



# Sector Wide Impact Assessment of Limestone, Gold and Tin Mining in Myanmar

Myanmar Centre for Responsible Business



Myanmar