in TARGET grants (subject to being granted a minerals exploration license), as part of the Stavely ground release tender.

By encouraging greater investment in minerals exploration, TARGET grants are enhancing the understanding of the mineral's potential in Victoria, which in turn can bring further investment and increased economic activity, services, jobs and other flow on benefits to regional Victoria.

- 7.7 References:**
- <https://earthresources.vic.gov.au/projects/target-minerals-exploration-initiative>

NSW Women in Mining Network

8.1 Name: NSW Women in Mining Network – WIMnet NSW

8.2 Type of initiative: Nonprofit organization

8.3 Scope: Specific for mining industry

8.4 Area of development: (5) Women participation

8.5 Trajectory: 2012 onwards

8.6 Description:

On March 8th, 2012 (International Women's Day), it was established the NSW Women in Mining Network to address this shortage and create a sustainable and productive network of women in the mining industry right across NSW.

The WIMnet NSW represents the interests of women working in the NSW minerals industry. Membership is open to all (including non-AusIMM members), regardless of gender. WIMnet NSW hosts networking events in Sydney and the regions including the Hunter Valley, Illawarra and Central West. The network is open to all women working in or with the NSW minerals industry; and they particularly encourage those working in non-traditional roles to join.

- 8.7 References:**
- <http://www.nswmining.com.au/people/women-in-mining>

Women in Mining Western Australia

9.1 Name: Women in Mining Western Australia - WIMWA

9.2 Type of initiative: Nonprofit organization

9.3 Scope: Specific for mining industry

9.4 Area of development: (5) Women participation

9.5 Trajectory: 2003 onwards

9.6 Description:

WIMWA provides a forum for women, (and men), to talk about their lives, share their experiences, and extend their professional networks. From an informal beginning WIMWA has grown to have a mailing list with over 3000 people from all over the mining and resource sector, an annual summit which attracts over 800 attendees, monthly networking events in Perth, along with networking events in the regions and a bi-annual innovative mentoring program.

- 9.7 References:**
- <https://womeninmining.com/wimwa-community/about-wimwa/>

Women in Mining and Resources Queensland

- 10.1 Name:** Women in Mining and Resources Queensland -WIMARQ
- 10.2 Type of initiative:** Nonprofit organization
- 10.3 Scope:** Transversal to some industries
- 10.4 Area of development:** (5) Women participation
- 10.5 Trajectory:** 2012 onwards
- 10.6 Description:**

WIMARQ is a group of volunteers who organize opportunities for the mentoring, support and encouragement to women who are working in, studying for or taking a break from the minerals and energy sectors. WIMARQ recognizes companies and individuals who champion gender diversity and make available information to inform our members about gender diversity issues, strategies and statistics through the annual Resources Awards for Women. Women and men from all sections of the sector are warmly welcomed to attend their events, which are held in Brisbane and regional locations. Women in Mining and Resources Queensland (WIMARQ) is a reference group to the Queensland Resources Council.

- 10.7 References:**
- <https://womeninminingqueensland.com/>

SUMMARY

TOOL		CATEGORIES						
Name	Type	Scope	(1) Economic development	(2) Environmental protection ²	(3) Social protection and development ³	(4) Training programs ⁴	(5) Women participation	
1	Australian Women in Resources Alliance	Private organization	Transversal				X	
2	Workplace Gender Equality Act	Law	Transversal				X	
3	Industry Growth Centre Initiatives	Private	Specific	X		X	X	
4	The Junior Minerals Exploration Incentive	Tax benefit	Specific	X				
5	Minerals Industry Action Plan	Regional Initiative	Specific	X				
6	Exploration Drilling Grant Initiative	Regional Funding	Specific	X				
7	TARGET Minerals Exploration Initiative	Regional Funding	Specific	X				
8	NSW Women in Mining Network	Nonprofit organization	Specific				X	
9	Women in Mining Western Australia	Nonprofit organization	Specific				X	
10	Women in Mining and Resources Queensland	Nonprofit organization	Transversal				X	

² There are many laws, policies, strategies, initiatives and conventions in place to protect and conserve Australia's natural resources.

These include the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), <http://www.environment.gov.au/epbc/what-is-protected> and <http://minerals.org.au/sites/default/files/190208%20The%20Next%20Frontier%20MCA%20Policy%20Priorities.pdf>.

³ Please refer to A Guide to "Leading Practice Sustainable Development in Mining" at <https://www.industry.gov.au/sites/default/files/2019-04/lpsdp-a-guide-to-leading-practice-sustainable-development-in-mining-handbook-english.pdf>. For the industry's perspective, please see the Minerals Council of Australia's website <https://minerals.org.au/> and its work: Enduring Value – the Australian Minerals Industry Framework for Sustainable Development (<https://minerals.org.au/sites/default/files/190503%20Enduring%20Value%20Principles.pdf>) and The Next Frontier report at <http://minerals.org.au/sites/default/files/190208%20The%20Next%20Frontier%20MCA%20Policy%20Priorities.pdf>

⁴ For general training initiatives, please refer to the website of the Department of Employment, Skills, Small and Family Business: <https://www.employment.gov.au/my-skills-industry-links>

BRUNEI DARUSSALAM

GENERAL CONTEXT

Brunei possesses a small mineral industry. The main minerals mined in Brunei include carbonate rocks, coal, sand, gravel and silica sands. The limited extend of exploration in this mineral sector is almost certainly restricted by the protected rainforests. However, it should be noted that the industry produces small volumes of cement, construction aggregate, and sand and gravel for consumption by the local construction industry. Almost all Brunei Darussalam's requirements for ferrous and nonferrous metals and most industrial mineral products other than cement, construction aggregate, and sand and gravel are met by imports⁵.

No relevant data for this project

⁵ Source of the context: http://www.commonwealthofnations.org/sectors-brunei_darussalam/business/mining_and_minerals/

CANADA

GENERAL CONTEXT

In Canada, the mining industry is divided into two groups – senior companies (large mining companies with revenue streams that develop and operate producing mines) and junior companies (small and medium-sized enterprises active in mineral exploration, generally pre-revenue). Juniors mostly finance their activities through share issues on public equity markets. They discover and explore deposits that they, occasionally, develop into mines or, more commonly, leverage to attract partners or sell to larger mining companies. In addition, the mining service and supply sector (MSS) supports the entire mining sector.

Canada is a federation that includes a federal government, ten provincial governments and three territorial governments. Provinces and territories are the resource owners – they own the mineral rights. Both federal and provincial/territorial governments have responsibilities when it comes to mineral-related activities, however. These responsibilities may be specific to the level of government or shared. For example, provinces and territories are responsible for matters within their boundaries such as water quality, operational matters (permitting, licensing and monitoring) and mining taxes/royalties. Environment is a shared jurisdiction, but the federal government has jurisdiction over environmental matters of international and inter-provincial concern. The federal government is responsible for international trade, domestic statistics and scale thematic geoscience, among others.

A number of policies, programs and initiatives are available from both levels of government to support, either directly or indirectly, mineral exploration, mining, and related activities. Some of these measures are targeted to a specific activity, such as mineral exploration incentives, while others are available across the economy but can be of benefit to mineral exploration and mining companies (e.g., skills acquisition and training programs).

Important aspects of mineral policy development in Canada include collaboration and consultation. Mechanisms of intergovernmental collaboration (e.g., intergovernmental working groups, the Energy and Mines Ministers' Conference) are in place to bring hear the views of stakeholders and bring Canadian jurisdictions together to identify and develop solutions to issues of joint relevance.

The recently launched Canadian Minerals and Metals Plan is an initiative of Canada's federal and provincial/territorial Mines Ministers that aims to foster a competitive, sustainable and responsible minerals and metals industry adapted to the realities of the modern economy to the benefit of all Canadians⁶.

⁶ Context provided by Natural Resources Canada on August 1st, 2019

The context and the tools indicated in this chapter have been provided and reviewed by International Affairs and Trade Division, Lands and Minerals Sector of Natural Resources Canada.

Canadian International Resources and Development Institute (CIRDI)

- 1.1 Name:** Canadian International Resources and Development Institute (CIRDI)
- 1.2 Type of initiative:** Private institute
- 1.3 Scope:** Transversal to resources industry
- 1.4 Area of development:** (2) Environmental development – (4) Training programs – (5) Women participation.
- 1.5 Trajectory:** 2013 onwards
- 1.6 Description:**

The Canadian International Resources and Development Institute (CIRDI) was founded by three leading universities: University of British Columbia (UBC), Simon Fraser University and Polytechnique Montréal. CIRDI is a partner of UBC's School of Public Policy and Global Affairs. It is an independent centre of expertise in natural resource-led development and works at the request of developing economy governments that seek to strengthen their capacity to govern and manage their natural resources for the benefit of their people.

CIRDI provides leading-practice advice, technical support, training and applied research as well as a platform for innovative thinking, knowledge mobilization and shared learning. CIRDI has three areas of focus: among them, "Transforming artisanal and small-scale mining". They work to improve gender equality, environmental sustainability and good governance.

One of CIRDI's priorities is to reduce mercury use among the miners. Their approach to reach this goal is to educate for better organization of the sector, which will ultimately support the political process of formalization.

- 1.7 References:**
- <https://cirdi.ca/about/who-we-are/>

Women in Mining Canada (WIMC)

- 2.1 Name:** Women in Mining Canada (WIMC)
- 2.2 Type of initiative:** Nonprofit organization
- 2.3 Scope:** Specific for mining industries
- 2.4 Area of development:** (5) Women participation.

2.5 Trajectory: 2009 onwards

2.6 Description:

Women in Mining Canada (WIMC) is a domestic nonprofit organization formed in 2009 focused on increasing the number of women representations in mining. WIMC carries out its mission with 3E's that are integral components to our programs: Empower, Educate, Elevate.

Empower: The mining industry has the lowest number of women on company boards of any industry group worldwide. It is our belief that by getting behind women's empowerment we can provide a global platform for real change. WIMC is committed to improving access to C-Suite and Board of Directors positions for women throughout the industry.

Educate: In our industry, competency is what matters. WIMC provides an environment where women can build their leadership skills. Through the development of leadership skills, fostering access to mentorships and internships, women gain the ability and conviction to become leaders.

Elevate: WIMC is committed to providing an economy wide platform that fosters excellence and best in class support for women in the mining sector through awareness, events, campaigns, programmes and WIMC's economy wide network.

WIMC's approach is meant to encourage dialogue and debate, giving a voice to women which enables them to articulate their own empowerment agendas.

The sector faces many challenges including a pending skilled labour shortage. Many experts agree that improving diversity within the mining workforce by attracting and retaining traditionally underrepresented groups such as women may be the best solution. To that end, WIMC encourages young women to explore a career within the minerals sector; and helps established professionals connect and navigate their way through a successful career in the minerals sector. These initiatives contribute to the positive footprint our industry is making.

As a domestic organization they encourage their peers to engage in the issues long term with our members through research, networking, educational forums, advocacy, topical debates, and industry speaking opportunities to ensure a sustainable minerals industry in Canada.

2.7 References:

- <https://wimcanada.org/>

Canadian Exploration Expenses (CEE)

3.1 Name: Canadian Exploration Expenses (CEE)

3.2 Type of initiative: Tax incentive

3.3 Scope: Specific for mining industry

3.4 Area of development: (1) Economic development

3.5 Trajectory: 2017 onwards

3.6 Description:

Canadian exploration expenses (CEEs) are those incurred by the taxpayer for determining the existence, location, extent, or quality of a mineral resource, or petroleum or natural gas, in Canada. Until 2018, CEEs also include some expenses involved in bringing a new mine into production, including clearing, removing overburden, stripping, and sinking a mine shaft. CEEs are 100% deductible in the year in which they occur. Taxpayers can carry unused balances forward indefinitely or transfer them to flow-through-share investors.

See Section 66.1(6) of the Income Tax Act for more information.

- 3.7 References:**
- <https://www.nrcan.gc.ca/mining-materials/mining/taxation/mining-taxation-canada/mining-specific-tax-provisions/8892#a4>
 - <https://laws-lois.justice.gc.ca/eng/acts/l-3.3/page-54.html#docCont>

Canadian Development Expenses (CDE)

4.1 Name: Canadian Development Expenses (CDE)

4.2 Type of initiative: Tax incentive

4.3 Scope: Specific for mining industry

4.4 Area of development: (1) Economic development

4.5 Trajectory: 2017 onwards

4.6 Description:

Canadian development expenses (CDEs) are those incurred in: sinking or excavating a mine shaft, main haulage way, or similar underground work for a mine in Canada built or excavated after the mine came into production pre-production mine development expenses (after 2017) the cost of any Canadian mineral property CDEs can be deducted at a 30% declining balance. Unclaimed balances can be carried forward indefinitely or transferred to flow-through-share investors (excluding the cost of any Canadian mineral property).

See Section 66.1(6) of the Income Tax Act for more information.

- 4.7 References:**
- <https://www.nrcan.gc.ca/mining-materials/mining/taxation/mining-taxation-canada/mining-specific-tax-provisions/8892#a4>

- <https://laws-lois.justice.gc.ca/eng/acts/l-3.3/page-54.html#docCont>

Flow-through Shares (FTS)

- 5.1 Name:** Flow-through shares (FTS)
- 5.2 Type of initiative:** Tax incentive
- 5.3 Scope:** Specific for mining industry
- 5.4 Area of development:** (1) Economic development
- 5.5 Trajectory:** 2018 onwards
- 5.6 Description:**

A flow-through share (FTS) allows a principal business corporation (PBC) to obtain financing for expenditures on mineral exploration and development in Canada. By issuing flow-through shares, a company can “flow through” certain expenses to the share purchaser. These expenses are then deemed to have been incurred by the investor, not the corporation, which can reduce the investor’s taxable income.

For individual investors, the advantages can be twofold:

- They receive a 100% tax deduction for the amount they invested in the shares, plus a 15% tax credit in the case of an eligible expense.
- They may see their investment appreciate if the exploration is successful.

FTS-issuing corporations do not have to be Canadian, but they must be Canadian taxpayers that incur the expenses in Canada on qualified activities. Resource expenses that may be flowed through include Canadian exploration expenses (CEEs) and certain Canadian development expenses (CDEs).

- 5.7 References:**
- <https://www.nrcan.gc.ca/mining-materials/mining/taxation/mining-taxation-canada/mining-specific-tax-provisions/8892#a4>
 - <https://laws-lois.justice.gc.ca/eng/acts/l-3.3/page-242.html#h-314117>

Mineral Exploration Tax Credit (METC)

- 6.1 Name:** Mineral Exploration Tax Credit (METC)
- 6.2 Type of initiative:** Tax incentive
- 6.3 Scope:** Specific for mining industry
- 6.4 Area of development:** (1) Economic development
- 6.5 Trajectory:** 2018 onwards

6.6 Description:

The METC is a 15% credit that works with the FTS mechanism to help simulate grassroots or early exploration (surface or above surface exploration activities). Expenses eligible for METC tax treatment are a subset of those expenses eligible for CEE treatment. The combination of FTS (tax deduction for the investor) and the METC (tax credit for the investor) greatly enhances the ability of junior companies to raise equity funds. The METC is scheduled to expire on March 31, 2024.

The following Canadian provinces offer tax incentives harmonized with the FTS mechanism:

- British Columbia: B.C. mining FTS tax credit (20%, no sunset date)
- Saskatchewan: Saskatchewan METC (10%, sunset date the same as the federal credit)
- Manitoba: Manitoba METC (30%, sunset date March 31, 2021)
- Ontario: Ontario Focused FTS Tax Credit (5%, no sunset date)
- Quebec: 120% deductibility of CEE (no sunset date)

6.7 References⁷:

- <https://www.nrcan.gc.ca/mining-materials/mining/taxation/mining-taxation-canada/mining-specific-tax-provisions/8892#a4>
- <https://laws-lois.justice.gc.ca/eng/acts/l-3.3/page-242.html#h-314117>

Northern Abandoned Mine Reclamation program

7.1 Name: Northern Abandoned Mine Reclamation program

7.2 Type of initiative: Program

7.3 Scope: Specific for mining industry

7.4 Area of development: (2) Environmental protection

7.5 Trajectory: 2019 onwards

7.6 Description:

Preserving and protecting Canada's environment is a key priority for the Government of Canada and its environmental laws and regulations are designed to ensure responsible and sustainable development of natural resources. The Impact Assessment Act puts in place better rules for major projects to protect Canada's environment, communities and

⁷ For more information on FTSs and METCs:

<https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/flow-through-shares-ftss.html>

For more detailed information on mining taxation in Canada, including the breakdown of federal and provincial/territorial responsibilities: <https://www.nrcan.gc.ca/mining-materials/mining/taxation/mining-taxation-canada/8876>

waterways; restore public trust and respect Indigenous rights; and, strengthen Canada's economy and encourage investment.

Among other environmentally related issues, the federal government is also concerned about climate change adaptability and the restoration of abandoned mine sites. In its last budget, it committed \$84 million over five years to build knowledge on the impacts of climate change and enhance the resiliency of northern communities. It also committed \$2.2 billion to advance the remediation of large abandoned northern mines through the Northern Abandoned Mine Reclamation program. Such initiatives increase public confidence vis-à-vis new natural resource projects and, in turn, contribute to stronger relationships between small and medium mining enterprises and local communities.

- 7.7 References:**
- <https://www.pdac.ca/communications/press-releases/communications-press-releases/2019/03/19/march-19-2019-pdac-welcomes-federal-budget-2019>

Centre of Excellence for Indigenous Mineral Development

- 8.1 Name:** Centre of Excellence for Indigenous Mineral Development
- 8.2 Type of initiative:** Public-private organization
- 8.3 Scope:** Specific for mining industry
- 8.4 Area of development:** (3) Social protection and development
- 8.5 Trajectory:** 2019 onwards
- 8.6 Description:**

Canadian residents are covered through a number of government-provided programs to ensure "social protection". These programs can range from broad programs (employment insurance, social assistance, health care) to more tailored programs to assist specific groups (seniors, people with disabilities, etc.). These programs can be domestic in scope (federal government) or offered by individual provinces and territories, and even by municipalities. Mining enterprises, like other enterprises in the economy, are not responsible for such programs. Taxes collected from these companies, their suppliers and their employees go into consolidated government revenues, which are then used to fund government-established priorities. In the spirit of building good relations, mining operations may choose to encourage local community-building activities, small business development, education, etc.

Indigenous peoples and communities can benefit from resource development activities occurring on Indigenous lands and within their traditional territories, through partnerships with the minerals industry. These partnerships can be formalized through Impact Benefit

Agreements, which can contain provisions for favorable procurement, hiring practices, training and skills building opportunities, and profit-sharing, among others, and have become an industry standard in Canada. Currently, there are over 400 active mining agreements between mineral industry proponents and Indigenous communities and groups across Canada. The ability of communities to make informed decisions to take advantage of resource development opportunities can be bolstered through capacity building initiatives (e.g., the \$79 million Community Opportunity Readiness Program of the federal department of Crown-Indigenous Relations and Northern Affairs and the Natural Resources Canada/FedNor \$1.8 million investment in the northeastern Ontario Centre of Excellence for Indigenous Mineral Development).

- 8.7 References:**
- <https://fednor.gc.ca/eic/site/fednor-fednor.nsf/eng/fn04514.html>

Mining Industry Human Resources Council (MiHR)

- 9.1 Name:** Mining Industry Human Resources Council (MiHR)
- 9.2 Type of initiative:** Nonprofit organization
- 9.3 Scope:** Specific for mining industry
- 9.4 Area of development:** (4) Training programs
- 9.5 Trajectory:** 1996 onwards
- 9.6 Description:**

The Canadian mining industry faces significant labour supply challenges. The Mining Industry Human Resources Council (MiHR), funded in part by the Government of Canada through Employment and Social Development Canada's Sectoral Initiatives Program, projects that employers may need to hire up to 135,000 workers over the next ten years. Particular challenges exist for filling skilled, technical- and science-related positions. This is largely a result of an aging workforce, the challenge of attracting and retaining workers with the right skills and knowledge, often to remote operations, and the fact that mining is a cyclical industry that is subject to commodity prices and other global economic factors. New and emerging technologies such as artificial intelligence, digitization and automation hold great promise for increasing mining efficiency and bridging the labour supply gap but also raise questions about their effect on skills requirements, workers and communities.

- 9.7 References:**
- <https://www.mihhr.ca/>

Integrated Indigenous Mine Training Program

10.1 Name: Integrated Indigenous Mine Training Program

10.2 Type of initiative: Program

10.3 Scope: Specific for mining industry

10.4 Area of development: (4) Training programs

10.5 Trajectory: 2019 onwards

10.6 Description:

The British Columbia Mining Jobs Task Force reviewed exploration and mining in the province to find ways to strengthen its mining industry. In response to its final report, the Government of British Columbia made a number of commitments in its Budget 2019, including the development of an Integrated Indigenous Mine Training Program; the review of opportunities to support Indigenous groups in gaining equity ownership in major projects; a coordinated communications and education strategy on the foundational importance of the mining sector, the development of an Action Plan to attract and retain women in mining careers; the development of a roadmap to address the sector's future skills and labour needs; investment in a British Columbia Mining Innovation Roadmap; and, the continuation and expansion of the BC Regional Mining Alliance.

10.7 References:

- <https://www.workbc.ca/getmedia/6e4bdae0-ac4d-4b31-9f45-42794afefc61/British-Columbia-Indigenous-Skills-Training-Programs-Inventory.pdf.aspx>

Gender Diversity and Inclusion Guidance

11.1 Name: Gender Diversity and Inclusion Guidance

11.2 Type of initiative: Tool

11.3 Scope: Specific for mining industry

11.4 Area of development: (5) Women participation

11.5 Trajectory: 2019 onwards

11.6 Description:

Canada's mining industry faces a diversity challenge and needs to hire more Indigenous Peoples, visible minorities, immigrants and women. According to the MiHR, women comprise half of Canada's population and 48% of its labour force, yet they only represent 17% of the mining labour force. On the mineral exploration side, where junior mining companies are concentrated, the domestic association (Prospectors & Developers Association of Canada) announced, in June 2019, the launch of its Gender Diversity

and Inclusion Guidance. This tool will assist companies improve their gender diversity and inclusion in the workplace and in the community.

- 11.7 References:**
- <https://www.pdac.ca/priorities/responsible-exploration/gender/gender-diversity-and-inclusion-guidance-document>

Gender Equity in Mining Works (GEM Works)

- 12.1 Name:** Gender Equity in Mining Works (GEM Works)
12.2 Type of initiative: Program
12.3 Scope: Specific for mining industry
12.4 Area of development: (5) Women participation
12.5 Trajectory: 2019 onwards
12.6 Description:

The Mining Association of Canada is another domestic association that supports increasing the employment of women in the mining sector through programs such as MiHR's Gender Equity in Mining Works (GEM Works), which provides tools to guide mining employers in their efforts to create more gender-inclusive workplaces. Gender Equity in Mining Works (GEM Works) is a 12-month, comprehensive program that builds networks of 10 like-minded mining companies or sites who collaborate to learn from one another, share successes and challenges, and offer mutual support to remove unintentional barriers to gender inclusion. It helps companies foster a mining and minerals industry where both women and men have the best opportunities for making great contributions and rewarding careers.

- 12.7 References:**
- <https://www.mihr.ca/pdf/GEM-works-EN.pdf>

Yukon Women in Mining

- 13.1 Name:** Yukon Women in Mining
13.2 Type of initiative: Nonprofit organization
13.3 Scope: Specific for mining industry
13.4 Area of development: (5) Women participation
13.5 Trajectory: 2012 onwards
13.6 Description:

Yukon Women in Mining (YukonWIM) is a regional nonprofit organization focused on creating awareness and attraction to the opportunities for rewarding careers for women in the mineral and mining industry. YukonWIM develops initiatives that foster personal

and professional development, through awareness, education and networking opportunities.

YukonWIM Objectives:

- To collaborate with WIM branches across Canada in sharing knowledge, best practices, and personal and professional development opportunities
- To promote the minerals sector as a safe, valuable, high-tech, environmentally and socially responsible industry
- To coordinate with other local nonprofits, associations and organizations to help women connect with established professionals in industry and to help them navigate their way to a successful career in the minerals sector

- 13.7 References:**
- <https://www.yukonwim.ca>

Gender-Based Analysis Plus (GBA+)

14.1 Name: Gender-Based Analysis Plus (GBA+)

14.2 Type of initiative: Tool

14.3 Scope: Transversal to several industries

14.4 Area of development: (5) Women participation

14.5 Trajectory: 2015 onwards

14.6 Description:

Gender-Based Analysis Plus (GBA+) is the process by which a policy, program, initiative or service can be examined for its impacts on various groups of women and men. GBA+ provides a snapshot that captures the realities of women and men affected by a particular issue at a specific time. This means that analysts, researchers, evaluators and decision makers are able to continually improve their work and attain better results for Canadian men and women by being more responsive to their specific needs and circumstances.

GBA+ aligns with the principles outlined in the Canadian Charter of Rights and Freedoms and the Canadian Human Rights Act, and the Government of Canada is committed to supporting the full implementation of GBA+ across federal departments and agencies.

In the 2015 Fall Reports (1) of the Auditor General of Canada, the Auditor General (AG) identified that, although there has been some progress in the use of GBA+, improvement is needed in addressing barriers to its implementation and in monitoring the effectiveness of GBA+ in informing government initiatives. In response to the AG's recommendations, Status of Women Canada, Privy Council Office and Treasury Board of Canada Secretariat tabled the Action Plan on Gender-based Analysis (2016-2020),

committing to identify and assess barriers to GBA+ implementation, enhance capacity-building tools and training, and develop monitoring and accountability mechanisms.

14.7 References:

- <https://www.canada.ca/en/treasury-board-secretariat/services/treasury-board-submissions/gender-based-analysis-plus.html#gba1>

SUMMARY

TOOL		CATEGORIES						
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation	
1	Canadian International Resources and Development Institute	Private institution	Transversal		X		X	X
2	Women in Mining Canada	Nonprofit organization	Specific					X
3	Canadian Exploration Expenses (CEE)	Tax incentive	Specific	X				
4	Canadian Development Expenses (CDE)	Tax incentive	Specific	X				
5	Flow-through Shares (FTS)	Tax incentive	Specific	X				
6	Mineral Exploration Tax Credit (METC)	Tax incentive	Specific	X				
7	Northern Abandoned Mine Reclamation program	Program	Specific		X			
8	Centre of Excellence for Indigenous Mineral Development	Public-private organization	Specific			X		
9	Mining Industry Human Resources Council	Nonprofit organization	Specific				X	
10	Integrated Indigenous Mine Training Program	Program	Specific				X	
11	Gender Diversity and Inclusion Guidance	Tool	Specific					X
12	Gender Equity in Mining Works (GEM Works)	Program	Specific					X
13	Yukon Women in Mining	Nonprofit organization	Specific					X
14	Gender-Based Analysis Plus (GBA+)	Tool	Transversal					X

CHILE

GENERAL CONTEXT

In Chile, the contribution of medium-scale mining is significant compared to other domestic productive sectors. It is estimated that the industry generates around US\$ 2.4 billion annually, surpassing key sectors such as wine and salmon production. It constitutes 5.2% of the domestic copper production (around 306,500 tons); 17.7% of gold production, 9.4% of silver production, 45.2% of iron ore production, and 100% of exported zinc and lead.

Medium-scale mining, in general, has higher production costs than larger operations and is subject to important challenges, such as greater economic vulnerability and difficulty in accessing financing, resulting in reduced operating margins in times of lower commodity prices. This highlights the need for technological innovation to overcome the structural challenges of the sector. The introduction of technologies that allow cost competitiveness offers a significant investment opportunity in economic sectors such as medium-scale mining⁸.

The context and the tools indicated in this chapter have been provided and reviewed by The Chilean Copper Commission (Cochilco).

Empresa Nacional de Minería

- 1.1 **Name:** Empresa Nacional de Minería (ENAMI)
- 1.2 **Type of initiative:** State-owned body
- 1.3 **Scope:** Specific for mining industry
- 1.4 **Area of development:** (1) Economic development - (4) training programs
- 1.5 **Trajectory:** It was founded in 1960 through DFL n° 153/1960 from the union of the “Credit and mining development fund”, and the “Nonprofit Smelter Company”.
- 1.6 **Description:**
 ENAMI is a technical state-owned body, responsible for the promotion and development of small and medium size mining. Specifically, it is responsible for boosting the activity and business of small and medium-sized miners, giving them access to the international metals market. Such an Access could not have been possible without ENAMI’s action, since the production level would not allow the miner to obtain good buyers and be competitive.

⁸Source of context:

http://www.minmineria.cl/portafolio_proyectos_mineros/Chile_A_country_of_Opportunities_for_Investment_and_Development_digital.pdf

ENAMI has three main areas to promote economic development of this sector, these are:

Production: This area is in charge of adding value to the miner's extracted mineral. When the miner lacks a concentrator plant, or lacks Access to one, he or she can sell the extracted ore directly to ENAMI. ENAMI has five process plants strategically located in the regions of Antofagasta, Atacama and Coquimbo. These are: Planta Delta, Planta Osvaldo Martínez (El Salado), Planta Manuel Antonio Matta, Planta José Antonio Moreno (Taltal), and Planta Vallenar. These plants have facilities to treat both sulfide and oxide minerals. ENAMI also has a smelter of its own, the Hernán Videla Lira smelter (also known as Paipote), where it produces copper anodes.

Commercialization: This area is in charge of buying the ore or concentrate produced by miners. To carry this out, they have a system to measure the ore grade, or content of valuable elements in the ore or concentrate, and according to this, the miner gets paid. Whenever the miner sells concentrate instead of ore, the payment is better since it is a product with a higher added value than raw mineral. To carry out the commercialization, ENAMI has 15 buying powers, which are divided in five categories:

- Buying power with own process plant
- Buying power with own crushing plant
- Buying power with in third parties' plants or facilities
- Buying power with own smelter facility
- Buying power with third parties smelter facility

Development: Seeks to provide tools that help the sustainable development of the sector, which are: Recognition of reserves, advice in the preparation and evaluation of projects, technical training, safety and environment, and assignment of credits in the following areas: Start-up of viable projects, purchase of equipment, development of mining operation, working capital, and eventualities.

In 2016, ENAMI had a budget of more than 15 million USD, money that was invested in recognition of resources and reserves, competitive capacities development, technical assistance service, district geological studies, safe production support, credit assistance, and in programs in conjunction with PAMMA (Assistance and Modernization of Small Artisanal Mining Program).

1.7 References:

- <https://www.enami.cl/>
- <https://www.enami.cl/api/Descarga?f=/Memorias/REPORTE%20DE%20SUSTENTABILIDAD%202016.pdf>

Assistance and Modernization of Small Artisanal Mining

Program

- 2.1 Name:** Assistance and Modernization of Small Artisanal Mining Program
Original name: Programa de Asistencia y Modernización de la Pequeña Minería Artesanal (PAMMA)
- 2.2 Type of initiative:** Program
- 2.3 Scope:** Specific for mining industry
- 2.4 Area of development:** (3) Social protection and development - (4) Training programs.
- 2.5 Trajectory:** From 1992 onwards
- 2.6 Description:**

PAMMA is a program from the Mining Ministry focused in training and Technology transfer for small-scale artisanal mining, aiming to help with the activity's development for a better life quality through creation on human capital, technical assistance, and access to current assets.

PAMMA has three main tools:

- i. ***Projects funding:*** PAMMA supports initiatives of artisanal miners, both individual and collective, working together with ENAMI. At the individual level, it helps miners who already are immersed in the field with technical-economic support to start their business. At the collective level, it supports artisanal miners who are organized in groups to buy equipment that is used collectively, and thus generating scale economies.
- ii. ***Training programs:*** First, they identify needs in the sector. The last few years have focused on strengthening the safety and self-care area. Those programs consist of monitors training in sectors where the mining activity takes place, those will, in turn, teach their peers. These programs are carried out in conjunction with SERNAGEOMIN⁹ (Servicio Nacional de Geología y Minería).
- iii. ***Regularization of mining operations:*** This instrument is operated in conjunction with the Fondo Nacional de Desarrollo Regional (FNDR), which function is strengthen the management capacity of Regional Governments in matters of regional public investment, and aims to work together with small-scale artisanal miners to regularize their work according to the Mining Safety Regulation.

To apply for PAMMA funds (from point i.), the miner must be up to date with SERNAGEOMIN's safety mining regulation requirements, along with having a formal mining property, or the lease of this. If there is a group, they must bring the documents that proves

⁹ Servicio Nacional de Geología y Minería (National Geology and Mining Service), abbreviated as SERNAGEOMIN, is a Chilean government agency. Its function is to provide geological information and advice, technical assistance to government, public and private interests, and to regulate the mining industry in Chile.

Source: https://en.wikipedia.org/wiki/National_Geology_and_Mining_Service

it. The existence of this funds encourages compliance with the Mining Safety Regulation, due to the benefits that can be obtained.

By 2017, there are more than 1,369 monitors in mining safety, more than \$3.7 million USD invested in individual and associative projects, and more than \$10 thousand of million USD through the FNDR for the development of artisanal mining throughout Chile.

In 2016, more than \$2,437 thousand million USD were invested, 288 projects were executed and there were 2,815 beneficiaries.

- 2.7 References:**
- <http://datos.gob.cl/uploads/recursos/programaPamma.pdf>
 - <http://www.minmineria.gob.cl/pamma/>

Clean Production Agreement

- 3.1 Name:** Clean Production Agreement
- Original name:** Acuerdo de Producción Limpia (APL)
- 3.2 Type of initiative:** Public-Private Agreement
- 3.3 Scope:** Transversal to productive industries
- 3.4 Area of development:** (2) Environmental protection - (3) Social protection and development
- 3.5 Trajectory:** From 1998 onwards
- 3.6 Description:**

In 1998, the Clean Production Council (CPL) was created. This body depends on CORFO¹⁰ and the Ministry of Economy, Development and Tourism, has a public-private nature, and has the purpose to promote clean production and the efficient use of resources. In this same line, the CPL is in charge of the administration of the Clean Production Agreements (APL). In 2016, Chile creates the Agency of Sustainability and Climate Change, which currently administrates the APL.

The APL it's a voluntary agreement between a representative business association of a productive sector, and the public bodies responsible for: environment, health, occupational hygiene and safety, energy and water efficiency, and productive development. Its objective is to apply clean production through specific goals and actions, within a certain time period, in order to achieve what was agreed.

The objective of the APL is to improve environmental or productive conditions in terms of occupational hygiene and safety, energy and water efficiency, reductions of emissions,

¹⁰ CORFO (Production Promotion Corporation) is the agency of the Government of Chile, under the Ministry of Economy, Development and Tourism in charge of supporting entrepreneurship, innovation and competitiveness in the economy along with strengthening human capital and technological capabilities. Its main objective is to promote a society of more and better opportunities for all and contribute to the economic development. For more information, visit: www.corfo.cl

waste recovery, good practices, productive development and other issues addressed by the agreement. The APL aims to generate synergies and scale economies, as well as compliance with environmental standards that tend to increase the companies' productivity and competitiveness.

The Agency of sustainability and climate change has three main tools:

- i. Clean production found: Has the objective of supporting companies in the implementation of Clean Production, looking to increase their efficiency and minimizing their impact into the environment.
- ii. Territorial agreement: A space for coordination between companies, communities and local actors. It has the objective to work together for the territory's sustainability and climate change's challenges.
- iii. Clean production: This is a management tools applied to production processes, products and services. Its goal is to improve production, environmental, social, and occupational hygiene and safety conditions.

- 3.7 References:**
- http://www.produccionlimpia.cl/index.php?option=com_content&view=article&id=51&Itemid=235
 - <http://www.cpl.cl/archivos/documentos/38.pdf>
 - <http://www.agenciasustentabilidad.cl/>

Mining Decalogue

- 4.1 Name:** Mining Decalogue
- Original name:** Decálogo Minero
- 4.2 Type of initiative:** Public-Private Agreement
- 4.3 Scope:** Specific for mining industry
- 4.4 Area of development:** (3) Social protection and development - (4) Training programs - (5) Women participation
- 4.5 Trajectory:** From 2018 onwards
- 4.6 Description:**

The Mining Decalogue it's a voluntary agreement between the public bodies the Mining Ministry and the Women and Gender Equity Ministry, and mining companies, suppliers, unions and social organizations, that includes 10 commitments for the incorporation of women in the mining industry.

The commitments are:

1. Promote greater female participation in the mining industry by continuing the development of equal opportunities and non-discrimination in the processes of

people management, selection, training, career development and equitable remuneration.

2. Ensure good labor practices and work-family balance and personal, proposing labor policies and work systems that are better adapted to the nature of mining work and location differences, without this meaning labor precarization.
3. Advance in the diffusion of the Chilean norm 3262: Management system of gender equality and reconciliation of work, family and personal life, as a standard that allows addressing equality between men and women within organizations as a theme of relevant management.
4. Promote the insertion of women in the union leadership by promoting leadership among women workers, through the delivery of tools that allow them to participate in equal conditions with respect to men.
5. Advance in the presence of women in decision-making positions eliminating biases in the selection and preparing professionals to occupy those positions.
6. Move towards an inclusive organizational culture and prone to the diversity of men and women, sensitizing and training permanently in gender issues, to people of all levels of mining companies.
7. Have an adequate infrastructure for a mixed workforce in optimal conditions of safety, hygiene and comfort, considering the different needs of men and women.
8. Promote the return to work of men and women after the exercise of parental rights, in an environment of integration and without affecting their career development and growth possibilities.
9. Encourage joint work with higher education institutions, technical training centers and professional technical high schools in order to encourage more women to enter to study related careers in mining, know and choose to work in the industry.
10. Contribute to sustainability and local development through working with women who are part of the area of influence of mining operations, promoting ventures and / or tasks related to mining, making visible the work and contribution they make.

4.7 References:

- <http://www.minmineria.gob.cl/nacionales/ministerios-de-mineria-y-la-equidad-de-genero-impulsan-ineditas-medidas-para-aumentar-participacion-femenina-en-el-mercado-laboral-2/>

Chilean Norm NCh3262

- 5.1 Name:** Chilean Norm 3262 “Gender equality and reconciliation of professional, family and personal life”.
- Original name:** Norma Chilena 3262 “Igualdad de género y Conciliación de la vida laboral, familiar y personal”
- 5.2 Type of initiative:** Domestic Standard
- 5.3 Scope:** Transversal to all industries
- 5.4 Area of development:** (3) Social protection and development – (5) Women participation
- 5.5 Trajectory:** From 2012 onwards
- 5.6 Description:**

Chilean Standard NCh 3262-2012 proposes the implementation of a Management System for Gender Equality and Reconciliation of work, family and personal life in the logic of co-responsibility, within organizations, establishing the minimum requirements that must be met, in order to improve efficiency, effectiveness and promote greater commitment to the development and well-being of the people that comprise it.

This standard, applicable to organizations of any size and activity, is of voluntary application, established by consensus, approved by a recognized body and serves as a complement to the regulation whose purpose is to facilitate the organization to improve its effectiveness and efficiency and promote greater commitment, development and well-being for the people of the organization, with the intention of promoting good practices, the standard insists on the need for the commitment of top management to establish a gender and conciliation policy and ensure the availability of resources.

Then, the implementation of the standard goes through the planning and development of processes necessary for the functioning of the gender equality and conciliation management system:

- Detection of gaps, between women and men
- HR management based on non-discrimination
- Communication and awareness actions
- Facilitate the reconciliation between work, family and personal life
- Diffusion of the rights recognized by law

- 5.7 References:**
- <https://www.minmujeryeg.cl/wp-content/uploads/2016/03/GU%C3%8DA-APOYO-Implementaci%C3%B3n-NCh3262.pdf>

Woman and Mining Worktable

- 6.1 Name:** Woman and Mining Worktable
Original name: Mesa de Trabajo Mujer y Minería
- 6.2 Type of initiative:** Public-Private Agreement
- 6.3 Scope:** Specific for mining industries
- 6.4 Area of development:** (3) Social protection and development – (4) Training programs
- (5) Women participation
- 6.5 Trajectory:** From 2018 onwards
- 6.6 Description:**
On June 2018 Ministry of Mining and Ministry of Women and Gender Equity constituted a working table to encourage female participation in the mining industry.
This instance brings together the main companies, unions and organizations of the mining sector and its objective is to advance in concrete measures to increase the presence of women in the sector, and also it seeks to look for best practices to make mining a more inclusive activity.
The meetings are developed on a monthly basis and move forward on the basis of the dialogue for the incorporation of women and the reconciliation of work, family and personal life, signed in 2017 (Chilean norm 3262).
Specifically, based on this document, the aim the advance in three points: develop adequate working conditions for men and women; increase female participation in the mining industry; and increase female presence in decision-making positions.
The ultimate goal of this working table will be the management of cultural change.
This table will begin its work with an in-depth diagnosis of the mining sector, in order to gather as much information as possible regarding best practices, as well as the gaps affected.
According to the information of the Mining Skills Council (CCM) of the Mining Council, in mining companies it is estimated that 8.4% of its allocation corresponds to women, while in the supplying companies this index reaches 6.7%, averaging 7, 9% in the field.
- 6.7 References:**
- <https://consejominero.cl/prensa/ministerio-de-mineria-y-de-la-mujer-constituyen-mesa-de-trabajo-para-fomentar-participacion-femenina-en-la-industria-minera/>

Women in Mining Chile

- 7.1 Name:** Women in Mining Chile
- 7.2 Type of initiative:** Nonprofit organization
- 7.3 Scope:** Specific for mining industry

7.4 Area of development: (5) Women participation

7.5 Trajectory: From 2015 onwards

7.6 Description:

Women in Mining Chile seeks to promote and support the development of women in the mining industry, as well as their participation in leadership positions and company directories of the field.

Their working lines are:

- Achieve high adherence of women in mining and be a group recognized by different interest groups.
- Support and enhance the labor development of mining women through collaboration and training networks.
- Be a reference in the issues that involve women in the workplace.

7.7 References: • <https://www.womeninminingchile.cl/wimchile>

Mining Female Engineers Network Chile (RIM Chile)

8.1 Name: Mining Female Engineers Network

Original name: Red Ingenieras de Minas Chile (RIM Chile)

8.2 Type of initiative: Nonprofit organization

8.3 Scope: Specific for mining industry

8.4 Area of development: (5) Women participation

8.5 Trajectory: From 2018 onwards

8.6 Description:

A women network of Chilean Mining Engineers -RIM Chile- is a nonprofit foundation that was created on August 9, 2018 due the need to welcome and support, in a transversal way, students and mining engineering professionals of different generations of the economy.

This Network is presented as an opportunity to focus on mining engineering women such as students and professionals and their positioning in the mining industry in Chile.

RIM is an entity that projects its actions in the mining industry on the basis of equal employment opportunities for mining engineers' women.

Our network does not promote differentiation and segregation with professional men, on the contrary, it seeks inclusion, collaboration and their contribution to build better relationships and thus, ultimately, have a better economy.

The main objectives of RIM are to promote the professional development of their members, in conjunction with personal and family life and, at the same time, to constitute

an entity that makes visible the leadership, science and experience of mining engineering woman as an agent mobilizing, inspiring and positioning of women in Chilean mining. Another main objective is to increase the participation of Mining Engineers women, both in executive positions and in the operation area of the mining business, since currently one of the main gender imbalances occurs in the mining industry. We must be present that 51% of the total population of the economy are women and only represent 8% of the total workforce in mining.

The Network also has among its purposes to influence on the mining industry agenda and that the opinion of their members converts to contribution in the contingent issues that contribute to the development of mining in Chile, where the efficient use of non-renewable resources in Chile will be promoted. Together with environment care and the development of technologies and innovation in the mining industry.

- 8.7 References:**
- <https://www.redingenierasdeminas.com/english-version>

SUMMARY

TOOL		CATEGORIES						
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation	
1	National Mining Company	Technical state-owned body	Specific	X			X	
2	Assistance and Modernization of Small Artisanal Mining Program	Program	Specific			X	X	
3	Clean Production Agreement	Public-Private Agreement	Transversal		X	X		
4	Mining Decalogue	Public-Private Agreement	Specific			X	X	X
5	Norm NCh3262	Domestic Standard	Transversal			X		X
6	Woman and Mining Worktable	Public-Private Agreement	Specific			X	X	X
7	Women in Mining Chile	Nonprofit Organization	Specific					X
8	Mining Female Engineers Network	Nonprofit Organization	Specific					X

CHINA

GENERAL CONTEXT

In total, there are more than 10,000 (mostly coal) mines in China, producing a large amount of the world's supply. China is the world's largest producer of coal, gold and most rare earth minerals. In addition to production, China is also the world's leading consumer of most mining products, particularly thermal coal and iron ore, consuming around 49% and 58% respectively of global supply¹¹. China's consumption of refined copper estimated for 2019 is 3.2 million of tonnes¹² and 900 million of tonnes of iron¹³.

Although there are not specific measures for small and medium mining, the government has implemented the following to boost the mining industry in general:

Relaxation of restrictions on foreign investment. On 28 June 2017, the Catalogue of Industries for Guiding Foreign Investment (2017 version) was issued. It doesn't restrict foreign investment in the exploration and exploitation of coal bed methane, oil shale, oil sand, and shale gas, and eliminates the restrictions on foreign investment in the exploration and exploitation of precious metals and the exploitation and ore dressing of lithium.

Reform of examination and approval system. On 14 March 2017, the Ministry of Land and Resources (MLR) issued a notice cancelling the requirement for approval to change the scale of mining production. Since 2013, the MLR has cancelled 25 requirements for examination or approval on geology and mineral resources and cleared up all relevant non-administrative examinations and approvals, including the requirement for the minimum registered capital needed for mining rights.

Strengthening supervision and management. The MLR issued the Measures for the Publication of Information on Exploration and Exploitation by Mining Right Holders (Trial) on 29 September 2015. This set out that, starting from 1 January 2017, all mining right holders must submit their exploration and exploitation information to the information publication system and publicize to the general public on a yearly basis and proactively co-operate with government supervision.

Reform of extraction right registration. On 29 December 2017, the MLR issued the Circular on Improving Administration of the Approval and Registration of Mineral Resources Extraction (the circular). Highlights of this circular include the following:

¹¹ Source of the contexts and further information: [https://uk.practicallaw.thomsonreuters.com/w-011-1348?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/w-011-1348?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1)

¹² <https://www.reuters.com/article/china-metals-copper/chinas-refined-copper-imports-to-fall-almost-15-pct-in-2019-antaik-idUSL3N21G1YX>

¹³ <https://www.reuters.com/article/us-china-steel/chinas-2018-crude-steel-output-to-hit-record-level-government-research-body-idUSKBN1O908G>

- applicants must no longer ask the competent authorities for approval on the mining area before extraction rights are granted, if these extraction rights are assigned by public bidding, auction, and listing (however, the requirement is still valid for the grant of extraction rights which are converted from prospecting rights).
- the prospecting right holder can reserve the relevant mining area until its application for extraction rights is approved by competent authorities; and
- transfer of extraction rights will not be registered if the mine permit holder has not fulfilled their obligation to restore the geological environment. This is expected to incentivize the permit holder to perform its obligation to restore the environment even if it intends to transfer the mining rights to a third party.

The information in this chapter has been reviewed by Department of International Cooperation, Ministry of Natural Resources.

Catalogue of Industries for Guiding Foreign Investment

- 1.1 Name:** Catalogue of Industries for Guiding Foreign Investment
- 1.2 Type of initiative:** Plan
- 1.3 Scope:** Transversal to several industries
- 1.4 Area of development:** (1) Economic development
- 1.5 Trajectory:** From 2017 onwards
- 1.6 Description:**

On June 28, 2017, the National Development and Reform Commission ("NDRC") and the Ministry of Commerce ("MOFCOM") jointly issued the Catalogue for the Guidance of Foreign Investment Industries ("2017 Catalogue"), which came into effect on July 28, 2017.

Compared with the Catalogue for the Guidance of Foreign Investment Industries (Revised in 2015) ("2015 Catalogue"), the 2017 Catalogue launches a negative list of foreign investment for the first time nationwide except the Free Trade Zone. The 2017 Catalogue keeps the overall stability of policies on encouraged investment, opens up more sectors and further relaxes restrictions for foreign business. In particular, it eliminates certain restrictions on foreign investment in mining sector activities, including non-conventional oil and gas (fracking), precious metals and lithium ore.

- 1.7 References:**
 - <https://www.deacons.com/news-and-insights/publications/the-catalogue-for-the-guidance-of-foreign-investment-industries-revised-in-2017.html>

SUMMARY

TOOL		CATEGORIES						
Name		Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Catalogue of Industries for Guiding Foreign Investment	Plan	Transversal	X				

HONG KONG, CHINA

GENERAL CONTEXT

Despite its small size, Hong Kong, China has a relatively large number of mineral occurrences. Some mineral deposits have been exploited commercially. Mesozoic igneous activity was largely responsible for this diversity of mineral deposits and the mineral concentrations have been variably enhanced by hydrothermal activity associated with faulting.

There are currently no commercial mining or prospecting licenses operating in Hong Kong¹⁴.

No relevant data for this project

¹⁴ Source of the context: <http://hkss.cedd.gov.hk/hkss/eng/education/GS/eng/hkg/chapter8.htm>

INDONESIA

GENERAL CONTEXT

Indonesia continues to be a significant player in the global mining industry, with significant production of coal, copper, gold, tin, bauxite, and nickel. Indonesia also continues to be one of the world's largest exporters of thermal coal. Global mining companies consistently rank Indonesia highly in terms of its coal and mineral prospects, yet assessments of the mining policy regime and the investment climate have not been so positive. There has been limited investment in mining in recent years, and particularly limited investment in greenfield projects.

The mining sector has been one of the key sectors contributing to Indonesia's economic growth over many decades. The sector makes a significant contribution to the Indonesian Gross Domestic Product ("GDP"), its exports, Government revenue, employment, and perhaps, most importantly, to the development of the many remote regions of Indonesia¹⁵.

The information in this chapter has been reviewed by Subdirector of Investment and Cooperation of Ministry of Energy and Mineral Resources, Indonesia.

Women in Mining and Energy (WiME)

- 1.1 Name:** Women in Mining and Energy (WiME)
- 1.2 Type of initiative:** Private organization
- 1.3 Scope:** Specific for mining industry
- 1.4 Area of development:** (1) Economic development - (2) Environmental protection – (3) Social protection and development - (4) Training programs – (5) Women participation.
- 1.5 Trajectory:** January 2019 onwards, building on the result of previous activities
- 1.6 Description:**

Pure Earth's Indonesia Director, along with Indonesian NGO Yayasan Tambuhak Sinta (YTS) and a group of professionals linked through the Minerals and Energy for Development Alliance have launched this initiative.

The goals of the initiative are:

- increasing the participation of women in the sector
- via the women, to lead change for artisanal gold miners to reduce mercury poisoning
- promoting equal rights, opportunities and benefits for both men and women to help them pursue sustainable livelihoods in mining and energy.

The initiative included:

¹⁵ Source of the context: <https://www.pwc.com/id/en/energy-utilities-mining/assets/mining/mining-guide-2019.pdf>

- the use of a technology to recapture mercury vapor released into the atmosphere using retorts and water box condensers,
- the use of specially-adapted sluice boxes, which help miners extract more gold without mercury,
- the implementation of an awareness-raising campaign on mercury hazards for male and female miners, school children and miners' wives.
- connecting women miners directly with jewelers in Bali who would like to purchase mercury-free gold at a higher market price (expected to be, for mercury-free gold, 20% higher than the market rate).

Artisanal and small-scale gold mining practices that avoid using mercury—such as panning, direct smelting, and the use of sluice boxes—are best practices compared with gold mining using mercury, which damages health and the environment. YTS is conducting trials, evaluating the outcomes, some results showed that the purity of the gold was 92-93%. This success was then shared with other women miners in the village in the hope that more would try mining and processing without the use of mercury and will continue to train miners in mercury-free methods. These activities will be followed up by discussions on other development opportunities.

The benefit of the initiative is five-fold: it will bring about positive improvements to the lives of women miners, and also to the community by enhancing social protection (health and safety), increasing economic yield and protecting the environment, by introducing training on innovative technologies. Not only are the mercury-free techniques helping to increase miners' gold recovery, but the negative environmental impact is also lessened since the tailings from the sluice box (which are NOT contaminated by mercury) can now be placed back into former mining areas in the hope that it will help rehabilitate unproductive mining lands and protect the local streams and rivers.

Important aspects to be considered: In Tewang Pajangan village, Central Kalimantan, the number of male miners is 240 on average, compared to less than 15 women miners. It is argued that women who mine contribute more to the family income: male miners rely on using large machines, which are costly, as they consume a lot of expensive fuel. Moreover, men spend more of their income on personal consumption on-site, whereas women usually bring a lunch box from home. Thus, men's expenses are out of balance with their income. This means they have an uncertain income, whereas women miners, who do manual panning, have a more consistent and reliable income.

Women miners can earn a net income of IDR 100,000 (SGD 9) per day for 4-5 working hours. The women mine after finishing doing house chores and taking care of their children. Male miners earn a net income of IDR 100,000-150,000 (SGD 9-14) per day on average, but do not work every day. Thus, women contribute more to the family in terms of income, along with their role and responsibility in taking care of the family.

Artisanal and small-scale miners use mercury to extract gold. However, only very few miners are aware that using mercury is dangerous and contaminates the environment—soil, air, and especially the river, on which they are dependent for daily activities, such as bathing and washing, and where the fish they consume may be contaminated by mercury.

In response to this problem, the use of mercury has been drawing worldwide concern in recent years. The Minamata Convention entered into force globally in August 2017. Indonesia has ratified the convention and the President has released a decree banning the use of mercury, especially in small-scale gold mining.

- 1.7 References:**
- <https://www.pureearth.org/blog/helping-women-gold-miners-in-indonesia/>

Basic Mining Law 1967

- 2.1 Name:** Basic Mining Law 1967
- 2.2 Type of initiative:** Law
- 2.3 Scope:** Specific for mining industries
- 2.4 Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development
- 2.5 Trajectory:** From 1967 onwards
- 2.6 Description:**

The prominent mining policy in Indonesia is the Basic Mining Law of 1967, which also provides basic law for environmental protection in the mine. The Basic Mining Law of 1967 delegates the authority of regulating mining operations to the Minister (now under the Energy and Mineral Resources Ministry) and also grant Mining Authorities to the Indonesian mining firms. This also includes the authority to cancel Mining Authorities.

The Basic Mining Law provides penalties for mining without Mining Authorities. The Basic Mining Law also regulates about domestic performance standard for land protection. However, the law only states that after completion of mining, the holder of the Mining Authorization is obliged to restore the disturbed land in such condition as not to evoke any danger. Unfortunately, this the only sentence that mention about reclamation, which too general as a law compared with other economies that specified a requirement for restoring land to be capable to support its supporting usage prior mining was conducted. Moreover, there is no requirement for preservation of topsoil, reclamation or control on on-site and off-site environmental effects of water pollution. Therefore, due to the lack of specified law in the Basic Mining Law 1967 about environmental protection, numerous laws and regulations thus formulated. The very first regulation about environmental

regulation of mining in Indonesia is regulation No. 4 of 1977 by the Minister of Mines that regulate about the Prevention and Handling of Disturbance and Pollution of the Environment Caused by General Mining. The issuance of this law then was followed by the issuance of the Director General of Mines of Decrees 7/1978 and 9/1978 about the prevention and mitigation of damage caused by surface mining, mineral processing and refining. More decrees and the law are then issued, by following the current condition of mining pollution, such as: Decree No. 7/1978 about reclamation plan, Decree 1211/1995 about the obligation on the Mine Manager to take preventive measures against the possibility of environmental damage and pollution, and many more.

- 2.7 References:**
- http://www.tj.kyushu-u.ac.jp/evergreen/contents/EG2018-5_2_content/pdf/Pages%2050-57.pdf

Technical Assistance Program

- 3.1 Name:** Technical Assistance Program
- 3.2 Type of initiative:** Program
- 3.3 Scope:** Specific for mining industries
- 3.4 Area of development:** (4) Training programs
- 3.5 Trajectory:** Technical Assistance Program is an annual program conducted by Directorate General of Mineral and Coal of Ministry (DGMC) of Energy and Mineral Resources (MEMR) of Indonesia.

3.6 Description:

Directorate General of Mineral and Coal (DGMC) is the government representative under Ministry of Energy and Mineral Resources (MEMR) whose responsibility is managing mining sector in Indonesia. One of strategic program of DGMC is to conduct technical assistance program each year for all mining companies either large or medium to small mining company all over Indonesia. This program is conducted through seminar, workshop, discussion forum, etc. aiming at broadening the understanding of mining company towards sectoral regulation, permits, good mining practices, environmental responsibility, corporate social responsibility, and other issues relevant to current mining condition.

Since Indonesia is an archipelagic state, the technical program every year is given based on region in order to accommodate all mining companies in Indonesia. Through technical assistance program each mining company has an opportunity to discuss all matters related to mining with the government. This program is very useful for the government to

improve the capacity of mining company particularly to support the small to medium mining company to improve the knowledge related to mining activity in Indonesia

- 3.7 References:**
- <https://www.esdm.go.id/>
 - <https://www.minerba.esdm.go.id/>

Regulations 11, 25 and 26, Year 2018

- 4.1 Name:** Minister of Energy and Mineral Resources (MEMR)
Regulation Number 11 Year 2018, Regulation Number 25
Year 2018, Regulation Number 26 Year 2018.
- 4.2 Type of initiative:** Regulations
- 4.3 Scope:** Specific for mining industry
- 4.4 Area of development:** (1) Economic development - (2) Environmental protection -
(3) Social protection and development
- 4.5 Trajectory:** From 2018 onwards
- 4.6 Description:**

The MEMR No.11/2018 regulates mining licensing, the MEMR No.25/2018 regulates mining business, and the MEMR No.26/2018 regulates good mining practices.

The regulations MEMR number 11-year 2018, MEMR number 25 year 2018, and MEMR number 26 year 2018 are the implementation of government policy for regulation simplification that was conducted in 2018 in order to improve mining investment climate in Indonesia. Those regulations support the mining activity either large or small to medium mining company. The regulations oblige the mining license holder to implement good mining practice, mineral conservation, sustainable mineral development as well as to support the local economic through community empowerment.

One of the case examples of the community empowerment is shown by PT Timah as Indonesia's state-owned tin mining company. PT Timah with the permission from the government has initiated a local community empowerment partnership program with the small-scale tin mining company in Bangka Belitung Province. This partnership program is aimed to engage small tin mining companies in exploitation activities under PT Timah's concession area. The local community is allowed to mine the alluvial tin deposit under supervision of PT Timah and at the same time they are learning about safety and quality control through technical guidance provided by the PT Timah. PT Timah will then value the total tin produced and pay the local companies.

- 4.7 References:**
- <https://www.esdm.go.id/>
 - <https://www.minerba.esdm.go.id/>

SUMMARY

TOOL		CATEGORIES						
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation	
1	Women in Mining and Energy (WiME)	Private organization	Specific	X	X	X	X	X
2	Basic Mining Law	Law	Specific	X	X	X		
3	Technical Assistance Program	Program	Specific				X	
4	Regulations 11, 25 and 26	Regulations	Specific	X	X	X		

JAPAN

GENERAL CONTEXT

Mining in Japan is minimal because Japan does not possess many on-shore mineral resources¹⁶. The Japanese mining industry began to rapidly decline in the 1980s. Coal production shrank from a peak of 55 million tons in 1960 to slightly more than 16 million tons in 1985, while coal imports grew to nearly 91 million tons in 1987. Domestic coal mining companies faced cheap coal imports and high production costs, which caused them chronic deficits in the 1980s. In the late 1980s, Japan's approximately 1 million tons of coal reserves were mostly hard coal used for coking. Most of the coal Japan consumed is used to produce electric power.

According to the Canadian Trade Commission for Japan: "In 2012, the Government of Japan increased the credit line for the Japan Bank for International Cooperation (JBIC) by 10 trillion yen (approximately C\$105 billion) to further enable the Japanese private sector to secure strategic natural resources, and expanded JBIC's mandate to provide financial assistance for certain types of natural resource development projects in developed economies.. Although this initiative has ended in June 2016, JBIC will continue this initiative to support the Japanese FDI opportunities in natural resources sector.

In April 2018, it was reported¹⁷ that mud from the seabed off Minamitorishima Island, some 1,150 miles southeast of Tokyo had been found to contain more than 16 million tons of rare-earth oxides. This was reported to be the equivalent to 780 years' worth of yttrium supply, 620 years of europium, 420 years of terbium and 730 years of dysprosium, at current rates of global usage.

As the coal mining industry declined, so did the general importance of domestic mining to the whole economy. Only 0.2% of the labour force was engaged in mining operations in 1988 and the value added from mining was about 0.3% of the total for all mining and manufacturing. Domestic mining production supplies an important quantity of some nonmetals: silica sand, pyrophyllite clay, dolomite, and limestone. Domestic mines are contributing declining shares of the economy's requirements for some metals: zinc, copper, and gold. Almost all of the ores used in the nation's sophisticated processing industries are imported¹⁸.

No relevant data for this project

Sources of the context:

¹⁶ David Bostwick, Government of Canada, Senior Trade Commissioner in Tokyo, Japan

¹⁷ <https://www.nature.com/articles/s41598-018-23948-5.pdf>

¹⁸ <https://web.archive.org/web/20080214234206/http://lcweb2.loc.gov/frd/cs/jptoc.html>

MALAYSIA

GENERAL CONTEXT

Malaysia is one of the largest economies in South East Asia, and one of the fastest growing. It's estimated around 28 million populations increasingly prosperous, making it a growing market with considerable potential.

Malaysia is endowed with over 33 different mineral types, comprising metallic, non-metallic and energy minerals, worth several billion dollars in economic potential. There was a generally a lack of exploration, mine development and capacity expansion in the local industry thus providing a great opportunity to those who see to venture into this area. Trade and trade-related policies remain integral parts of Malaysia's broad economic development strategy, whose key objectives are economic growth sufficient for the attainment of developed status by 2020¹⁹.

Minerals mined and extracted in Malaysia included barite, bauxite, clays, coal, gold, ilmenite, iron ore, limestone, monazite, natural gas, petroleum, silica, silver, struverite (a niobium-tantalum mineral), and tin. In addition to these, Malaysia had identified mineral resources of copper and Rare Earth Elements (REE) from Ion Adsorption clays.

The mining and quarrying sector accounted for 8.8% of the GDP and employed about 103,000 individuals in 2015. During the past 5 years, employment in the mining sector had increased by more than 35%. During the same period, Malaysia's labor force participation rate increased to 67.6% from 64.4%, and the unemployment rate remained between 2.9% and 3.2%. In 2014, Malaysia became an important source of bauxite for China's aluminum industry in response to Indonesia's ban on bauxite exports in 2014 (which remained in effect through 2015). By 2015, Malaysia accounted for 40% of China's imported bauxite compared with 10% in 2014, making Malaysia the China's leading source of imported bauxite.

According to Department of Mineral and Geoscience Malaysia statistics in 2019, the country's mineral production is worth RM6.32 billion. This is a 6.4 per cent higher than last year's RM5.94 billion. While the gross domestic product (GDP) of 2019 for the mining and quarrying industries (excluding oil and gas) is worth RM9.041 billion or 0.7 percent of the country's total GDP. The production came from 155 mines and 397 quarries operating nationally.

The information in this chapter has been provided/reviewed by Mineral Economics Section of Department of Mineral and Geoscience Malaysia and the Ministry of International Trade and Industry.

¹⁹ Source of the context: http://malaysianminerals.com/index.php?option=com_content&task=view&id=247&Itemid=180

Eleventh Malaysia Plan

- 1.1 Name:** Eleventh Malaysia Plan
- 1.2 Type of initiative:** Plan
- 1.3 Scope:** Transversal to several industries
- 1.4 Area of development:** (1) Economic development
- 1.5 Trajectory:** In May 2015, the Government of Malaysia released its Eleventh Malaysia Plan, which covers the period 2016 to 2020.

1.6 Description:

In the plan, the Government sets the goal of achieving average annual growth of the GDP of between 5% and 6% between 2016 and 2020, with an average annual increase of 9.4% in private investment and 2.7% in public investment. Although the Government expected the contributed share to the GDP by both the manufacturing and mining sectors to decrease during the next 5 years, the Government set targets of an average annual growth rate of 5.1% for manufacturing and 1.3% for mining. Several environmental initiatives that are likely to affect the mining industry are included in the plan. These include initiatives to improve waste management (including mining waste) by increasing recycling and the rate of waste recovery; these efforts are to be led by the National Solid Waste Management Department and the Solid Waste Management and Public Cleansing Corp.

Malaysia's mineral sector is governed by the Mineral Development Act 1994 and the State Mineral Enactment. The Mineral Development Act 1994 defines the power of the Federal Government to regulate and inspect mineral exploration, mining, and related activities.

The State Mineral Enactment gives the States the power to issue mineral prospecting and exploration licenses and mining leases. Apart from paying a corporate tax to the Federal Government, mine and quarry operators are required to pay value-based royalties to the State in which their operation is located.

Royalty rates depend on the mineral commodity and on the assessment of each of the individual States. The Environmental Quality (prescribed activities, environmental impact assessment) Order 1987 governs environmental aspects of the mineral industry. Under the order, all mining leases larger than 250 hectares require an environmental protection plan that must be approved by the Department of Environment.

- 1.7 References:**
- <https://s3-us-west-2.amazonaws.com/prd-wret/assets/palladium/production/mineral-pubs/country/2015/myb3-2015-my.pdf>
 - <https://www.jmg.gov.my/>

Sustainable Development Indicators (SDI)

- 2.1 Name:** Sustainable Development Indicators (SDI)
- 2.2 Type of initiative:** Standard tool
- 2.3 Scope:** Specific for mining industries
- 2.4 Area of development:** (2) Environmental protection
- 2.5 Trajectory:** From 2014 onwards
- 2.6 Description:**

Sustainable Development Indicators (SDI) is a star rating tool on mines and quarries in Malaysia to determine the sustainability of the industry.

In 2014, JMG²⁰ has conducted studies to develop SDI as sustainability indicators for the Malaysian mining and quarrying industry. Expert advice, internally and externally, like from the Malaysian Audit Department was sought to develop these sustainability criteria and indicators in accordance with Malaysian perspectives.

The sustainability indicators developed based on auditing concept were completed after trial runs on six mines and five quarries taking into account comments from auditors and miners alike. The SDI indicators produced were based on six (6) criteria and 54 elements. The criteria comprise legal compliance, best practices (legal action not provided), rules, benefits (economic and social impacts), green practices, social and corporate responsibility and aesthetic value. Each criterion has a weighting and assessment element.

The audit team will provide a weighted score based on the criteria and the results element. Overall scores obtained by audited mines and quarries are presented to management for star rating purposes.

In 2016, the auditing process was conducted on 21 bauxite mines in Pahang. The selection for bauxite mines was made because at that time there was a newly imposed moratorium on the bauxite mining activity in Pahang State. The main purpose of the audit was to look at the "health" level of the bauxite mines at that time. In 2017, the auditing process was conducted on 13 quarries and 26 mines in Kelantan. While in 2018, the auditing process was conducted on 35 quarries operating in Simpang Pulai, Perak. In 2019, the exercise is on quarries and mines in the states of Negeri Sembilan and Melaka. The sustainability audit is carried out on mining and quarrying premises and sites by the auditors' team comprising of JMG officers and support staffs who have been trained first. The Star rating not only assesses and measures the sustainability performance of mining and quarrying activities in Malaysia but also a formal recognition to outstanding companies as well as extending the publicity on the policies, strategies and best

²⁰ JMG is *Jabatan Mineral Dan Geosains*, The Department of Minerals and Geoscience Malaysia, is one of the government departments under the Ministry of Water, Land and Natural Resources Malaysia (KATS).

practices undertaken by the industry. Indirectly this rating promotes healthy competition among mining and quarrying industry operators in Malaysia.

- 2.7 References:**
- <https://www.jmg.gov.my/>

National Mineral Policy

- 3.1 Name:** National Mineral Policy
- 3.2 Type of initiative:** Standard tool
- 3.3 Scope:** Specific for mining industries
- 3.4 Area of development:** (2) Environmental protection – (3) Social protection and development
- 3.5 Trajectory:** From January 2009 onwards
- 3.6 Description:**

Sustainable National Mineral Policy 2 (NMP2) provides the foundation for the sector to pursue with good mining practices to ensure a balance between economic prosperity, social well-being and environmental protection.

In addition, to ensure that the NMP2 objectives are achieved, nine main thrusts were introduced, namely:

1. Expansion of the Mineral Sector
2. Conducive Business Climate
3. Environmental Stewardship
4. Research and Development (R&D) Enhancement
5. Human Resources Development
6. Establishment of Integrated Mineral Information
7. Community Involvement and Social Responsibility
8. Promotion, Marketing and Branding
9. Publicity and Public Relations

Policy Statement of NMP2: To enhance the contribution of the mineral sector to the socio-economic development of the nation through the efficient, responsible and sustainable development as well as the optimum utilization of mineral resources.

The objectives of NMP2 are as follows:

To ensure the sustainable development and optimum utilization of mineral resources.

To promote environmental stewardship that will ensure the nation's mineral resources are developed in an environmentally sound, responsible and sustainable manner.

To enhance the mineral sector's competitiveness and advancement in the global arena.

To enhance the use of local minerals and promote the further development of mineral-based products.

To encourage the recovery, recycling and reuse of metals and minerals.

There are three Master Plans formulated under the NMP2, namely:

- Mineral Development Master Plan
- Quarry Industry Development Master Plan
- Mines and Quarries Rehabilitation Master Plan

- 3.7 References:**
- <https://www.jmg.gov.my/>
 - <https://www.jmg.gov.my/en/38-mengenai-kami/dasar-jabatan/19-dasar-mineral-negara-2>

Mining and Quarrying Legal Framework

- 4.1 Name:** Mining and Quarrying Legal Framework
- 4.2 Type of initiative:** Law
- 4.3 Scope:** Specific for mining industries
- 4.4 Area of development:** (2) Environmental protection – (3) Social protection and development
- 4.5 Trajectory:** The mining activities are governed in Malaysia by two main legislations consisting of the Mineral Development Act 1994 (MDA) for the Federal Government and the State Mineral Enactment (SME) for respective State Government. Quarrying sectors is regulated by Quarry Rules.

4.6 Description:

The mining activities are governed in Malaysia by two main legislations consisting of the Mineral Development Act 1994 (MDA) for the Federal Government and the State Mineral Enactment (SME) for respective State Government. Quarrying sectors is regulated by Quarry Rules.

The MDA 1994 defines the powers of the Federal Government to regulate exploration, mining and related activities on mineral, including authority to conduct inspections. This Act came into force on 1st August 1998.

Meanwhile, SME gives state government the powers related to land matters including issuance of mineral tenements. All states have enacted the SME, except Sabah and the Federal Territory of Kuala Lumpur. Mining activities in Sabah are subject to the Sabah Mining Ordinance 1960, and for the Federal Territory of Kuala Lumpur mining activities are subject to Mining Enactment Chapter 147. Whereas, mining activities in Sarawak are enforced under the Sarawak Mineral Ordinance 2004 (a modified version of the SME).

As stipulated under the Act, every mining operation in Malaysia must have valid Letter of Approval for Operational Mining Scheme issued by Minerals and Geoscience

Department Malaysia before commencing any development work or mining activities in the mining lease or proprietary mining license areas.

There are five regulations under this Act, which are gazetted and enforced, namely:

- Mineral Development (Operational Mining Scheme, Plans and Record Books) Regulations 2007;
- Mineral Development (Blasting) Regulations 2013;
- Mineral Development (Safety in Exploration and Surface Mining) Regulations 2015;
- Mineral Development (Licensing) Regulations 2016;
- Mineral Development (Effluent) Regulations 2016;
- Mineral Development (Statistical Returns) Regulations 2019; and
- Mineral Development (Compounding of Offenses) Regulations 2019.

A few other regulations are being formulated such as Underground Mining.

- 4.7 References:**
- <https://www.jmg.gov.my/>

Best practices and guidelines on mining and quarrying industry

- 5.1 Name:** Best practices and guidelines on mining and quarrying industry
- 5.2 Type of initiative:** Guidelines
- 5.3 Scope:** Specific for mining industry
- 5.4 Area of development:** (2) Environmental protection
- 5.5 Trajectory:** Published on 2018
- 5.6 Description:**

At the end of 2018, a series of Best Practices and Guidelines on Mining and Quarrying Industry is produced which covers all stages of mining and quarrying processes from initial development to closure.

The series consist of:

- Guidelines on Fieldwork Safety
- Guidelines on Investigation and Prosecution (Mining)
- Guidelines on Investigation and Prosecution (Quarrying)
- Guidelines on Mine and Quarry Rehabilitation
- Guidelines on Environmental Management during Mineral Exploration
- Best Practices on Blasting in Mining and Quarrying Industry

- Best Green Practices on Energy and Water Consumption in Mining and Quarrying Industry
- Best Practices on Mineral and Rock Transportation in Mine and Quarry
- Best Practices on Visual and Aesthetic Impact in Mining and Quarrying

It is hoped to serve as a useful guide for the industry towards sustainable resource management in Malaysia.

- 5.7 References:**
- <https://www.jmg.gov.my/>

Tin Industry (Research and Development) Board

- 6.1 Name:** Tin Industry (Research and Development) Board
- 6.2 Type of initiative:** Public body
- 6.3 Scope:** Specific for mining industries
- 6.4 Area of development:** (1) Economic development - (4) Training Programs
- 6.5 Trajectory:** The Tin Industry (Research and Development) Board (Tin Board) was established under Section 4 of the Tin Board (Research and Development) Fund Ordinance No. 58 of 1953.

6.6 Description:

The Tin Industry (Research and Development) Board (Tin Board) was established under Section 4 of the Tin Board (Research and Development) Fund Ordinance No. 58 of 1953. In March 1991, the Ordinance was amended and published as a revised legislation entitled Tin Industry (Research and Development) Fund Act No.455 of 1953.

The Act provides for the collection of cess on export of tin from Malaysia. It also establishes a Fund into which money collected as cess is to be paid into.

The Act also establishes a Board to administer and manage the Fund for the purpose of funding research, development, publicity and other activities for the benefit of the Malaysian tin industry. As from 16 July 2013, the cess has been fixed at the rate of 40 cents per kilo of tin concentrates.

The Tin Board started operations in 1954 and is responsible to the Ministry of Natural Resources and Environment (currently known as Ministry of Energy and Natural Resources). The primary objectives of the Tin Board are to stimulate, popularize and extend the consumption and uses of tin, to publicize and disseminate information on tin production, characteristics and availability, to undertake other activities that will benefit the tin industry, and to help develop a fully integrated tin-based products manufacturing industry.

The Tin Board continued to conduct research and development (R & D) programs in earnest throughout the year. While the Tin Board does not carry out this activity directly, it encourages and facilitates R & D efforts primarily at universities and research institutes locally. It follows the same business model as ITRI Ltd, UK. Under this business model, the Board will act as facilitators and supporters in providing relevant relationships with various universities and research institutions as well as encouraging them to share with each other in leveraging their research work. In this way, there is no substantial allocation required to finance the R & D business. Tin board also collaborates with various related industry organizations, such as the Malaysian Mining Chamber (MCOM), in efforts to run R & D programs related to promoting and improving the use of tin and its applications. Tin Board has extended its MoU with ITRI on May 18, 2017 for another five years to implement strategic partnerships in tin R&D.

Tin Board also paid serious attention to human capital development in recent years to ensure a stable workforce for the mineral resources industry. Throughout the year the report, together with MCOM, has continued to communicate with local universities offering mineral and geoscience-related programs towards developing and strengthening the appropriate level of skills in human capital for the needs of the industry. The consultation with Universiti Malaysia Pahang (UMP) has been continued throughout the year to help provide suitable modules for the Master's degree program in mining engineering and mineral processing to be launched soon.

In its efforts to further promote capacity building and information sharing in responsible mining, Tin Board has provided financial support and jointly organized Sustainable and Responsible Sustainable Mineral Resource Development Conference in Malaysia, themed Mining Today's Responsible for Better Tomorrow's Day which has taken place from 4 until December 5, 2017 in Kuantan, Pahang. The event was well-received and attracted about 270 participants from various organizations, academicians and government officials and private sector from across the economy. The proceeds from this Conference are eleven Resolutions submitted to the relevant Federal and State Governments in 2018 for consideration and action.

- 6.7 References:**
- <https://www.mcom.com.my>

Malaysia Smelting Corporation Berhad (MSC)

- 7.1 Name:** Malaysia Smelting Corporation Berhad (MSC)
- 7.2 Type of initiative:** Private organization
- 7.3 Scope:** Specific for mining industry
- 7.4 Area of development:** (1) Economic development

7.5 Trajectory: The Malaysia Smelting Corporation Berhad (MSC) is an integrated producer of tin metal and tin based products and a global leader in custom tin smelting since 1887.

7.6 Description:

The Malaysia Smelting Corporation Berhad (MSC) is currently one of the world's leading integrated producers of tin metal and tin based products and a global leader in custom tin smelting since 1887.

In 2017, the Group produced 27,172 tonnes of tin metal thus maintaining its position as the third largest supplier of tin metal in the world. MSC's smelting facility in Butterworth operates one of the lowest cost smelting plants in the world, converting primary, secondary and often complex tin bearing ores into high purity tin metal for industrial application. The plant has a production capacity of approximately 40,000 tonnes of refined tin a year and still uses reverberatory furnace technology. But this may change as the plant is preparing to introduce modern smelting technology using Top Submerged Lance. ("TSL") furnace.

Malaysian tin miners can sell the extracted tin ore directly to MSC. In term of royalty payment to the State, for example the State of Perak, the MSC has an understanding with the tin miners in facilitating the miner to pay royalty directly to the state by deducting from the tin ore payments that were sent to MSC for smelting.

7.7 References: • <https://www.msmelt.com>

SME Bank of Malaysia

8.1 Name: SME Bank of Malaysia

8.2 Type of initiative: Private organization

8.3 Scope: Transversal to several industries

8.4 Area of development: (1) Economic development

8.5 Trajectory: From 2005 onwards

8.6 Description:

SME Bank was established in 2005 is now one of the nation's leading Development Financial Institution (DFI) wholly-owned by the Ministry of Finance and regulated by Bank Negara Malaysia (BNM). SME Bank is fully committed in driving the nation's economic growth by providing not only financing assistance, but also development expertise to small and medium scale enterprises, allowing those businesses to prosper and grow.

The Bank plays an important role in supporting the Malaysian Government's economic and development initiatives such as the National Key Economic Areas (NKEAs) (2010-2020) and the Financial Sector Blueprint (2011-2020).

Over the last decade, the Bank has progressed tremendously in its operations and also human capital developments delivered through its strategic Five-Year Transformation Plan which among others saw the Bank becoming an Islamic Principle Based DFI in 2015.

Moving forward, the Bank aims to strengthen its position as the preferred financial partner for the SMEs.

- 8.7 References:**
- <https://www.smebank.com.my>

Monthly Statistical Data Collection Form for Mining and Quarrying Industry

9.1 Name: Monthly Statistical Data Collection Form for Mining and Quarrying Industry

9.2 Type of initiative: Public organization

9.3 Scope: Specific for mining industry

9.4 Area of development: (5) Women participation

9.5 Trajectory: From January 2019 onwards

9.6 Description:

In line with the United Nation Sustainable Development Goals SDG 5 Gender Equality, the JMG has start collecting data on women working in mining and quarrying sector starting in Jan 2019.

The data for the year 2019 showed that less than 2% from the total of 16,500 workers of mining and quarrying sector in Malaysia (excluding oil & gas sector) are women.

Most of the women workers in mine are employed as machineries operators or drivers. Only small portion works as geologist, mining engineer as well as safety & environment officers.

JMG is actively encourage more women to take up careers in mining & quarrying industry in line with the Ministry of Women, Family and Community Development of Malaysia National Women Policy that emphasize on five clusters which is Women and Health Cluster, Women Cluster and Safety, Cluster Women and Economy, Women and Education Cluster and Women Cluster and Culture. The Ministry is committed to ensuring that women are exposed to information, knowledge and opportunities in generating and becoming competitive in meeting the challenge of Industry Revolution 4.0.

- 9.7 References:**
- <https://www.jmg.gov.my>
 - <https://www.kpwkm.gov.my>

Human Resources Development Fund - HRDF

10.1 Name: Human Resources Development Fund

10.2 Type of initiative: Private Fund

10.3 Scope: Transversal to several industries

10.4 Area of development: (5) Training programs

10.5 Trajectory: From 2001 onwards

10.6 Description:

The Human Resources Development Fund (HRDF) was established under the legal requirements of the Human Resources Development Act 1992 (currently known as the Pembangunan Sumber Manusia Berhad (PSMB) Act 2001).

HRDF was established with the aim of developing quality human capital and world-class workforce in order for Malaysia to achieve a high-income economy based on knowledge and innovation

The HRDF is a pool of funds that consists of Human Resources Development levies collected from employers of the manufacturing and service sectors as listed in the First Schedule of the PSMB Act 2001 (liable registrants) as well as optional registrants. All employers in Mining & Quarrying sectors are mandatory to register with PSMB.

According to Section 14(1) of PSMB Act, 2001 a HRD levy, mandatory levy payment imposed by the Government on specified groups of employers for the purpose of employee training and skills upgrading shall be paid by every employer to whom the PSMB Act, 2001 applies. Employers are liable to pay a Human Resource Development levy for each working employee at the rate of 1.0% of the monthly wages of the employee.

Training grants are open to all employers registered and/or incorporated in Malaysia who have registered with PSMB and pay the HRD levy as to defray all or a major portion of the costs incurred in employee training. Financial assistance is given to employers that conduct training that is in line with their business operations.

10.7 References:

- <https://www.hrdf.com.my>

The Social Security Organization - SOCSO

11.1 Name: The Social Security Organization

11.2 Type of initiative: Public organization

11.3 Scope: Transversal to several industries

11.4 Area of development: (3) Social protection and development

11.5 Trajectory: The Social Security Organisation (SOCSO) was established to administer, implement and enforce the Employees' Social

Security Act 1969 and the Employees' Social Security (General) Regulations 1971.

11.6 Description:

The Social Security Organisation (SOCSO) was established as one of the government departments in Malaysia under the Ministry of Human Resources to administer, implement and enforce the Employees' Social Security Act 1969 and the Employees' Social Security (General) Regulations 1971.

On 1 July 1985, SOCSO's status was changed to a Statutory Body and since 1 January 1992, SOCSO has implemented its own remuneration system known as the Sistem Saraan Baru PERKESO.

Functions and Roles: The notion of SOCSO Social Security Protection is based on the concept of joint responsibility through the pooling of resources, sharing of risk and replacement of income. Social security protection is a basic need that must be fulfilled as agreed upon in the International Labour Organisation (ILO) Convention 1952, namely, Convention 102: Minimum Standards for Social Security. In meeting the goal, the main function of SOCSO is to provide social security protection to employees and their dependents through the Employment Injury Scheme and the Invalidity Scheme.

The Employment Injury Scheme provides protection to employees against occupational injuries including occupational diseases and commuting accidents. The Invalidity Scheme provides 24-hour protection to employees against invalidity or death due to any cause outside working hours and not related to employment. Both schemes provide cash benefits to employees and their dependents in the event of unforeseen incidents, in addition to providing medical treatment, physical rehabilitation or vocational training. SOCSO also conducts implements accident prevention activities through occupational safety and health awareness programmes among employees and employers.

Self-Employment Social Security Act 2017 (Act 789): The Self-Employment Social Security Act 2017 (Act 789) came into force on 1 June 2017. Currently, this Act provides protection under the Self-Employed Employment Injury Scheme to self-employed individuals. The rate of contribution is 1.25% per month from the insured salary option.

Employment Insurance System Act 2017 (Act 800): SOCSO reached a milestone when the Employment Insurance System Act 2017 (Act 800) was introduced and enforced from 28 December 2017 with the aim to provide protection and assist workers who have lost employment through two (2) main components namely, the Employment Insurance and Active Labour Market Policies. The Employment Insurance System (EIS) provides protection to workers who have lost their employment through income replacement,

reskilling and upskilling training to enhance their employability as well as employment services so that they can secure other suitable jobs faster.

Extension of Social Security Coverage Spouse: Effective from 1 July 2018, SOCSO has expanded its social security protection to cover husbands or wives working for their spouses in an enterprise under Act 4 and Act 800. With the extension of the social security protection, eligible wives or husbands who are employed by their respective spouses to work in enterprises under Act 4 and Act 800 will be protected by social security schemes under both Acts.

Foreign Workers: SOCSO has also extended its coverage for to all legal foreign workers (excluding domestic servants) in Malaysia, effective 1 January 2019, whereby they will be covered by Employment Injury (EI) Scheme under Act 4. The EI Scheme provides protection to employees against occupational accidents or diseases arising out of and in the course of his employment as well as commuting accidents.

- 11.7 References:**
- <https://www.perkeso.gov.my>

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Eleventh Plan Malaysia	Plan	Transversal	X	X	X	
2	Sustainable Development Indicators	Standard Tool	Specific		X		
3	National Mineral Policy	Policy	Specific		X	X	
4	Mining and Quarrying Legal Framework	Laws	Specific		X	X	
5	Best Practices and Guidelines on Mining and Quarrying Industry	Guidelines	Specific		X		
6	Tin Industry (Research and Development) Board	Public body	Specific	X			X
7	Malaysia Smelting Corporation Berhad	Private organization	Specific	X			
8	SME Bank of Malaysia	Private organization	Transversal	X			
9	Monthly Statistical Data Collection Form for Mining and Quarrying Industry	Public body	Specific				X
10	Human Resource Development Fund	Private Fund	Transversal				X
11	The Social Security Organization	Public organization	Transversal			X	

MEXICO

GENERAL CONTEXT

Mexico is a historically mining economy, given the great diversity of mining deposits that it has throughout the domestic territory. The great geological-mining wealth existing, has allowed the exploitation of its deposits from the ancient inhabitants of Mexico who used to adorn and protect their bodies with medallions, masks, breastplates and earrings, as well as using tools and vessels made with metals such as gold and the silver, which they obtained from mineral deposits that they found very superficially.

With the Spanish conquest mining activity begins to emerge in a more organized way with the discovery of new deposits, which has led to this activity continues for more than 500 years in an uninterrupted way to the present, as is the case of deposits of silver from the Mining Districts of Guanajuato, Zacatecas, Chihuahua and Guerrero, among others.

The domestic territory contains abundant and diversified mineral wealth, with: Silver, Fluorite, Celestite, Bismuth, Molybdenum, Lead, Zinc, Copper, Barite, Gold, Gypsum, Coal, Iron and Manganese, among the most important.

70% of the Mexican territory is susceptible to developing mining projects and the granted concessions only cover 11% of the domestic territory, corresponding to an area of 25.1 million hectares²¹.

Mining development trust fund

- 1.1 Name:** Mining development trust fund
- Original name:** Fideicomiso de Fomento Minero (FIFOMI)
- 1.2 Type of initiative:** Private organization
- 1.3 Scope:** Specific for mining industry
- 1.4 Area of development:** (1) Economic development – (4) Training programs
- 1.5 Trajectory:** From 1961 onwards
- 1.6 Description:**

In 1934, was created the Mining Development Commission (COFOMI). After that, in 1961, was created the National Fund Trust, and in the same year, this was transformed to create the Mexican Non-Metallic Minerals Trust Fund. Later, in 1990, the Mining Development Trust Fund was finally created. This body replaces the previous one created on the year 1961, and also including also metal mining. Finally, in 1993, FIFOMI absorbed COFOMI to be what it is today.

²¹ Source of the context: <https://www.gob.mx/fifomi/articulos/contexto-de-mexico-en-la-mineria?idiom=es>

FIFOMI offers three main services. These are: Financing, training, and technical assistance. All of them have as their main objective to support mining development, especially the smaller scale mining.

Financing: This tool aims to finance all those projects whose productivity activity has something to do with exploitation, extraction, benefit, industrialization, distribution, commercialization and rendering of service, to the Domestic mining and its productive chain; understood as a productive chain to manufacturers, customers, suppliers, distributors and marketers. Funding can be obtained for infrastructure, equipment, and working capital, through different financing instruments.

Training: This service contemplates a previous detection of training needs, among those who work in something related to mining activity. In this regard, an annual plan is created. It contains courses and its characteristics (places, schedules, demands), so people can register and participate. Those courses cover topics such as: risk, administration, and finance, resources, human capital, safety and hygiene, civil protection, quality, information Technology, and mining processes, among others.

Technical Assistance: Its objective is to achieve an efficient operation in small and medium mining projects to have something to do with: exploration, exploitation, mineral benefit and product commercialization. Assistance is provided to small and medium-sized mining companies, as well as to financial institutions and investors. There is a technical team (geologists, miners and metallurgists) that serves those who request it throughout Mexico.

The subject addresses in the technical assistance are:

- Mining concessions: how to obtain them, characteristics, procedures, etc.
- Prospecting or exploration: support to find potential deposits.
- Exploration: characterization of the found deposit.
- Construction and exploitation: characterization of the type of rock, identification of the best way to operate (underground or open sky), help in decision making regarding infrastructure and mining and metallurgical facilities.
- Metallurgical processes: understanding the processes and their operation.

To access this assistance, the miner must apply at the offices of FIFOMI.

1.7 References:

- <https://www.gob.mx/fifomi>
- https://www.gob.mx/cms/uploads/attachment/file/175828/INFORME_FIFOMI_2015_.pdf
- https://www.fifomi.gob.mx/WEB/INFORE_2017_FIFOMI.pdf

Gender point

- 2.1 Name:** Puntogénero: formación para la igualdad
- 2.2 Type of initiative:** Program
- 2.3 Scope:** Transversal to several industries
- 2.4 Area of development:** (4) Training programs – (5) Women participation
- 2.5 Trajectory:** From 2016 onwards
- 2.6 Description:**

The “Instituto Nacional de las Mujeres” (Women Domestic Institute in English) was created in Mexico in 2001. It has its headquarters in Mexico City and reports directly to the presidency. The program Puntogénero belongs to this institute. Although the program is not specific for mining, this sector does benefit.

It is a space that promotes training and training strategies through face-to-face and online courses. Training programs are for both men and women and have the purpose of certify and train their skills. In the platform web page, there is information available of calls, agendas, profiles, schedules, requirements, and step-by-step instructions to register in both modalities: online or face-to-face. People also have free access to educational materials linked to gender equality, and free from violence and discrimination environments.

- 2.7 References:**
- <http://puntogenero.inmujeres.gob.mx/>
 - <https://www.gob.mx/inmujeres/acciones-y-programas/puntogenero-formacion-para-la-igualdad?idiom=es>

Fund for the Regional Sustainable Development of State and Municipal Mining

- 3.1 Name:** Fund for the regional sustainable development of state and municipal mining
- Original name:** Fondo para el desarrollo regional sustentable de estados y municipios mineros
- 3.2 Type of initiative:** Fund
- 3.3 Scope:** Specific for mining industry
- 3.4 Area of development:** (3) Social protection and development
- 3.5 Trajectory:** From 2015 onwards
- 3.6 Description:**

In 2014 there was a tax reform proposed by the Federal Executive, which establishes the payment of special, additional and extraordinary rights for mining companies, with the reform to the Federal Law of Rights. These contributions represent important

resources for states and municipalities that translate into benefits for their communities, since the Regional Development Fund constitutes 80% of the revenue generated by the new tax rights. With this collection of the payment of the rights, the realization of social infrastructure work has been able, with the objective of raising the quality of life of the inhabitants in the mining extraction areas, with the purpose of compensating some of the effects of the mining activity in favor of the inhabitants that in these regions inhabit. The allocation of resources is determined based on the percentage of the value of the extractive activity of the corresponding municipality or demarcation, with respect to the total value of the extractive activity in the domestic territory, according to the statistical record of mining production that for this purpose the Ministry of Economy prepare in the corresponding year. The resources must be used in terms of article 271 of the Federal Law of Rights, in physical investment with a positive social, environmental and urban development impact.

- 3.7 References:**
- <http://congresominerosonora.com/wp-content/uploads/2018/09/35-AGUIRRE.pdf>

Mexican Mining Chamber

- 4.1 Name:** Mexican Mining Chamber
- Original name:** Cámara Minera de México
- 4.2 Type of initiative:** Private body
- 4.3 Scope:** Specific for mining industry
- 4.4 Area of development:** (1) Economic development
- 4.5 Trajectory:** From 1906 onwards
- 4.6 Description:**

According to CAMIMEX itself, its mission is: «Group, coordinate, represent and defend the interests of the Mining Industry before the different instances of Government and other agencies, as well as to provide information, training, management and support services to promote integral development of the industry. »

Their objectives are:

- Represent the general interests of the mining-metallurgical industry.
- Promote the development of the domestic mining-metallurgical industry; ensure its members access to programs aimed at the development of trade and industry in the sector.
- Participate in the defense of the private interests of its affiliates without more limitations than those indicated in the Law of Business Chambers and their Confederations and provide them with the services indicated in these statutes.

- Represent their affiliates before federal and local authorities and exercise the functions necessary to carry out the objects listed above.
- Act, through the Commission for that purpose, as arbitrator or arbitrator in conflicts between its members, if they submit to the Chamber in compromise that will deposit them before him.
- Perform, in accordance with the applicable provisions, the syndicate in the bankruptcies of its associates.
- Promote coordination and integration with the Chambers, of local and regional associations and associations of the branch, in order to strengthen the sectorial representation.

- 4.7 References:**
- <https://mineriaenlinea.com/articulos/camara-minera-de-mexico/>
 - <https://justiceprojectdotorg1.files.wordpress.com/2017/08/estudio-de-la-mineria-en-mexico-report.pdf>
 - <https://camimex.org.mx/>

Women in Mining Mexico

- 5.1 Name:** Women in Mining Mexico
- 5.2 Type of initiative:** Nonprofit organization
- 5.3 Scope:** Specific for mining industry
- 5.4 Area of development:** (5) Women participation
- 5.5 Trajectory:** From 2016 onwards
- 5.6 Description:**

This organization born with the purpose of promoting initiatives that promote the equality of opportunities and working conditions of women in the mining industry of Mexico; and with the inclusive vision and focused on spreading good practices and the image of mining as a strategic sector for economic development that contributes positively from remote communities and the progress of their families, to the economy itself.

This organization pursues to be the main platform for the promotion of gender equity and its benefits in the Mining Sector with the mission of implementing initiatives that improve gender balance throughout in the mining industry and promote development Women's professional in mining.

- 5.7 References:**
- <http://wimmexico.org.mx/>

SUMMARY

TOOL		CATEGORIES						
Name		Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Mining development trust fund (FIFOMI)	Private	Specific	X			X	
2	GenderPoint	Program	Transversal				X	X
3	Fund for the Regional Sustainable Development of State and Municipal Mining	Fund	Specific			X		
4	Mexican Mining Chamber	Private-body	Specific	X				
5	Women in Mining Mexico	Nonprofit organization	Specific					X

NEW ZEALAND

GENERAL CONTEXT

New Zealand is prospective for a wide range of minerals, including coal, gold, silver, and titanomagnetite ironsand. A number of other industrial rocks and minerals are produced for local and export markets - including bentonite, various clays, diatomite, perlite, pumice, serpentine, silica and zeolite.

There are approximately 1,000 mineral exploration and mining permits including more than 20 permits for larger scale mining operations extracting coal, gold and aggregates. The vast majority of permits however are for smaller-sized operations²².

The Crown Minerals Amendment Act 2013

- 1.1 Name:** The Crown Minerals Amendment Act 2013
- 1.2 Type of initiative:** Law
- 1.3 Scope:** Transversal to several industries
- 1.4 Area of development:** (1) Economic development - (2) Environmental protection
- 1.5 Trajectory:** From May 2013 onwards
- 1.6 Description:**

The Crown Minerals Amendment Act 2013 sets up a two tier system to focus the regulatory effort on those mining activities which are more complex and offer the highest returns to the government: petroleum (oil and gas), hard rock gold and silver, coal and iron sands, phosphates and sulphides. The Act sets out the legislative framework for prospecting, exploration and mining of Crown minerals in New Zealand. It also sets out the process for permit holders to negotiate land access arrangements to Crown lands. In 1997, the New Zealand Government added Schedule 4 to the Act to prohibit most access for exploration and mining of Crown minerals to particular tracts of conservation land and marine reserves on the basis of the high conservation values of those areas. In August 2009, the Minister of Energy and Resources and the Minister of Conservation directed officials to carry out a stocktake of Schedule 4-listed land. The purpose of the stocktake was to identify areas where current knowledge of the geology of the area indicated that the potential high economic value of the minerals to New Zealand warranted a case-by-case consideration of proposals for exploration and mining in the area within the context of a discussion about the conservation, tourism, cultural and other values of the area.

- 1.7 References:**
- <https://www.chapmantripp.com/Publication%20PDFs/Regulatory%20platform%20for%20mining.pdf>

²²Source of the context: <https://www.nzpam.govt.nz/doing-business/investing-minerals/resources-potential/>

Straterra

- 2.1 Name:** Straterra
- 2.2 Type of initiative:** Collective
- 2.3 Scope:** Specific for mining industry
- 2.4 Area of development:** (1) Economic development - (2) Environmental protection - (5) Women participation
- 2.5 Trajectory:** From 2008 onwards
- 2.6 Description:**

Straterra was formed in 2008 as an incorporated society to provide a collective voice for the New Zealand resource sector. Straterra achieves this objective by engaging with officials, politicians, industry and other interests; participating in policy and legislative processes; and via advocacy and communications. Straterra also works with its membership, and industry more generally, to prepare policy analysis, and advocacy of an optimal standard. Straterra is seeking changes to policy, regulation and legislation; improvements to the labour market; and a better understanding of prospecting, exploration and mining in New Zealand; to improve New Zealand's attractiveness for investment in the resource sector, and to benefit "New Zealand Inc" – the economy, society, environment and conservation, and the resource sector.

Straterra believes the minerals sector makes a significant contribution to New Zealand, and, properly managed and encouraged, that there is good potential for an increase in this contribution. We believe that exploration and mining can and should be done meeting high standards of environmental and social responsibility, and of health & safety, and risk management. We believe the minerals sector makes a positive and essential contribution towards Green Growth.

Straterra operates in a principled and ethical way, in the conviction that our effectiveness depends on being seen to be a valued and trusted stakeholder in New Zealand's future. This is in the interests of the resource sector, and, ultimately, of all New Zealanders.

Also, on April 2019 Women in Extractives Network New Zealand (WENNZ) was launched, and its aim is to increase the number of women in the industry, enhance their visibility, and to enable networking opportunities and support in the sector. It also seeks to promote diversity and inclusion by creating pathways and to assist in increasing the network of wahine toa at all levels, across New Zealand's mining, quarrying and drilling sectors.

- 2.7 References:**
- <https://www.straterra.co.nz/assets/Our-Charter-Hi-Res.pdf>
 - <https://www.straterra.co.nz/about/women-in-extractives-network-wennz/>

SUMMARY

TOOL		CATEGORIES						
Name		Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	The Crown Minerals Amendment Act 2013	Law	Transversal	X	X			
2	Straterra	Collective	Specific	X	X			X

PAPUA NEW GUINEA

GENERAL CONTEXT

Papua New Guinea undoubtedly is a mining state, with mineral export revenues driving the economy and services, with almost 7 million people spread over a land area of 462,840 km², and a GDP of US \$ 1900 per capita. It is endowed with vast natural resources in all sectors, in minerals, oil & gas, agriculture, forestry, and fisheries.

The mineral wealth of Papua New Guinea is the result of its geology; based on anomalies from past and current exploration efforts, it can offer to explorers the opportunity to multi element discoveries, including gold, copper, rare earth elements, nickel, cobalt, chromium, molybdenum, iron and platinum.

The mineral sector in Papua New Guinea is vibrant and progressive, with sector being by far the major contributor to the GDP, providing more than one third of government tax revenue, as well as royalties to landowners, dividends to equity holders, business development income, and many tangible benefits to host communities that would not otherwise be provided from any source²³

Papua New Guinea Chamber of Mines and Petroleum

- 1.1 **Name:** Papua New Guinea Chamber of Mines and Petroleum
- 1.2 **Type of initiative:** Nonprofit organization
- 1.3 **Scope:** Transversal to several industries
- 1.4 **Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development - (4) Training programs
- 1.5 **Trajectory:** From 1987 onwards
- 1.6 **Description:**

The Papua New Guinea Chamber of Mines and Petroleum is a nonprofit, peak industry association that represents the interests of the mining and petroleum industry and associated industries in Papua New Guinea.

Since its establishment in 1987, the Chamber has gained the respect of both the business community at large, the civil society, the industry itself and the Government over its 30 years of evolution.

Apart from hosting international and domestic conferences, workshops and seminars, and producing industry relevant publications, the Chamber provides the interface between Government and the industry on key policies and legislations that impact the industry and the economy.

²³ Source of the context: <http://www.mra.gov.pg/>

To promote the mineral and petroleum exploration potential of Papua New Guinea and the development of a world-class sustainable resources industry that provides benefit streams to improve the welfare of all Papua New Guineans.

The Chamber:

- Promotes world-class, sustainable mineral and hydrocarbon exploration, production, processing and supporting industries in Papua New Guinea that are profitable, safe, environmentally and socially responsible, responsive to the welfare of impacted communities, and committed to the wellbeing and prosperity of current and future generations of Papua New Guinea;
- Is the representative voice for the mining and petroleum industry in Papua New Guinea. One of the principal roles of the organization is to promote and support the industry by presenting to government and the community the concerns and issues facing the industry along with proposals to address these issues, and to advocate for beneficial changes to both existing and proposed new legislation and policy that affect the mining and petroleum sectors.
- Performs the vital role of informing and educating the wider community and increasing public awareness of the activities and benefits of the mining and petroleum industry. The organization informs the public of the industry's obligations and commitments which are effectively monitored and controlled by the Government.
- Implements a wide range of other programs to promote and support the industry, assist members, and educate and inform the public, including media and public relations activities, education programs, publications, conferences and seminars, workshops, and international industry promotions. The Chamber's flagship conference is the biennial PNG Mining and Petroleum Investment Conference convened in Sydney.
- Keeps members informed by publishing a "bi-monthly newsletter", which is also widely circulated to politicians, senior public servants, business and media organizations. The organization also produces and supports technical publications for the benefit of members.
- Cooperates with and supports educational and training institutions regarding technical and professional courses and research programs of importance to the industry.

1.7 References:

- <http://www.pngchamberminpet.com.pg/who-we-are/what-we-do/>

Small Scale Mining Branch (SSMB)

- 2.1 Name:** Small Scale Mining Branch (SSMB)
- 2.2 Type of initiative:** Public body
- 2.3 Scope:** Specific to mining industry
- 2.4 Area of development:** (1) Economic development - (2) Environmental protection - (4) Training programs
- 2.5 Trajectory:** From 1999 onwards
- 2.6 Description:**

Under the Mineral Resources Authority (MRA) Structure, The Small-Scale Mining Branch is established under the Development Coordination Division. The SSMB's objective is to develop the Small-Scale Mining (SSM) sector in a sustainable manner with minimum impact on the environment and community for the benefit of the landowners and the economy.

Their goals are:

- Empower target groups including miners (role models) and government officers through quality training
- Develop a standard land access and landowner's participation agreement
- Liaise with various governments agencies and donor agencies to build infrastructures that can open up the resource's areas
- Lift the profile of small-scale mining as a profitable business in order to obtain recognition from financial institutions
- Provide assaying and marketing assistance for miner to sell gold at a fair price
- Enforce compliance relating to environment and safety
- Seek donor funding to evaluate alluvial gold resources in PNG to increase the confidence of miners
- Promote sustainable investment using proceeds earned through SSM activities
- Do research and provide relevant training and technical support and appropriate technologies for miners
- Liaise with other government agencies and formulate sustainable strategies to stop illegal smuggling of gold;
- Provide network for miners and stakeholders to exchange information and form allies
- Provide systems and incentives to encourage miners to comply with the legal requirements and best practice
- Provide system for promoting tourist alluvial gold mines
- Attract non-traditional landowner investors in the small-scale mining sector;
- Develop mechanism for collecting data on the progress of the sector; and

- Train and develop the staff for mutual benefit and reward

Their initiatives are:

Initiative 1: Training & Development

- Construction of three (3) Small Scale Mining Schools in Wau, Porgera and Wewak
- Development of Small-Scale Mining Curriculum
- Provincial Outreach Training Programs (OTP)

Initiative 2: Regulatory and Compliance Audits

- Ensure SSM activities comply with all legal requirements
- Regular inspections of SSM sites
- Promotion of safe and best SSM practices
- Penalties to be imposed for non-compliance with legal and safety requirements

Initiative 3: Business Development Support

- Development of a strategic plan for the development of small-scale mining as a viable and sustainable business venture
- Research and develop policies for business development in small scale mining impacted communities
- Advice and coordinate the formation and registration of associations and corporative societies for small scale mining impacted communities
- Coordination of the establishment of microfinancial facilities for small scale miners
- Identify and coordinate networking between funding and technical support organizations and small-scale mining impacted communities
- Provision of advice to small scale miners on available investment opportunities in the Papua New Guinea and abroad
- develop marketing strategies for small scale miners to export gold to international markets

Initiative 4: Baseline Data

- Development and establishment of a database to record all information on the SSM sector
- Data will be used to develop the SSM sector

Initiative 5: Prospecting and Establishment of Alluvial Gold Districts

- Establishment of the value of alluvial gold reserves in placer deposit areas
- Coordination and effective use of SSM services
- Marketing purposes of alluvial gold potential in PNG

Initiative 6: Gold Assaying Laboratory

- Provision of access to better markets and fair gold price for miners
- Motivation for increasing alluvial gold production.

2.7 References:

- <http://www.mra.gov.pg/Portals/2/Publications/Brochures/DCD/SSMB.pdf>
- <http://www.mra.gov.pg/AboutUs/RegulatoryOperationsDivision/SSMB.aspx>

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	PNG Chamber of Mines and Petroleum	Nonprofit organization	Transversal	X	X	X	X
2	Small-Scale Mining Branch	Public body	Specific	X	X	X	X

PERU

GENERAL CONTEXT

Peru has a long mining tradition, with mineral revenues having been a major contributor to the economy's development. However, while its vast mineral wealth is contributing to economic growth, the benefits are not evenly distributed and regional inequality is increasing. This has contributed to the growth of a large ASM sector.

ASM in Peru is mostly of gold, with small numbers of people extracting copper depending on international prices. There is also some artisanal coal mining. ASGM experienced a surge in the 1980s due to internal war and economic crises, then again around 2007 due to an increase in international prices.

While there are no LSM developments in the Amazon region, there are high levels of ASM activity. Unfortunately, due to the nature of those activities, ASM has become associated with deforestation of the rainforest and mercury contamination, as well as crime and violence. This has contributed to an incoherent policy toward ASM and difficulties in formalizing miners, particularly in the Madre de Dios region of the Amazon²⁴.

Because Peru is one of the top 10 mineral rich economies in the world, Peru's economic development has long been associated with the export of minerals and precious metals. Currently, mining accounts for 24% of foreign direct investment. In 2016, Peru's total GDP was valued at around USD 192 billion. Of this, USD 36.9 billion (19%) was made up of exports, 50% of which was from mineral revenues. Thus, mining and oil production represented 14.36% of total GDP.²⁰¹ In 2016, copper was Peru's biggest export, representing 23.7% of all total exports by value and made up of USD 8.77 billion in ore and USD 1.38 billion in refined copper. Gold exports bring the government a further USD 6.25 billion, making up 16.9% of total exports, while zinc is the third biggest export at USD 1.22 billion. An increased output of minerals, especially copper, contributed to a surge in exports in 2016, despite the falling global price of these commodities.

Geological, Mining and Metallurgic Institute

- | | |
|---------------------------------|--|
| 1.1 Name: | Geological, Mining and Metallurgic Institute |
| Original name: | Instituto Geológico, Minero y Metalúrgico (INGEMMET) |
| 1.2 Type of initiative: | Public technical institution |
| 1.3 Scope: | Specific for mining industry |
| 1.4 Area of development: | (4) Training programs |
| 1.5 Trajectory: | From 1978 onwards |

²⁴ Source of the context: <https://beta.delvedatabase.org/uploads/resources/Delve-2019-State-of-the-Artisanal-and-Small-Scale-Mining-Sector.pdf>

1.6 Description:

INGEMMET was created in 1978 as a result of the union of Geology and Mining Institute (INGEOMIN) and Mining Scientific and Technological Institute (INCITEMI). This institution is a public decentralized institution from the mining and energy sector. INGEMMET performs and promotes research into Peru’s mineral, energy, and hydrogeological resources. It administrates, interpreters and disseminates Domestic geoscientific information: It is the official depository of all the mining geological information of Peru. It creates the geological maps in order to determinate areas of prospective interest for deposits of metallic minerals, to contribute with the updating of Peru’s Metal-genetic Map, and to contribute with geoscientific information needed for environmental care and territorial ordering.

INGEMMET has domestic and international agreements with universities, institutes and governments to support medium-sized mining. They develop activities of reciprocal cooperation to promote research, Technology transfer, training programs, Exchange of training, presentations of specialized goods and services, in fields related to earth sciences. It also develops studies to characterize the problems and the different factors that affect small-scale mining development, such as studies developed in some mining regions where mineralization and small-scale mining processes are evaluated.

- 1.7 References:**
- www.ingemmet.gob.pe

Technical Assistance to small-scale mining

- 2.1 Name:** Technical assistance to small-scale mining
- Original name:** Asistencia técnica a la pequeña minería (ATPM)
- 2.2 Type of initiative:** Public body
- 2.3 Scope:** Specific for mining industry
- 2.4 Area of development:** (4) Training programs
- 2.5 Trajectory:**
- 2.6 Description:**

ATPM is part of the Peruvian State policy to promote private mining-energy activities investment, in a competitive legal framework, within a sustainable development and encouraging research and training. To fulfill this purpose, INGEMMET (Geological, Mining and Metallurgic Institute) has developed a Permanent Technical Assistance Activity aimed at Small Mining Producers (PPM) and Artisanal Mining Producers (PMA), in coordination with the General Mining Direction (DGM).

The general objective is to provide technical assistance in mining prospection to PPM and PMA in areas where they are operating. The activity’s functions are:

Locate and geo-reference areas of high concentration of small and artisanal miners.

Locate the operations of small and artisanal miners in those areas.

Provide on-site mining-geological technical assistance regarding small and artisanal miners' prospecting.

Perform prospective geological work: collect ore samples from operations to recognize and describe the deposit, rock samples for prospecting purposes, mapping of hydrothermal alterations, etc.

Carry out surveys to feed the small and artisanal-scale mining database.

Disseminate ATPM, DRME (Mineral and Energetic Resources Direction) and INGEMMET activities in the mining communities as well as in the visited region universities and educational institutions.

- 2.7 References:**
- <http://www.ingemmet.gob.pe/asistencia-tecnica-productores-rme>

Law on equality of opportunities between women and men

- 3.1 Name:** Law on equality of opportunities between women and men
Original name: Ley de igualdad de oportunidades entre mujeres y hombres (Ley N°28,983)
- 3.2 Type of initiative:** Law
- 3.3 Scope:** Transversal to several industries
- 3.4 Area of development:** (5) Women participation
- 3.5 Trajectory:** From 2007 onwards
- 3.6 Description:**

In 1995, Peru signed the Beijing Platform agreements, concretizing its commitment to eradicate gender gaps and all forms of discrimination based on gender. Since 2001, the Peruvian Parliament has debated the equality of men and women. After a long period of debate, in 2007, Law N° 28.983 was promulgated.

This law is based on the fundamental principle of equity, respect for freedom, dignity, security, human life, as well as the recognition of the multi-cultural and multilingual character of Peru. The state promotes equality of opportunities between women and men, basically considering the following principles:

Recognition of gender equality, banishing practices, concepts, and languages that justify the superiority of one gender over other, as well as all types of discrimination or social exclusion.

The prevalence of human rights, highlighting rights of women throughout their life cycle.

Respect for multi-cultural, multi-lingual, and multi-ethnic reality, promoting social inclusion, inter-culturally, dialogue and exchange.

Recognition and respect for children, adolescents, Young people, adults and seniors, people with disabilities or most affected by discrimination age groups.

This law defines the framework for the implementation of policies, programs and actions to achieve equality between women and men. The law also makes Peru – at a regional and local level – to take concrete decisions to achieve everyone to exercise their rights without discrimination. It also requires monitoring and evaluate the decision-making process and the results of the public policies implemented, as well as mechanisms for their accountability.

However, gender gaps persist, and affect women’s physical, psychological, social and economic well-being (INEI 2015). Some of these gaps are sexual violence and homicides. It should be noted that gender gaps in health, education, work, political participation, access to identity, as well as multiple forms of discrimination against women persist in Peru (CEDAL 2013).

Although it is true that the problems of women in Peru do not respond to the lack of an international and Domestic regulatory framework that promotes gender equality, in terms of gender, mining and water resources productive sectors, lack protocols, guidelines and action plans, with a gender focus. This suggest that the mainstreaming and institutionalization of the gender approach in public policies is still an unfinished process.

- 3.7 References:**
- https://www.mimp.gob.pe/files/direcciones/dgfc/diff/normatividad_nacional_general/6_Ley_de_Igualdad_de_oportunidades.pdf
 - https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1388/Libro.pdf
 - <http://spij.minjus.gob.pe/Graficos/Peru/2012/Agosto/18/DS-004-2012-MIMP.pdf>

Agency for Environmental Assessment and Control

- | | |
|---------------------------------|--|
| 4.1 Name: | Agency for Environmental Assessment and Control |
| Original name: | Organismo de Evaluación y Fiscalización Ambiental (OEFA) |
| 4.2 Type of initiative: | Public body |
| 4.3 Scope: | Transversal to several industries |
| 4.4 Area of development: | (2) Environmental protection |
| 4.5 Trajectory: | From 2008 onwards |

4.6 Description:

OEFA promotes compliance with environmental obligations in economic agents and the improvement of the National Environmental Management System, in an articulated, effective and transparent manner, contributing to Peru's sustainable development.

Likewise, they guarantee that the economic activities are developed in balance with the care of the environment, for that reason they supervise the activities in the sectors of mining, industry, fishery, energy, as well as the release of Modified Living Organisms, transport and infrastructure of solid waste and environmental consultants.

It is the governing body of the National System of Environmental Assessment and Control (SINEFA) and they fulfill a normative and supervisory function with the Entities of Environmental Inspection (EFA) of domestic, regional or local scope.

- 4.7 References:
- <https://www.gob.pe/minam/oefa>

Sociedad Nacional de Minería, Petróleo y Energía

- 5.1 Name: Sociedad Nacional de Minería, Petróleo y Energía (SNMPE)
- 5.2 Type of initiative: Public body
- 5.3 Scope: Transversal to some industries
- 5.4 Area of development: (1) Economic development - (2) Environmental protection - (4) Training programs
- 5.5 Trajectory: From 1896 onwards. On 1998 the field of Energy was incorporated and took the actual name.

5.6 Description:

The Sociedad Nacional de Minería, Petróleo y Energía (SNMPE) has the following aims:

- Promote the development of mining, hydrocarbon and electric activities, and their auxiliary activities and services, through the sustainable use of natural resources, contributing to the conservation of the environment and social development.
- Promote investment in these productive sectors for the generation of economic and financial resources that the Nation requires.
- Develop educational and cultural activities in relation to these productive activities.
- Promote and defend the market economy and competitiveness in our sectors.

SNMPE has the mission, in relation to productive activities:

- Promote the development of mining, hydrocarbon and electric activities, through the sustainable use of natural resources, and social development, in full respect of current legislation.

- Develop and seek that these activities are carried out in an increasingly competitive way.
- Be the reference and authoritative opinion on issues related to the mining, hydrocarbon and electricity sectors.
- Encourage the efficient development of mining, hydrocarbon and electric activities.
- Channel before the Public Powers the institutional interests of its Associates.
- Represent the Sectors before public and private institutions and legal persons.

In relation to Investment:

- Provide technical advice to public authorities and public or private institutions that require it.
- Promote the sustainable use of natural resources.
- Build a good reputation of the Sectors that the Company represents.
- Promote the Sectors that the Company represents among investors, authorities and civil society.

In relation to productive education and culture:

- Disseminate relevant and objective, general and specialized information on the Sectors to the different interest groups.
- Contribute to the better understanding of the Sectors.
- Work to contribute to the sustainable development of Peru.

- 5.7 References:**
- <https://www.snmpe.org.pe/informes-y-publicaciones/memorias-institucionales/5437-memoria-anual-2018.html>

Women in Mining Peru

- 6.1 Name:** Women in Mining Peru
- 6.2 Type of initiative:** Nonprofit organization
- 6.3 Scope:** Specific for mining industry
- 6.4 Area of development:** (5) Women participation
- 6.5 Trajectory:** From September 2016 onwards
- 6.6 Description:**

This organization is a nonprofit association, which aims to promote the personal and professional growth of women working in the mining sector, whether in the public or private sector, as well as in companies related.

One of WiM Peru's initiatives has been the creation of decentralized branches.

The South Branch covers Arequipa, Moquegua and Tacna. Moreover, they have Student Chapters in Central Peru and in Puno. Another key initiative is their Mentoring program, where members support each other in their personal and professional growth. There is also a monthly event for members called Women & Mines, where they tackle both hard and soft skills and which concludes with a networking space for participants. Women are not used to networking and the development of contact networks is essential during a professional career.

Finally, the organization has been active on Facebook, LinkedIn, Instagram and Twitter, and it has also produced a monthly bulletin to reach more women with their message and provide up-to-date information on activities and achievements by women in the industry

- 6.7 References:**
- <https://wimperu.org/>
 - <https://www.gbreports.com/article/the-role-of-women-in-perus-mining-industry>

Alliance for responsible mining

- 7.1 Name:** Alliance for responsible mining (ARM)
- 7.2 Type of initiative:** Nonprofit organization
- 7.3 Scope:** Specific for mining industry
- 7.4 Area of development:** (3) Social protection and development - (4) Training programs
 – (5) Women participation
- 7.5 Trajectory:** From 2004 onwards
- 7.6 Description:**

ARM is a leading global expert on artisanal and small-scale mining (ASM). They work to transform the ASM sector into a socially and environmentally responsible activity, while improving the quality of life of artisanal miners, their families and communities.

The alliance's objectives are directed towards the well-being of miners, their families and communities; the reduction of negative impacts of ASM on the environment; and for ASM to contribute to local and domestic economic development and job creation.

The Alliance works towards this goal through improving governance around artisanal mining; supporting miners; developing standards and certification systems; and building responsible supply chains and markets. ARM has historically directly supported women miners and executed projects that relate to gender issues within the ASM sector; it also includes gender as a cross-cutting issue in its approach. In 2018, the Alliance decided to incorporate a gender lens into its strategy more broadly. To this end, it conducted a research project using case studies and interviews in Colombia to explore the key gender

issues pertaining to ASM and is developing tools and methodologies to help improve gender equality in ASM.

Their headquarters are in Colombia, but the geographical focus of their work are Bolivia, Colombia, Honduras and Peru, with different projects in those areas the region.

- 7.7 References:**
- <https://www.responsiblemines.org/en/projects-and-alliances/territories/>
 - <https://womenandmining.org/wp-content/uploads/2019/04/Encyclopedia-.pdf>

Better Gold Initiative

- 8.1 Name:** Better Gold Initiative
- 8.2 Type of initiative:** Private – public initiative
- 8.3 Scope:** Specific for mining industry
- 8.4 Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development
- 8.5 Trajectory:** From 2013 onwards
- 8.6 Description:**

Arising from a wish to improve the situation of ASM miners, the Better Gold Initiative for Artisanal and Small-Scale Mining (BGI) was set up in 2013 as a private-public partnership between the Swiss Better Gold Association (SBGA) and the State Secretariat for Economic Affairs SECO. With the Better Gold Initiative, the Swiss government has developed a successful pioneering scheme to build transparency, responsibility and profitability in the gold value chain.

Better Gold Initiative formally coordinates with Bolivia, Colombia and Peru governments through their Ministries of Mines, and Environment, in the case of Peru. In addition, they work in collaboration with each regional and local governments.

The general goal of Better Gold Initiative is reducing poverty and improving social and environmental conditions for ASM. To achieve this goal, the project comprises three pillars:

Production and Certification: With the aim of expanding the production of gold extracted in a responsible manner (“Responsible Gold”), the initiative provides support to Small-scale miners and mining cooperatives to improve their performance in technical, organizational, social and environmental terms. BGI supports Fairtrade, Fairmined and Responsible Jewellery Council RJC certification systems. Through the introduction of a new BGI purchase policy for Small-scale mining with established market entry criteria, a

substantial higher number of gold mining companies, as well as their families and communities, shall benefit from better living and working conditions in the second phase.

Political Dialogue: Political dialogue and cooperation with governments allows for a common understanding of the core conditions for sustainable gold mining and supports the simplification of the formalization processes.

Demand: In Switzerland, the cooperation with the SBGA channels the demand for Better Gold among industry stakeholders: refiners, brands (watchmakers, jewelry) and investors. Members of the SBGA are committed to buying the production of Better Gold and reinvesting through the Better Gold Fund a contribution of USD 1 per gram into social and environmental projects in and around mines.

SBGA and the Better Gold Initiative, facilitate the entry of artisanal and small-scale mining operations to the gold market. Continuous improvement is the heart and the immutable principle of the private-public partnership and is essential to its success. Small-Scale Mining participating operations are given incentives to continuously improve their practices and to slowly enter the international gold market by complying with the due diligence guidance of Better Gold or the requirements of Voluntary Sustainability Systems recognized. This progressive approach is known as Better Gold Continuous Improvement Escalator.

ASM's Better Gold Continuous Improvement Escalator comprises three progressive steps, from the first selection of Small-Scale Mining operators until becoming Better Gold verified suppliers and, for some operators who aim at having access to specialized markets, obtaining the Voluntary Sustainability Systems certification

- 8.7 References:**
- <http://bettergold.org/about-bgi/about/>

SUMMARY

TOOL			CATEGORIES					
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation	
1	Geological, Mining and Metallurgic Institute	Public technical body	Specific				X	
2	Technical Assistance to small-scale mining	Program	Specific				X	
3	Law on equality of opportunities between women and men	Law	Transversal					X
4	Agency for Environmental Assessment and Control	Public body	Transversal		X			
5	National Society of Mining, Petroleum and Energy	Public body	Transversal	X	X		X	
6	Women in Mining Peru	Nonprofit organization	Specific					X
7	Alliance for responsible mining	Nonprofit organization	Specific			X	X	X
8	Better Gold Initiative	Public-private initiative	Specific	X	X	X		

RUSSIA

GENERAL CONTEXT

Despite modest global growth of the mining sector in recent years, Russia remains one of the largest producers of mining commodities in the world. Russia has a huge geographic area rich with mineral resources. According to the United States Geological Survey (USGS) on 2013, Russia was ranked among the world leading producers of commodities including bauxite, coal, copper, diamond, gold, iron ore, lead, nickel, PGM, potash, silver, uranium and others.

Russia is the largest miner of diamonds and palladium and the second largest miner of platinum and nickel. Business Monitor International (BMI) forecasts that Russia will remain one of the world's largest producers of base and industrial metals.

Russian mining companies are on the edge of developing new excellent deposits. In 2017 Polyus Gold acquired a license for Sukhoi Log deposit development with an estimated reserve of 64 million ounces of gold. Baikal Mining Company, Metalloinvest subsidiary, is about to proceed with the design documentation development phase of Udokan project with JORK-compliant reserves of 26.7 million tonnes of copper.

The mining industry plays an ample role in Russia's domestic economy. It takes about three to five per cent of the gross domestic product (GDP) but accounts for 16 per cent of export earnings in 2015. The sector is highly consolidated. The Strategic Investments Law, which regulates access of foreign investors to the mining industry, gives privileges to Russian companies that play key roles in the sector and restricts foreign firms from developing large, or 'strategic' deposits. At the same time, the gold mining industry offers bigger integration into the global economy offered to Russian and international miners. A few smaller international companies are also producing nickel, silver and coal in Russia²⁵.

No relevant data for this project

²⁵ Source of the context: <https://www.austrade.gov.au/Australian/Export/Export-markets/Countries/Russia/Industries>

SINGAPORE

GENERAL CONTEXT

The economy of Singapore is a highly developed free-market economy. Singapore's economy has been ranked as the most open in the world, 3rd least corrupt, most pro-business, with low tax rates (14.2% of Gross Domestic Product, GDP) and has the third highest per-capita GDP in the world in terms of Purchasing Power Parity (PPP).

State-owned enterprises play a substantial role in Singapore's economy. The Singaporean economy is a major Foreign Direct Investment (FDI) outflow financier in the world. Singapore has also benefited from the inward flow of FDI from global investors and institutions due to its highly attractive investment climate and a stable political environment.

Exports, particularly in electronics, chemicals and services including Singapore's position as the regional hub for wealth management provide the main source of revenue for the economy, which allows it to purchase natural resources and raw goods which it lacks. Moreover, water is scarce in Singapore therefore it is defined as a precious resource along with the scarcity of land to be treated with land fill of Pulau Semakau. Singapore has limited arable land, meaning that Singapore has to rely on the agrotechnology park for agricultural production and consumption. Human resources is another vital issue for the health of the Singaporean economy. No mining activities are developed in Singapore.

Singapore could thus be said to rely on an extended concept of intermediary trade to entrepôt trade, by purchasing raw goods and refining them for re-export, such as in the wafer fabrication industry and oil refining. Singapore also has a strategic port which makes it more competitive than many of its neighbours in carrying out such entrepot activities. Singapore's trade to GDP ratio is among the highest in the world, averaging around 400% during 2008–11. The Port of Singapore is the second-busiest in the world by cargo tonnage²⁶.

No relevant data for this project

²⁶ Source of the context: <http://www.intracen.org/BB-2012-08-27-WTO-Trade-Policy-Review-Singapore/>

REPUBLIC OF KOREA

GENERAL CONTEXT

Most of the mineral deposits in the Korean Peninsula are located in Democratic People's Republic of Korea, with the Republic of Korea only possessing an abundance of tungsten and graphite. Coal, iron ore, and molybdenum are found in Republic of Korea, but not in large quantities and mining operations are on a small scale. Much of the Republic of Korea's minerals and ore are imported from other economies. Most of the Republic of Korea's coal is low-grade anthracite that is only used for heating homes and boilers²⁷.

No relevant data for this project

²⁷ Source of the context: https://en.wikipedia.org/wiki/Economy_of_South_Korea#Mining

CHINESE TAIPEI

GENERAL CONTEXT

Over 20 kinds of minerals with economic value are currently mined in Chinese Taipei including energy minerals such as coal, petroleum, natural gas; metallic minerals such as gold, silver, copper, and iron; and non-metallic minerals such as sulfur, iron sulfide, marble, dolomite, limestone, feldspar, talc, serpentine, gem, asbestos, gypsum, kaolinite, fire clay, and silica sand. Regarding energy mineral distribution, coal field is distributed over plain and hill areas in Northwestern Chinese Taipei, concentrating in such counties as Keelung, Taipei, Taoyuan, Hsinchu and Miaoli.

However, the natural gas/condensed oil field covers western plain and hill areas. The onshore deposits of natural gas/condensed oil are small; however, the offshore natural gas/condensed oil resources are relatively rich.

Gold, silver, and copper deposits are scattered in the northern part of Chinese Taipei and Central Mountain area. The major metallic mineral deposit is found at Chinkuashih in New Taipei City.

Except that some of limestone, silica sand, and clay minerals are deposited in western areas, other major non-metallic mineral resources are occurring in the metamorphic rock of the east wing of Central Mountain in Chinese Taipei, among which marble reserves, estimated up to 300 billion tons, are the most abundant. These non-metallic minerals are used as major sources for industrial raw materials and stone materials.

All minerals are owned by the state by law. Before a natural or juridical person of Chinese Taipei explores for or mines a mineral deposit, he/she must submit an application for establishing a mineral right. A mineral right is classified into the exploration right and mining right. The duration of an exploration right must be approved by the Ministry of Economic Affairs within a period of four years. An extension not exceeding a period of two years may be granted only once. The duration of a mining right must be approved by the Ministry of Economic Affairs within a period of twenty years. An extension not exceeding a period of twenty years may be granted upon the expiry of the existing duration²⁸.

The information in this chapter has been provided by Bureau of Mines, Ministry of Economic Affairs, Chinese Taipei

Bureau of Mines

- 1.1 Name:** Bureau of Mines of Ministry of Economic Affairs
- 1.2 Type of initiative:** Public body
- 1.3 Scope:** Specific for mining industry

²⁸ Source of the context: <https://www.mine.gov.tw/Download/ePInfo/e06A.pdf>

1.4 Area of development: (1) Economic development - (2) Environmental protection - (3) Social protection and development - (4) Training programs

1.5 Trajectory: From 1970 onwards

1.6 Description:

All the mining activities in Chinese Taipei are regulated by the Bureau of Mines of the Ministry of Economic Affairs. Government in Chinese Taipei used to take into considerations both resources development and environmental protection for mining activities, while currently putting efforts to the natural landscape conservation and environmental quality as well. To fulfill this policy, the government tends to make a restrict review and control, leading to reducing mineral right establishment, to improve mine management. Application for mineral right will be rejected if the operation is considered to be impairing such public interest when reviewed by other related authorities. On the other hand, the application will be permitted if the measures are well planned to help soil and water conservation, landscape protection and mine damage precaution.

According to the “mine safety law” and “mining law” and their relative regulations, Bureau of Mines has been reinforcing the mine safety management, monitoring and inspection by implementing a 5-year mine safety monitoring and management plan since 2005 to assure effective use of mineral resources and promote sustainable development of mineral industry. The Bureau also continuously supervises the safety practice and automatic safety inspection. Various trainings and workshops were held to improve mine safety management techniques and to train mine safety management personnel for elevating the mine self-management capability.

According to mine safety related regulations, the Bureau held a series of mine safety technique and educational trainings on the purpose of improving the mine operators’ understanding of mine safety regulation and knowledge so as to enhance their safety knowledge level. In 2018, a total of 201 safety education and training classes were held and a total of 2,351 mine operators received the training. Among these training classes, 1,598 mines operators attended the class for the on-job safety and education training (67.97%), 192 mine operators attended the safety management personnel training class (8.17%), and 561 mine operators attended the mine rescue training class (23.86%)

1.7 References:

- <https://www.mine.gov.tw/Download/ePInfo/e06A.pdf>

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Bureau of Mines	Public body	X	X	X	X	

THAILAND

GENERAL CONTEXT

Thailand was formerly a major tin producer, but now produces mainly gold, silver, iron, zinc, limestone, gypsum and basalt. Thailand is currently a net importer of mineral commodities and more than 40 minerals are produced. Based on the information provided on the DPIM website, the most-produced target minerals in 2017 were industrial minerals and industrial rocks during the past year, mining production for almost all minerals reduced with a few exceptions.

There is exploration and mining activity in all regions. For example, lignite is produced in northern regions, and limestone is produced in central, western, southern and northern regions.

The information in this chapter has been reviewed by Department of International Economics Affairs of Ministry of Foreign Affairs.

Mining related Legislation

- 1.1 Name:** The Minerals Act B.E. 2560, Promotion and Conservation of National Environmental Quality Act B.E. 2535 and (No. 2) B.E. 2561; Occupational Safety, Health and Environment Act B.E. 2554; Determining Plan and Procedures in Decentralizations to the Local Administrative Organization B.E. 2542.
- 1.2 Type of initiative:** Laws
- 1.3 Scope:** Transversal to several industries
- 1.4 Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development
- 1.5 Trajectory:** In force from August 29th, 2017
- 1.6 Description:**

Mining activities are governed by several laws. The Minerals Act B.E. 2560 is the main law for regulating mining and mineral-related activities such as mineral processing, metallurgical works, and waste storage facilities. It was enforced on 29th August 2017 as a replacement of the Minerals Act B.E. 2510 and the Mineral Royalty Rate Act B.E. 2509. Other important laws include the Promotion and Conservation of National Environmental Quality Act B.E. 2535 and (No. 2) B.E. 2561; Occupational Safety, Health and Environment Act B.E. 2554; Determining Plan and Procedures in Decentralizations to the Local Administrative Organization B.E. 2542, and land use related laws.

The Minerals Act B.E.2560 specifies the concessional procedure and conditions as well as responsibilities of permit holders and the mining authority. To obtain a mining license, an applicant needs to carry out an initial environmental examination (IEE), environmental impact assessment (EIA), or environmental and health impact assessment (EHIA),

depending on the conditions under the Promotion and Conservation of National Environmental Quality Act B.E. 2535.

Mining project classification is a way to facilitate investment by specifying different requirements for projects with different characteristics. According to the Minerals Act B.E. 2560, Mining projects are classified into 3 classes:

- Class 1 project is mining project not larger than 16 hectares and producing silica sand, plastic clay, soil cement, marl, ball clay, fire clay, or diatomite. Project of this class requires an IEE, which is a form of good practice, instead of a conventional EIA and is approved by a Provincial Committee.
- Class 2 project is mining project not larger than 100 hectares and not subject to an environmental and health impact assessment (EHIA) requirement. Project of this class is approved by a Central Committee.
- Class 3 project is mining project that is not Class 1 and Class 2, larger than 100 hectares, located in the previous special exploration permit area, offshore mining, underground mines, gold mines, coal mines, subject to the Cabinet's approval such as one in the first-level watershed area, and/or subject to an EHIA requirement. Project of this class is approved by a Central Committee.

Regarding mine closure, every industrial mine is subject to the submission of mine rehabilitation plan and a bank guarantee for rehabilitation. There are also official announcements on the establishment of health monitoring and community development funds. Every mine has a mandate to establish both funds and cooperate with local stakeholders.

By classifying mining projects into 3 different groups according to scale and level of impacts, the government can reduce excessive complication for small, simple projects while able to ensure adequate environmental and social measures.

Additionally, to the concessional and control mechanisms, the Minerals Act B.E. 2560 and the Determining Plan and Procedures in Decentralizations to the Local Administrative Organization B.E. 2542 specify criteria for sharing governmental revenue from mining to local communities. These revenues are mainly Special Benefit collected after permits are granted and mineral royalty collected during the extraction phase. The criteria are applied to all mining project. The rate for collecting Special Benefit varies by project class (It is lower for Class 1 project) while that of royalty is similar for all project class.

Benefit sharing creates a good impression of communities towards mining and allows mining operations to continue. Therefore, the government tries to ensure adequate distribution of benefit to local communities while maintaining profitability and affordability of smaller scale mines.

- 1.7 References:**
- <http://www.dpim.go.th/service/download?articleid=8022&F=17303>
 - <http://infofile.pcd.go.th/law/NEQA1992eng.pdf?CFID=1833793&CFTOKEN=37244663>
 - http://thailaws.com/law/t_laws/tlaw0070_6.pdf

Department of Primary Industries and Mines (DPIM) initiatives

- 2.1 Name:** Department of Primary Industries and Mines (DPIM) initiatives
- 2.2 Type of initiative:** Programs
- 2.3 Scope:** Transversal to several industries
- 2.4 Area of development:** (2) Environmental protection - (3) Social protection and development – (4) Training programs
- 2.5 Trajectory:** From 2004 onwards
- 2.6 Description:**

Since 2004, Department of Primary Industries and Mines (DPIM) has launched several initiatives and development schemes to help mining companies to improve their performance in a bottom-up manner, complementing to the typical top-down legal compliance mechanism. Important activities are Best Performance Standard, Green Mining, Corporate Social Responsibility (CSR)-DPIM, and capacity building programs. With better performance, companies can achieve better cost control, reputation, and social acceptance.

Best Performance Standard

The Best Performance Standard initiative was launched in 2004, aiming at rating and classifying the performance of each mining operation into one of the four categories: outstanding, good, fair, and poor and assisting the poor-performance group to improve. The performance is evaluated in 4 aspects: (1) operational performance, (2) occupational safety and health, (3) environmental management, and (4) stakeholder relationship. The evaluation and rating are carried out by DPIM's staff annually based on specific criteria and forms. After more than 10 years of implementation, more than 93% of mining operations in Thailand (regardless of size and type) have satisfying performance level.

Green Mining

Green Mining initiative was inaugurated in 2009, when DPIM announced its Green Mining Policy based on 6 principles: (1) environmental and social responsibility, (2) environmental impacts prevention, (3) assurance in health and safety of workers and

community, (4) rehabilitation and site management, (5) transparency, and (6) resource utilization efficiency. At the beginning, the classifying results of the Best Performance Standard initiative is used as a basis for selecting high-performance mining for granting the Green Mining Award annually. The selected mines were evaluated on site and received suggestions from the evaluating committee, consisting of academia and representatives of the governmental and private sectors. Recently, companies can apply for participating in the program.

CSR-DPIM

CSR-DPIM is a CSR promoting project. DPIM created a CSR-DPIM standard in 2010 based on ISO26000 standard. Then, an expert team is hired to mentor ten companies each year to help them improve and comply with the standard. After a few years, a CSR network was established to allow communication and exchanges of experiences among company staff who work on CSR activities.

Capacity building programs

DPIM carried out many capacity building programs to assist companies to improve their performance. Large-scale companies often supported by providing speakers or allowing technical visits. An example of capacity building programs is the shotfirer training, which is held once a year to transfer basic knowledge on explosive uses to blasting foremen. The knowledge will help them improve blasting performance, control costs and environmental impacts, and increase safety at work, all of which also contribute to company's competitiveness and reputation.

- 2.7 References:**
- <http://greenmining.dpim.go.th/eng/index.htm>
 - Department of Primary Industries and Mines (No published information)

Thailand International Cooperation Agency - TICA

- 3.1 Name:** Thailand International Cooperation Agency
- 3.2 Type of initiative:** Programs
- 3.3 Scope:** Transversal to several industries
- 3.4 Area of development:** (4) Training programs - (5) Women participation
- 3.5 Trajectory:** From 2004 onwards
- 3.6 Description:**

Believing that global challenges are best addressed by a concerted effort, Thailand has, therefore, been promoted sustainable development through fostering South-South cooperation and global partnership. It is in this spirit of constructive collaboration that we

have offered training fellowships and postgraduate scholarships to developing partners across the world.

Today, in addition to fellowships and scholarships offered as part of bilateral and triangular development cooperation projects, TICA offers over 700 training fellowships and 70 postgraduate scholarships for government officials from developing economies around the world through Annual International Training Course (AITC) and Thailand International Postgraduate Programme (TIPP).

Annual International Training Course (AITC) was initiated in 1991 as a framework in providing short-term training for developing partners. Today, the AITC remains one of TICA's flagship programmes. It offers not only a training experience, but also a platform in exchanging ideas and establishing professional network among participants from across the world.

In 2015, UN members adopted Sustainable Development Goals or SDGs, a set of visions of how we would like the world to be in 2030. Each goal is designed to address specific challenges that by nature have no boundaries. Therefore, in order to realize them all, everyone needs to do their parts. We believe that all goals can be achieved through development cooperation, be it a government or private, or capacity building or human resources development.

Through the Annual International Training Course and Thailand International Postgraduate Programme, TICA believes that they are doing their part to deliver Thailand's contribution to a sustainable future.

The Annual International Training Courses under the SDG frame includes a Learning Program on Gender Equality and Women empowerment Sharing Good Practiced and Experiences of Thailand, and this course aims at sharing Thailand's best practices and experiences on gender equality and women empowerment. Experiences and knowledge shared during the course will help empowering participants in coping with the global challenges and will be part of Thailand's contribution to the global effort in achieving relevant Sustainable Development Goal (SDG), particularly Goal 5 on Gender Equality.

- 3.7 References:**
- <http://www.tica.thaigov.net/main/>

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Mining related regulations	Laws	Transversal	X	X	X	
2	Department of Primary Industries and Mines (DPIM) initiatives	Programs	Specific		X	X	X
3	Thailand International Cooperation Agency	Programs	Transversal				X

THE PHILIPPINES

GENERAL CONTEXT

The Philippines' top mineral exports are copper, gold and nickel. Other target minerals include quartz, mica, iron, gypsum, feldspar, chromite, calcite and sulphur. Some target non-metallic minerals are sand and gravel, limestone, marble, clay and other quarry materials.

Cobalt is the main factor for the increased interest in minerals used in battery technology in the Philippines. The Philippines has the fourth-largest cobalt reserves worldwide, at an estimated 280,000 tons²⁹.

The Philippines' relatively small geographical area belies its potential for growth in mining and energy. Various sources, from the US State Department to different international publications, recognize its immense untapped mining potential. Based on the policy brief of the Philippine Senate Economic Planning Office, The Philippine's is said to contain approximately \$840bn of untapped mineral wealth.

The mining industry is a growing contributor to the Philippine economy. Based on the mining industry statistics released by the Philippine Mines and Geosciences Bureau, the gross production value of the first quarter of 2018 – Php 109.5bn (2,100 million USD aprox)– surpassed the gross production value of the entire previous year – Php108.6bn (2,000 million USD aprox). In addition to its significant contribution to the economy, the mining industry also opens a host of employment opportunities to its stakeholder-communities. As of 2016, at least 236,000 workers (excluding indirect jobs generated by upstream and downstream sectors) were employed in the mining industry. Indirectly, mining companies have also positively impacted the development of their stakeholder-communities. As of August 2016, approximately Php13.153bn (253 million USD aprox) has been allocated by mining companies for the development of their host and neighboring communities through approved social development and management programmes.

Notwithstanding this, many factors continue to impede growth, primarily the issues of responsible or sustainable mining and the perceived negative environmental effects of mining³⁰.

People's Small-scale Mining Act of 1991 and further regulations

- 1.1 **Name:** People's Small-scale Mining Act of 1991
1.2 **Type of initiative:** Law

Sources of the context:

²⁹ <https://www.lexology.com/gtdt/tool/workareas/report/mining/chapter/philippines>

³⁰ <https://www.financierworldwide.com/current-trends-in-the-philippine-mining-and-energy-sectors#.XT3lr-i0IPY>

- 1.3 Scope:** Specific
- 1.4 Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development – (4) Training programs
- 1.5 Trajectory:** From 1991 onwards
- 1.6 Description:**

The principal laws that regulate the mining industry are Republic Act No. 7942, otherwise known as the Philippine Mining Act of 1995 (Mining Act), and its implementing rules and regulations, Department of Environment and Natural Resources (DENR) Administrative Order No. 2010-21 (Mining Act IRR), both of which have not been amended in the past year.

However, in January 2019, the Mines and Geosciences Bureau (MGB) proposed the review and revision of the Mining Act IRR.

In 2012, Executive Order No. 79 (Institutionalizing and Implementing Reforms in the Philippine Mining Sector, Providing Policies and Guidelines to Ensure Environmental Protection and Responsible Mining in the Utilization of Mineral Resources) (EO 79) was issued as the policy of the Aquino administration.

EO 79 instituted reforms such as a review of the performance of existing mining operations and cleansing of non-moving mining rights holders, imposed a moratorium against the issuance of mineral agreements (MAs) until the enactment of legislation rationalizing existing revenue sharing schemes and mechanisms, and constituted the Mining Industry Coordinating Council (MICC), among others. The Duterte administration has issued no order repealing, amending or replacing EO 79.

The DENR is the primary government agency responsible for the conservation, management, development and proper use of The Philippines's environment and natural resources, including mines. The MGB, a line bureau under the DENR, is responsible for the proper management and disposition of mineral lands and mineral resources. It promotes sustainable mineral resources development. The MGB director recommends to the DENR secretary the granting of MAs and monitors compliance with the terms and conditions of the MAs.

The MGB and the Environmental Management Bureau (EMB), another line bureau of the DENR, advise the DENR secretary on matters relating to environmental management, formulate plans and policies on environmental quality standards, exercise supervision over regional offices in the implementation of plans and programmes and issue permits and clearances.

Environmental protection: The Mining Act and its IRR contain provisions on this aspect. Mining contractors are required to institute an environmental protection and enhancement programme prior to the commencement of mining operations and to

submit final mine rehabilitation or decommissioning plans to ensure environmental protection beyond the life of the mine.

Social development: There are currently no principal community engagement or CSR laws that are applicable to the mining industry. However, community engagement or social development provisions are found in various laws and regulations, including the Mining Act IRR. Under the Mining Act IRR, a contractor is mandated to annually allot a minimum of 1.5 per cent of operating costs to do the following:

promote the general welfare of the inhabitants within the host and neighboring communities;

develop a programme for advancement of mining technology and geosciences; and
develop and institutionalise an information, education and communication programme for greater public awareness and understanding of responsible mining and geosciences.

Artisanal Small Gold Mining: Legislation and policy action by the Government has tended to promote the shrinking or eradication of the ASGM sector, rather than proactively supporting formalization.

Under RA 7076, small-scale mining operations are overseen by the Provincial Mining Regulatory Board composed of the MGB director as chair and the provincial governor as vice chair. ASGM miners must be licensed to be considered legal. Licensing requirements include that contract areas may not exceed 20 hectares per contractor and licenses are good for two years, after which they may be renewed. ASGM miners must also be Filipino citizens.

In 2012, the Philippine President issued Executive Order (EO) No. 79, or the Measures to Improve Small-scale Mining Activities. The EO, limiting ASGM to the mining of gold, chromite and silver, mandates that small-scale mining operations shall be undertaken only within the declared People's Small-scale Mining Areas, or Minahang Bayan. The government EO also mandates the provision of training and capacity-building measures in the form of technical assistance for small-scale mining cooperatives and associations. In addition, the EO prohibits the use of mercury in small-scale mining operations.

In March 2015, the government again revised the rules and regulations for small-scale mining. To increase the number of legal mining operations, the government simplified the process for obtaining licenses and declaring people's mining areas. The government also prohibited certain harmful mining practices, including the use of mercury and underwater (so-called compressor) mining.

- 1.7 References:**
- https://www.unido.org/sites/default/files/files/2019-02/Philippines%20Report%20_20.11.17.pdf

- <https://www.lexology.com/gtdt/tool/workareas/report/mining/chapter/philippines>
- <https://www.mgb.gov.ph/en/>

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	People's Small-scale Mining Act of 1991 and its amendments	Law	Specific	X	X	X	X

THE UNITED STATES OF AMERICA

GENERAL CONTEXT

Mining in the United States has been active since the beginning of colonial times but became a major industry in the 19th century with a number of new mineral discoveries causing a series of mining rushes. In 2015, the value of coal, metals, and industrial minerals mined in the United States was US \$109.6 billion. 158,000 workers were directly employed by the mining industry.

In the early 20th century, the gold and silver rush to the western United States also stimulated mining for coal as well as base metals such as copper, lead, and iron. Areas in modern Montana, Utah, Arizona, and later Alaska became predominate suppliers of copper to the world, which was increasingly demanding copper for electrical and households' goods.

Nowadays, the US mining industry is large, but it is dominated by the coal and other nonmetal minerals (e.g., rock and sand), and various regulations have worked to reduce the significance of mining in the United States³¹.

On the other hand, although the United States produces a diversity of gemstone varieties, the quantity produced is very small. In calendar year 2017 the total gemstone production of the United States was only \$13 million. That amount is very small compared to the \$22.6 billion in gemstones that were imported for consumption. The United States has greater than a 99.9 percent dependence on foreign gemstone supplies.

Most of the gemstone production in the United States comes from very small mines with just two or three employees who are often part-time or seasonal workers. Very few of the mines have more than a dozen employees and operate during all four seasons of the year. In 2014 about 250 gemstone mines were operating in the United States. They employed between 1,200 and 1,500 people.

A significant amount of additional gemstone mining in the United States is done by rockhounds (amateurs who search for rocks, minerals, gemstones, and fossils as a hobby). Many of them do their rockhounding on public land (areas owned by the government where individuals can collect if they observe the rules). Others go to fee mining sites. These are proven gemstone deposits where visitors can pay a fee, look for gemstones, and keep any that they find³².

Gemstone production in the United States is surprisingly low considering the large geographic area and the large number of people who have a strong interest in finding gemstones. Three barriers stand between an interest in mining and the successful operation of a mine: 1) the cost of opening a mine; 2) the cost of labor; and, 3) government regulations related to environment and labor.

³¹ Source of the context: <https://en.wikipedia.org/wiki/Mining>

The cost of opening a mine in the United States is extremely high. Before mining can begin, a permit must be obtained. The permit is required to assure that the mine will be developed and operated with minimal impact on the environment, minimal hazard to employees, and in compliance with all local, state and federal laws. The research, data collection, planning, and writing that must be done to complete a permit application is enormous. This cost cannot be supported by the small-size deposits that are typical of most colored stone mining.

The cost of labor in the United States is very high in comparison with the cost of labor in other regions/economies. . People need to earn a decent wage as in any other industry. Much of the colored stone mining done in other parts of the world is supported by very low-cost labor.

There are also many costs associated with operating a mine in compliance with government regulations. A significant investment must be made in safety planning, equipment, and procedures. A significant investment must also be made to control wastewater, erosion, dust, and many other problems associated with operating a mine. These can easily total more than the value of the gemstones that would be produced from a small colored stone deposit³³.

No relevant data for this project

³³ Source of the context: <https://geology.com/gemstones/states/>

VIET NAM

GENERAL CONTEXT

Viet Nam's key mineral endowment includes: coal, bauxite, rare earth, tungsten, titanium, phosphate rocks and iron ore.

Coal remains one of the primary energy sources for the domestic market. Viet Nam turned from a net coal export into net import in 2016. With the rising energy demand and industry sector development, the pressure will be on coal supplies. In 2017 Viet Nam expects to produce around 37 million tonnes of coal and an estimation of imported coal of over 11.7 million tonnes, mainly to supply the cement and power industry.

Except for coal, bauxite and titanium, most deposits discovered to date have been found to be too small to be economically viable for most international companies. Foreign investment in mining has been minimal, constrained by high royalty, regulatory issues, investment and market access challenges.

Viet Nam has great coal reserves, concentrated in the northern area in Quang Ninh province and the Red River Delta basin.

Viet Nam has discovered more than 5000 new minerals and deposits, reviewed a number of minerals and natural resources such as: oil and gas; coal, titanium, bauxite, phosphate rocks, rare earth, copper, gold, iron ore, mineral construction materials and some others.

Many of the open cut mines are depleting and trends are shifting toward more advanced technologies and investments in underground mining.

The state-owned company, Vinacomin Group, which operates most of the coal mines in Viet Nam produced 37 million tonnes of coal in 2016.

There are 22 open cut mines ranging from those with small capacity of hundred thousand tons up to three million tons and about 23 underground mines ranging from small capacity up to 2.5 million tons, plus a number of underground mine projects. Vinacomin is the owner and major shareholders of minerals mining businesses including³⁴:

- Sin Quyen Copper Complex
- Lam Dong Alumina and Bauxite
- Nhan Co Alumina and Bauxite

According to their estimates, more than 1.500 mining companies are registered in Viet Nam, of which about 55% are state-owned, 36% by private Viet Nameese companies and only 9% by foreigners³⁵.

Sources of the context:

³⁴ [https://www.austrade.gov.au/Australian/Export/Export-markets/Countries/Viet Nam/Industries](https://www.austrade.gov.au/Australian/Export/Export-markets/Countries/Viet%20Nam/Industries)

³⁵ <https://www.lexology.com/library/detail.aspx?g=cfd12324-fb6f-4fb2-b558-41054b9cc56f>

Initiative to reduce Mercury use in Cambodian Artisanal Gold Mines

- 1.1 Name:** Initiative to reduce Mercury use in Cambodian Artisanal Gold Mines
- 1.2 Type of initiative:** Private organization
- 1.3 Scope:** Specific for mining industry
- 1.4 Area of development:** (2) Environmental protection – (3) Social protection and development - (4) Training programs
- 1.5 Trajectory:** April 2006 to July 2007
- 1.6 Description:**

Organized by Pure Earth Cambodia in connection with the Viet Nameese government and other NGOs.

Goals: to reduce the mercury released in artisanal mining and to train on alternative technologies (retorts) to amalgamation to the miners.

Actions:

- Assessing the potential environmental and health impacts of gold mines in Ratanakirri province. through the sampling of human hair, organisms (mussels/fish), soils/mine tailings, and river water,
- Providing locally-produced ceramic water filters to reduce incidence of diarrhea in two mining communities (simple pit latrines and ceramic filters were provided to the families at the two study mine, and were accompanied by an education program on proper sanitation and clean drinking water practices. Health surveys were performed before and after these introductions).
- Building capacity, through the provision and training in the use of simple retorts, management of mine tailings, and basic clean water practices for domestic use, to improve local environmental and health conditions.

Main conclusions on its implementation, and the main results are:

- The retorts were made in the area and local craftsmen were trained to make and use them.
- Different models were tested and while mercury was effectively trapped in all the retorts, miners preferred the glass top version so that the gold amalgam could always be seen.
- Field demonstrations resulted in good uptake of the new cleaner processes.
- Work remains to expand the application across the different Viet Nameese mining communities.

The benefit of the initiative is three-fold: it will bring about positive improvements to the lives of artisanal miners' community by enhancing social protection (health and safety of

workers) and protecting the environment by introducing training on innovative technologies.

The province of Ratanakirri is an isolated underdeveloped area of northeast Cambodia with a small population of about 72,000. About 80% of the people are tribal who subsist by slash and burn agriculture and fishing. Gold and gem stones are fathered in crude mines at times using mercury to extract gold. A review by Sotham (2004) estimated that about 1000 miners are working at six Prey Meas mines. They use mercury amalgamation, without retorts, to extract the gold. The concentration of mercury in the hair of the miners was extremely high.

in April 2006 retorts were successfully introduced into a goldmine in Prey Meas to recover mercury. The technology was readily understood, and the miners were glad to be both protecting their health and recouping some of their expense. This initial project was quite small, and more effort should be directed at introduction of retorts at more mines.

This process transforms elemental mercury into methylmercury. Methylmercury is one of the most toxic organic substances and a powerful neurotoxin that works its way up the food chain through bioaccumulation.

There are a number of cleaner technology alternatives to current methods of mercury amalgamation. The use of retorts during the mercury burn-off stage is a very simple and highly cost-effective method of controlling the release of mercury into the environment. They allow for the efficient capture and reuse of mercury and minimizing occupational exposure.

Experience has shown that the biggest barrier to the uptake of such technology is educational. This project sought to break the cycle of dangerous mercury use by supplying ASM miners with the education and technology needed to minimize their exposure to mercury and its release into the environment.

- 1.7 References:**
- <https://www.pureearth.org/project/cambodia-artisanal-gold-mines/>

SUMMARY

TOOL		CATEGORIES					
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Initiative to reduce Mercury use in Cambodian Artisanal Gold Mines	Private	Specific		X	X	X

MULTILATERAL TOOLS AND INITIATIVES

This chapter discloses the initiatives and tools that are shared by several APEC Economies.

Minamata Convention on Mercury

- 1.1 Name:** Minamata Convention on Mercury (Arsenic Remediation after small mines abandonment)
- 1.2 Type of initiative:** Global treaty
- 1.3 Scope:** Specific articles for mining
- 1.4 Area of development:** (2) Environmental protection - (3) Social protection and development - (4) Training programs
- 1.5 Trajectory:** 2017 onwards
- 1.6 Description:**

The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. The Minamata Convention entered into force on 16 August 2017.

The Convention draws attention to a global and ubiquitous metal that, while naturally occurring, has broad uses in everyday objects and is emitted to the atmosphere, and released to the soil and water from a variety of sources. Controlling the anthropogenic releases and emissions of mercury throughout its lifecycle has been a key factor in shaping the obligations under the Convention.

Major highlights of the Minamata Convention include a ban on new mercury mines, the phase-out of existing ones, the phase out and phase down of mercury use in a number of products and processes, control measures on emissions to air and on releases to land and water, and the regulation of the informal sector of artisanal and small-scale gold mining. The Convention also addresses interim storage of mercury and its disposal once it becomes waste, sites contaminated by mercury as well as health issues.

The objective of the Minamata Convention is to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. It contains, in support of this objective, provisions that relate to the entire life cycle of mercury, including controls and reductions across a range of products, processes and industries where mercury is used, released or emitted. The treaty also addresses the direct mining of mercury, its export and import, its safe storage and its disposal once as waste. Identifying populations at risk, boosting medical care and better training of health-care professionals in identifying and treating mercury-related effects will also contribute to implementing the Convention.

The Convention have 35 Articles and 5 Annexes, which can be divided into four main categories:

1. Operational provisions – describing the obligations for Parties to reduce anthropogenic emissions and releases of mercury and mercury compounds to the environment, with controls on all their lifecycle stages:
 - a) Controls on mercury supply sources and trade (Article 3)
 - b) Phase-out and phase-down of mercury use in products and processes (Articles 4, 5 and 6, Annexes A and B)
 - c) Controls on artisanal and small-scale gold mining where mercury is used (Article 7, Annex C)
 - d) Controls on air emissions and releases to land and water (Articles 8 and 9, Annex D)
 - e) Storage, waste and contaminated sites (Articles 10, 11 and 12)
2. Support to Parties – with articles relating to:
 - a) A financial mechanism, which includes the Global Environment Facility Trust Fund and a specific international Programme to support capacity-building and technical assistance (Article 13)
 - b) The provision of capacity building, technical assistance and technology transfer (Article 14)
 - c) The establishment of an Implementation and Compliance Committee (Article 15)
3. Information and awareness raising articles, covering:
 - a) Health aspects (Article 16)
 - b) Information exchange (Article 17)
 - c) Public information, awareness and education (Article 18)
 - d) Research, development and monitoring (Article 19)
 - e) Implementation plans (Article 20)
4. Administrative matters:
 - a) Reporting (Article 21)
 - b) Effectiveness evaluation (Article 22)
 - c) Conference of the Parties (Article 23)
 - d) Secretariat, hosted by UNEP (Article 24)
 - e) Procedures such as the settlement of disputes, amendments to the Convention, the adoption and amendment of annexes, the right to vote, signature, ratification (or acceptance, approval or accession), entry into force, reservations, withdrawal, depositary, authentic texts (Articles 25 to 35, Annex E).

The Convention contains three important elements that will contribute to identifying whether and how it is meeting its objective.

First an Implementation and Compliance Committee is established as a subsidiary body to the Conference of the Parties (COP) to promote the implementation of the Convention and review compliance with all its provisions. Article 15 of the Convention specifies the role, composition and functions of this Committee.

Second, the Convention embeds in its Article 21 the requirement for Parties to report, to the COP through the Secretariat, on the measures they have taken to implement the provisions of the Convention, on the effectiveness of these measures and the possible challenges in meeting the objectives of the Convention.

Third, the Convention sets up a process for the evaluation of its effectiveness, laid down in its Article 22. The COP is tasked with this evaluation mission, beginning no later than six years after the date of entry into force of the Convention and periodically thereafter. The evaluation will be conducted on the basis of available scientific, environmental, technical, financial and economic information. Among the information to be considered by the COP in its evaluation, the article specifically notes the reports and monitoring information on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations; reports submitted by Parties; information and recommendations provided pursuant to Article 15 on the Implementation and Compliance Committee; and reports and other relevant information on the operation of the financial assistance, technology transfer and capacity-building arrangements put in place under the Convention. In addition, several articles of the Convention have a specific requirement for the COP to monitor a particular issue.

Finally, if the COP decides more action is required to address an issue, it can use a variety of options, including adding or adjusting annexes, providing guidelines on technical issues or considering moving towards more defined targets, for example shifting from phasing down a mercury-added product to phasing out with a date.

There are indeed provisions for the Convention text to be amended, or an annex adjusted, with such trigger already embedded either in the text itself or to be initiated by a Party.

- 1.7 References:
- <http://www.mercuryconvention.org/Home/tabid/3360/language/en-US/Default.aspx>

- 1.8 APEC Economies members of this initiative:

	ECONOMY	DATE
III.	Canada	7 – Apr – 2017
IV.	Chile	27- Aug – 2018

V.	China	31-Aug-2018
VII.	Indonesia	22-Sep-2017
VIII.	Japan	2-Feb-2016 (A)
X.	Mexico	29-Sept-2015
XIII.	Peru	21-Jan-2016
XVI.	Singapore	22-Sept-2017
XIX.	Thailand	22-Jun-2017 (a)
XX.	United States of America	6-Nov-2013 (A)
XXI.	Viet Nam	23-Jun-2017 (AA)

A=Acceptance / AA=Approval / a=Accession

Equal Future

- 3.1 Name:** Equal Future
- 3.2 Type of initiative:** Global treaty
- 3.3 Scope:** Transversal to several industries
- 3.4 Area of development:** (5) Women participation
- 3.5 Trajectory:** US government launched Equal Futures during the 2012 UN General Assembly. In three short years, a partnership that began with 13 founding members has more than doubled to include over 29 members and the European Union, along with private sector, nonprofit, and multilateral partners.

3.6 Description:

The Equal Futures Partnership is an innovative multilateral initiative designed to encourage members to empower women economically and politically. Equal Futures partners commit to taking actions -- including legal, regulatory, and policy reforms --- to ensure women fully participate in public life at the local, regional, and domestic levels, and that women lead and benefit from inclusive economic growth.

Working closely with key stakeholders to identify policy and program priorities, Equal Futures members set achievable goals as commitments within the Partnership, and report on progress. Members exchange best practices and lessons learned in a flexible and agile framework. Key multilateral stakeholders, such as UN Women and the World Bank, as well as leading businesses and nonprofit institutions also support the work of Equal Futures.

Equal Futures members commit to taking actions - including legal, regulatory, and policy reforms - to ensure women fully participate in public life at the local, regional, and domestic levels, and that women lead and benefit from inclusive economic growth.

Working closely with key stakeholders to identify policy and program priorities, Equal Futures members set achievable goals as commitments within the Partnership, and report on progress. Members exchange best practices and lessons learned in a flexible and agile framework.

Since its launch in 2012, the Equal Futures Partnership has grown to include 29 members and the European Union.

- 3.7 References:**
- <https://www.equal-futures.org/about#history>

3.8 APEC Economies members of this initiative:

- Australia
- Canada
- Chile
- Indonesia
- Japan
- Mexico
- New Zealand
- Peru
- Republic of Korea
- Thailand
- The United States of America

International Women in Mining

- 3.1 Name:** International Women in Mining
- 3.2 Type of initiative:** Nonprofit Association
- 3.3 Scope:** Specific for mining industry
- 3.4 Area of development:** (4) Training programs - (5) Women participation
- 3.5 Trajectory:** From 2007 onwards
- 3.6 Description:**

International Women in Mining (IWIM) is the go-to organization and opinion leader in the promotion and strengthening of the role of women in the mining sector. IWIM fosters closer connections between women working in mining around the world and supports and promotes their contribution to the industry. With 10,500+ members in over 100 economies and supporting 50+ WiM groups in 40 economies around the world, IWIM's mission is 'Changing the world today for a more inclusive tomorrow'.

Their focus:

- Connector: helping women create WIM chapters, connect WIM chapters to each other and to members; be a voice for women where there isn't a WIM chapter, providing opportunities to groups
- Developing projects with a global scope and reach that aim to make the mining sector more inclusive and diverse
- Help women in their careers
- Track data around women in mining: without quantifying how many women work in the sector you can't measure progress
- Review women in mining policy

Their projects:

- Develop the pipeline of tomorrow via a global mentoring program
- Promote inclusive actions that create positive impacts via video campaigns;
- Inspire others into mining & improve visual representation of women in the industry via their photo gallery (role models)
- Increase the number of women presenting at mining conferences via IWiMSpeakUp project
- Increase the number of women serving on boards via a Women on Boards webinar programme
- Research and reports around the contribution of women in mining and gender in extractives

3.7 References: • <https://internationalwim.org/>

3.8 APEC Economies members of this initiative:

Board, volunteers and members are based worldwide, but participating economies member of APEC are:

- Australia
- Canada
- Chile
- Indonesia
- Mexico
- Papua New Guinea
- Peru
- Singapore
- The Philippines
- USA

Intergovernmental Forum - IGF

- 4.1 Name:** Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
- 4.2 Type of initiative:** Intergovernmental body
- 4.3 Scope:** Specific for mining industry
- 4.4 Area of development:** (2) Environmental protection – (3) Social protection and development – (4) Training programs
- 4.5 Trajectory:** The IGF was created in 2002 after the World Summit on Sustainable Development in South Africa. Core funding is provided by the Government of Canada.
- 4.6 Description:**
IGF is a voluntary partnership and works with more than 60 nations for a more sustainable mining activity, ensuring negative impacts are limited, and financial benefits are shared. The actions they take are the following:
- Capacity building and training: IGF provides capacity building training and workshops to members upon request.
 - Guidance for governments on artisanal and small-scale mining managing: This is guide with a step-by-step process for governments to develop, implement and monitor an effective artisanal and small-scale mining (ASM) management strategy.
 - Assessment and reports: Members get assistance from IGF in evaluating their policies through Mining Policy Framework (MPF) assessment. The results of this effort are then implemented and monitoring. All reports are public.
- 4.7 References:**
- <https://www.igfmining.org/about/introduction/>
 - https://www.iisd.org/sites/default/files/publications/igf-guidance-for-governments-asm_0.pdf
- 4.8 APEC Economies members of this initiative:**
- Canada
 - Mexico
 - Papua New Guinea
 - Peru
 - The Philippines
 - Russia
 - Thailand

Artisanal Gold Council

- 5.1 Name:** Artisanal Gold Council
- 5.2 Type of initiative:** Nonprofit organization
- 5.3 Scope:** Specific for Artisanal and Small-scale gold mining (ASGM)
- 5.4 Area of development:** (1) Economic development - (2) Environmental protection – (3) Social protection and development - (4) Training programs – (5) Women participation
- 5.5 Trajectory:** The Artisanal Gold Council (AGC) is a nonprofit organization based in Canada.
- 5.6 Description:**

The Artisanal Gold Council was created to help formalize the sector by focusing in several strategic areas:

- Improved practices: Focused in reducing mercury usage by facilitating the transition to mercury free technologies.
- Governance: Giving the importance or artisanal and small mining to local communities, it is important that this sector does not disappear, therefore, helping them enter the formal market is crucial.

In this regard, the AGC:

- Advices Governments in the formalization and stabilization of the sector.
- Develops Economy Action Plans specific for economies to compliance with the Minamata Convention
- Inform and advices regarding new issues related to ASGM
- Provide technological, social and policy solutions to implement in field programs
- Build training centers to generate local capacity.
- Livelihoods: Focus on improving livelihoods of people involved in ASGM by assisting the miners and their communities in diversifying their opportunities and saving for future generations of non-miners.
- Health: Mitigate health issues through education, improved processes and best practices.
- Environment: Specially related to mercury use and water consumption. The AGC provides simple and accessible technology to mining sites that uses less water and does not require mercury. They also work with communities and governments to develop strategies to reduce emissions and mercury use.
- Gender equality: Focused in including women in mining projects by including them in the training programs, conducting gender mapping studies, and working with communities, governments and miners to raise gender equality.

- Market access and development: Help miners to get to the formal market, promote responsible artisanal gold to global markets, help develop market-based solutions to increase profitability, work with Banks to increase interest in funding responsible artisanal gold.

5.7 References: • <http://www.artisanalgold.org/>

5.8 APEC Economies members of this initiative:

- Indonesia
- Papua New Guinea
- Peru
- The Philippines

Fairtrade International

6.1 Name: Fairtrade International

6.2 Type of initiative: Association

6.3 Scope: Transversal for several industries

6.4 Area of development: (1) Economic development - (2) Environmental protection - (3) Social protection and development

6.5 Trajectory: From 1997 onwards

6.6 Description:

The Association is part of a global fair trade movement that shares a vision of a world in which justice and sustainable development are at the heart of trade structures and practices so that everyone, through their work, can maintain a decent and dignified livelihood and develop their full human potential. The fair trade movement believes that:

- Trade can be a fundamental driver of poverty reduction and greater sustainable development, but only if it is managed for that purpose, with greater equity and transparency than is currently the norm.
- People who are marginalized and disadvantaged by conventional trading structures can develop the capacity to take more control over their work and their lives if they are better organized, resourced and supported, and can secure access to mainstream markets under fair trading conditions.
- People and institutions in the developed world are supportive of trading in this way when they are better informed and provided with opportunities to support change and improvement.

In pursuit of this vision, the members of the Association work individually and collectively, and in partnership with others, to connect the aims of those in more affluent parts of the world who seek greater sustainability and justice with the needs of those in the Global

South who most need those changes. Its work enables citizens to make a difference to farmers and workers through their actions and choices as consumers. Being driven by informed consumer choice, its work provides support for campaigning to reform international trade rules and creates a fairer economic system.

Fairtrade International is divided into six units:

- Standards and Pricing—sets and maintains fair trade standards
- Finance, Operations and Central Services—ensures coordinated communications, finance, human resources, fundraising, and IT services
- Global Products, Programs, and Policies. Implements all the commodity facing work, as well as programs on living income, living wages, and climate change
- Monitoring, Evaluation and Learning- Data governance and management, research and impact.
- External Relations - In charge of resource mobilization, communications and advocacy
- Branding, Trademark, and Licensing. Promotes the integrity of the Fairtrade Mark and relationships with licensees.

Given the development focus of fair trade, related standards contain minimum requirements that all producer organizations must meet to become certified as well as progress requirements in which producers must demonstrate improvements over time. In this regard, on November 7, 2018, it was launched a revision of the Fairtrade Standard for Gold and Associated Precious Metals as a key instrument to align the standard with the market needs and producer realities with the following objectives:

- Adapt the standard to the Artisanal and Small-scale Miners' realities and market needs
- Review and analyze outstanding issues included on the monitoring log on the Fairtrade Gold standard since the last revision
- Include elements that address the specific reality of a supply driven market situation
- Research requirements in other sustainability schemes
- Review minimum threshold requirements to achieve Fairtrade certification; include requirements on commercial viability of organizations
- Collect additional topics, issues and concerns on the Fairtrade Gold standard from relevant stakeholder groups including adaptation of standard to producer and market realities, enabling new business opportunities and securing existing ones, and increasing impact on producers

- Consult on solutions with relevant stakeholder groups to resolve standard related issues
- Ensure consistency in standards by aligning changes in all related standards, e.g. Trader Standard
- Improve standard language for better clarity and simplicity
- Develop final proposals for approval by Standards Committee

The objective of this review is to address and find solutions for identified problems or issues with the Fairtrade Standard for Gold and Associated Precious Metals for Artisanal and Small-Scale Mining, as part of the regular 5-year monitoring and review cycle. This revision will be conducted until Q3 of 2020.

- 6.7 References:**
- <https://www.fairtrade.net/standard/fairtrade-standard-for-gold-and-associated-precious-metals-for-artisanal-and-small-scale-mining-review-2018>
 - https://files.fairtrade.net/standards/Geographical_Scope_Policy_EN.pdf

6.8 APEC Economies members of this initiative:

- Australia
- Canada
- Chile
- China
- Hong Kong, China
- Indonesia
- Japan
- Mexico
- New Zealand
- Papua New Guinea
- Peru
- Republic of Korea
- Chinese Taipei
- Thailand
- The Philippines
- The United States of America
- Viet Nam

Fairmined Gold Standard

- 7.1 Name:** Fairmined Gold Standard
- 7.2 Type of initiative:** Standard for gold
- 7.3 Scope:** Specific for mining
- 7.4 Area of development:** (1) Economic development - (2) Environmental protection - (3) Social protection and development
- 7.5 Trajectory:** From 1997 onwards
- 7.6 Description:**

Fairmined is an assurance label that certifies gold from empowered responsible artisanal and small-scale mining organizations. It transforms mining into an active force for good, ensuring social development and environmental protection, providing everyone with a source of gold to be proud of.

Thanks to the Fairmined Standard, anyone who buys gold and associated precious metals can support responsibly managed community mines. Our Fairmined model is open to all market players wishing to make a positive impact on responsible mining. It provides gold for businesses selling labeled products with strict traceability requirements and it includes a more flexible business-to-business model for sustainability reporting.

Fairmined is backed by a rigorous 3rd party certification and audit system that ensures that artisanal and small-scale mining organizations meet world leading standards for responsible practices, delivering organizational and social development and environmental protection.

The Fairmined Initiative was created by the Alliance for Responsible Mining (ARM), a nonprofit organization globally recognized as a leader and pioneer of responsible artisanal and small-scale mining.

Between 2006 and 2008, Fairmined led a multi-stakeholder process in Latin America to develop a collective vision and principles for responsible artisanal and small-scale mining (ASM). These provide the foundation upon which they went on to develop Standard Zero, the world's pioneering standard for responsibly mined gold and associated silver and platinum. In 2009 based on Standard Zero, the first version of the Fairmined Standard was developed in partnership with Fairtrade. In April 2014, after a transparent revision process with open forums involving a broad range of stakeholders including the whole supply chain, version 2.0 of the Fairmined Standard was released. The Fairmined Standard has been received by the miners, the gold industry, governments, and civil society as a robust and credible standard. The Fairmined Standard is world leading in its ability to deliver positive impact to the miners and their communities and is a valued tool to transform artisanal and small-scale mining into an active force for good.

They have developed the Fairmined Standard for Gold and Associated Precious Metals to support sustainable development of artisanal and small-scale mining communities. The standard includes requirements for artisanal and small-scale mining organizations to perform responsible artisanal and small-scale mining: formal and legal mining operations, environmental protection, labor conditions, traceability of Fairmined minerals, and socio-economic development through the Fairmined Premium. It also outlines market models and requirements for market actors (Fairmined Suppliers).

7.7 References: • <https://www.fairmined.org/what-is-fairmined/>

7.8 APEC Economies members of this initiative:

- Australia
- Canada
- China
- Hong Kong, China
- Japan
- Peru
- Republic of Korea
- Thailand
- United States of America

SUMMARY

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
1	Minamata Convention	Global treaty	Specific		X	X	X
				Canada – Chile - China – Indonesia – Japan – Mexico – Peru – Singapore – Thailand - United States of America - Viet Nam			
2	Equal Future	Global treaty	Transversal				X
				Australia – Canada – Chile – Indonesia – Japan – Mexico - New Zealand – Peru – Republic of Korea – Thailand - United States of America			
3	International Women in Mining	International Association	Specific				X
				Australia - Canada – Chile – Indonesia – Mexico - Papua New Guinea – Peru – Singapore - The Philippines - USA			
4	IFG on Mining, Minerals, Metals and Sustainable Development	Public body	Specific		X	X	X
				Canada – Mexico – Papua New Guinea – Peru – The Philippines – Russia - Thailand			
5	Artisanal Gold Council	Nonprofit organization	Specific	X	X	X	X
				Indonesia – Papua New Guinea - Peru - The Philippines			
6	Fairtrade International	Association	Transversal	X	X	X	
				Australia – Canada – Chile - China - Hong Kong, China – Indonesia – Japan – Mexico - New Zealand - Papua New Guinea- Peru – Republic of Korea – Chinese Taipei - Thailand - The Philippines - United States of America – Viet Nam			
7	Fairmined Gold Standard	Standard	Specific	X	X	X	
				Australia – Canada – China - Hong Kong, China – Japan –Peru – Republic of Korea – Thailand - United States of America			

Summary of Initiatives and tools of APEC Economies

TOOL			CATEGORIES				
Name	Type	Scope	(1) Economic development	(2) Environmental protection	(3) Social protection and development	(4) Training programs	(5) Women participation
I. AUSTRALIA							
1	Australian Women in Resources Alliance	Private organization	Transversal				X
2	Workplace Gender Equality Act	Law	Transversal				X
3	Industry Growth Centre Initiatives	Private	Specific	X		X	X
4	The Junior Minerals Exploration Incentive	Tax benefit	Specific	X			
5	Minerals Industry Action Plan	Regional Initiative	Specific	X			
6	Exploration Drilling Grant Initiative	Regional Funding	Specific	X			
7	TARGET Minerals Exploration Initiative	Regional Funding	Specific	X			
8	NSW Women in Mining Network	Nonprofit organization	Specific				X
9	Women in Mining Western Australia	Nonprofit organization	Specific				X
10	Women in Mining and Resources Queensland	Nonprofit organization	Transversal				X
II. BRUNEI DARUSSALAM							
	No relevant data						
III. CANADA							
1	Canadian International Resources and Development Institute	Private institution	Transversal		X		X
2	Women in Mining Canada	Nonprofit	Specific				X
3	Canadian Exploration Expenses (CEE)	Tax incentive	Specific	X			
4	Canadian Development Expenses (CDE)	Tax incentive	Specific	X			
5	Flow-through Shares (FTS)	Tax incentive	Specific	X			
6	Mineral Exploration Tax Credit (METC)	Tax incentive	Specific	X			
7	Northern Abandoned Mine Reclamation program	Program	Specific		X		

8	Centre of Excellence for Indigenous Mineral Development	Public-private organization	Specific			X		
9	Mining Industry Human Resources Council	Private organization	Specific				X	
10	Integrated Indigenous Mine Training Program	Program	Specific				X	
11	Gender Diversity and Inclusion Guidance	Tool	Specific					X
12	Gender Equity in Mining Works (GEM Works)	Tool	Specific					X
13	Yukon Women in Mining	Nonprofit organization	Specific					X
14	Gender-Based Analysis Plus (GBA+)	Tool	Transversal					X
IV. CHILE								
1	National Mining Company	Technical state-owned body	Specific	X			X	
2	Assistance and Modernization of Small Artisanal Mining Program	Program	Specific			X	X	
3	Clean Production Agreement	Public-Private Agreement	Transversal		X	X		
4	Mining Decalogue	Public-Private Agreement	Specific			X	X	X
5	Norm NCh3262	Certification	Transversal			X		X
6	Woman and Mining Worktable	Public-Private Agreement	Specific			X	X	X
7	Women in Mining Chile	NGO	Specific					X
8	Mining Female Engineers Network	NGO	Specific					X
V. CHINA								
1	Catalogue of Industries for Guiding Foreign Investment	Plan	Transversal	X				
VI. HONG KONG, CHINA								
	No relevant data							
VII. INDONESIA								
1	Women in Mining and Energy	Private organization	Specific	X	X	X	X	X
2	Basic Mining Law	Law	Specific	X	X	X		
3	Technical Assistance Program	Program	Specific				X	
4	Regulations 11, 25 and 26	Regulations	Specific	X	X	X		
VIII. JAPAN								
	No relevant data							

IX. MALAYSIA								
1	Eleventh Plan Malaysia	Plan	Transversal	X	X	X		
2	Sustainable Development Indicators	Standard Tool	Specific		X			
3	National Mineral Policy	Policy	Specific		X	X		
4	Mining and Quarrying Legal Framework	Laws	Specific		X	X		
5	Best Practices and Guidelines on Mining and Quarrying Industry	Guidelines	Specific		X			
6	Tin Industry (Research and Development) Board	Public body	Specific	X			X	
7	Malaysia Smelting Corporation Berhard	Private organization	Specific	X				
8	SME Bank of Malaysia	Private organization	Transversal	X				
9	Monthly Statistical Data Collection Form for Mining and Quarrying Industry	Public body	Specific					X
10	Human Resource Development Fund	Private Fund	Transversal				X	
11	The Social Security Organization	Public organization	Transversal			X		
X. MEXICO								
1	Mining development trust fund	Private	Specific	X			X	
2	Gender point	Program	Transversal				X	X
3	Fund for the Regional Sustainable Development of State and Municipal Mining	Fund	Specific			X		
4	Mexican Mining Chamber	Private-body	Specific	X				
5	Women in Mining Mexico	NGO	Specific					X
XI. NEW ZEALAND								
1	The Crown Minerals Amendment Act 2013	Law	Transversal	X	X			
2	Straterra	Collective	Specific	X	X			X
XII. PAPUA NEW GUINEA								
1	PNG Chamber of Mines and Petroleum	Nonprofit association	Transversal	X	X	X	X	
2	Small-Scale Mining Branch	Public body	Specific	X	X	X	X	
XIII. PERU								
1	Geological, Mining and Metallurgic Institute	Public technical body	Specific				X	

2	Technical Assistance to small-scale mining	Program	Specific				X	
3	Law on equality of opportunities between women and men	Law	Transversal					X
4	Agency for Environmental Assessment and Control	Public body	Transversal		X			
5	National Society of Mining, Petroleum and Energy	Public body	Transversal	X	X		X	
6	Women in Mining Peru	NGO	Specific					X
7	Alliance for responsible mining	NGO	Specific			X	X	X
8	Better Gold Initiative	Public-private initiative	Specific	X	X	X		
XIV. RUSSIA								
	No relevant data							
XV. SINGAPORE								
	No relevant data							
XVI. REPUBLIC OF KOREA								
	No relevant data							
XVII. CHINESE TAIPEI								
1	Bureau of Mines	Public body	Specific	X	X	X	X	
XVIII. THAILAND								
1	Mining related regulations	Law	Transversal	X	X	X		
2	Department of Primary Industries and Mines initiatives	Programs	Specific		X	X	X	
3	Thailand International Cooperation Agency	Programs	Transversal				X	X
XIX. THE PHILIPPINES								
1	People's Small-scale Mining Act of 1991 and its amendments	Law	Specific	X	X	X	X	
XX. UNITED STATES OF AMERICA								
	No relevant data							
XXI. VIET NAM								
1	Initiative to reduce Mercury use in Cambodian Artisanal Gold Mines	Private	Specific		X	X	X	

Conclusions

Regarding the development of SME mining sector, some initiatives bring together services related to mining (equipment, technology and services) to enhance the competitiveness and productivity of the industry, while promoting the development of collaborative skills and the improvement of skills in the sector. The objective is to foster innovation, productivity and competitiveness, and to finance (through private and public funds) specific projects or initiatives, focusing on the priorities of industry.

Some Economy Members have tools that involve tax credits to encourage investment in exploration in small mining, in some cases of specific products, such as gold, copper and other metals of interest. Also, in grants for exploration drilling projects. In Canada, for example, a company can deduct taxes when the expense is to determine the existence, location, extent and quality of the ore. In others economies, tax benefits can be obtained for the development of the mine, when production has already started. Also, incentives to obtain financing, through the transfer of spending to the buyer of shares. These tools were found to be regional or domestic scope, depending on the strategy and the size of the industry.

On the opposite side, an interesting tool was found in Mexico, where in 2014 there was a tax reform proposed at Federal level, which establishes the payment of special, additional and extraordinary rights for mining companies. These contributions represent important resources for states and municipalities that benefits their communities, through social infrastructure investments. The focus is to rise the quality of life of the inhabitants in the mining extraction areas and to compensate some of its negative effects.

Mining Chambers in some Economy Members coordinate, represent and defend the interests of the Mining Industry before the different instances of Authorities and other agencies. They also provide information, training and support services to promote comprehensive development of the industry.

In Chile, a state-owned body is in charge of the promotion and to support the development of artisanal, small and medium size mining. This body is responsible for boosting the activity and business of those miners, giving them access to the international metal market. There is also a Ministerial Program that contributes through the training and technology transfer for small-scale and artisanal mining, aiming to help with the activity's development for a better life quality through creation on human capital, technical assistance, and access to current assets.

In Mexico, the Mining development trust fund offers three main services: Financing, training, and technical assistance. All of them have as main objective to support mining development, especially the small scale mining.

On the other hand, and as it is common in most Economies, for example in China although there are not specific measures for small and medium mining, they have implemented some actions to boost the mining industry in general: relaxation of restrictions on foreign investment; reform of examination and approval system; strengthening supervision and management; reform of extraction right registration, among others.

Other Economies, such as Malaysia, have a periodic plan, which has set a growth goal of 1.3% in its Eleventh version. They also have a tool based in a star rating tool on mines and quarries in Malaysia to determine the sustainability of the industry. This economy also has guidelines since 2018 to monitor the mining activities from their development to the closure. Special organizations to promote metals of interest (such as tin) were created to stimulate, popularize and increase their consumption and uses. Those organizations also publish information on production, characteristics and availability of those metals to undertake initiatives to help develop a fully integrated metal-based manufacturing industry. They also paid attention to human capital development to ensure a stable and skilled workforce for the industry needs.

A special entity was created in Malaysia, the SME Bank, which is committed in driving the economic growth by providing not only financing assistance, but also development expertise to small and medium scale enterprises, allowing those businesses to prosper and grow.

Regarding Environmental protection and social development, in general, most Economy Members have general policies or laws with a transversal scope for all the industries, or perform supervision through agencies. Only a few Economies, such as Canada, Chile, Mexico, Papua New Guinea and Peru have specific measures implemented for small and medium-sized mining.

In Chile, for instance, exist a voluntary agreement (APL) between a business association representative of a productive sector and the public bodies responsible for environment, health, occupational hygiene and safety, energy and water efficiency, and productive development. Its objective is to apply clean production through specific goals and actions, within a certain time period, in order to achieve what was agreed. The objective of the APL is to improve environmental or productive conditions in terms of occupational hygiene and safety, energy and water efficiency, reductions of emissions, waste recovery, good practices, productive development and other issues addressed by the agreement. This tool is available to any industry.

Canada, for example, has an institution that provides assistance to developing economies with technical support, advice, training and applied research to strengthen its natural resource governance and management capabilities. The main objective is to reduce the use of mercury in mining, through education. Also, this economy has remediation program for abandoned mines located in the north, which increases the confidence of communities and strengthen the relation between small and

medium-sized mining companies and local communities. The collection of taxes on projects in indigenous lands is used for the development of those communities.

There is an initiative called Alliance for Responsible Mining among four Latin-American economies which aim is to promote a social and environmental responsible artisanal and small-scale mining producing standards and criteria to be applied. The Alliance objectives are directed towards the well-being of miners, their families and communities; the reduction of negative impacts of ASM on the environment; and for ASM to contribute to local and domestic economic development and job creation. This organization works in the direction of this goal through improving governance around artisanal mining; supporting miners; developing standards and certification systems; and building responsible supply chains and markets. It has historically directly supported women miners and executed projects that relate to gender issues within the ASM sector; it also includes gender as a cross-cutting issue in its approach, becoming a relevant example for the purpose of this work.

A similar initiative represents Better Gold. Its objective is to reduce poverty and improving social and environmental conditions for ASM. It is developed in Peru with the support of Swiss Better Gold Association and the Authorities.

Regarding training, most economies focuses in developing and updating the mining workers skills. Another initiative trains people from the indigenous community.

In Mexico, Genderpoint promotes training and training strategies through face-to-face and online courses. Training programs are for men and women and have the purpose to certify and train their skills to improve the development of the industry.

Regarding the promotion of women's participation, in general, Economy Members have initiatives that are open to any industry, not only mining sector. For example, Australia have a specific law that requires employers with more than 100 workers to report on six indicators. These indicators allow gaps to be detected and closed, and among them the participation of women in the industry, by launching specific initiatives to work on them.

On the other hand, in Economies like Chile, there is no specific law, but there is a voluntary standard, applicable to organizations of any size and activity, that serves as a complement to the regulation. The purpose of this voluntary standard is to facilitate the organization to improve its effectiveness and efficiency and promote greater commitment, development and well-being for the people of the organization, with the intention of promoting good practices.

Another important point is how the private sector pushes certain initiatives. In Australia, an institution was created based on a concern of a group of industrial entrepreneurs to help them meet their objectives on diversity and increase the participation of women in male-dominated fields.

In Chile, a working roundtable integrated with main companies, unions and organizations of the mining sector was created. Its objective is to advance in concrete measures to increase the presence

of women in the sector, and it seeks to look for best practices to make mining a more inclusive activity. Canada already launched a guide to increase the inclusion and diversity in workplaces.

In general, the main objectives of these initiatives are: develop adequate working conditions; increase female participation in the mining industry; and intensify female presence in decision-making positions.

On the other hand, many initiatives were found (Australia, Canada, Chile, Indonesia, Mexico, Peru, among others) that aim to generate collaboration and networking among women, allowing their visibility, recognition and empowerment in this industry, both locally and internationally.

A specific initiative was found in Indonesia, WiME, which aim is to increase the participation of women in the sector. It is expected that they lead the change for artisanal gold miners reducing mercury use, promoting equal rights, opportunities and benefits for both men and women to pursue sustainable livelihoods from mining.

In addition, some initiatives are focused on spreading good practices and the image of mining as a strategic sector for the economy, where women's participation on equal opportunities basis is fundamental. Training of women in STEM careers is also another tool to promote women's participation in this industry.

Finally, there are some multilateral initiatives that can be used for collaboration among APEC Economies. The topics treated are wide: human safety, gender equality and women's participation, training and fair trade.

This study was elaborated in the Research and Policy Planning Department, Chilean Copper Commission, by

Vania RAMIREZ
Strategies and Public Policies Analyst

With the collaboration of
Maria ROBINSON

Jorge CANTALLOPTS
Director of Research and Policy Planning Department

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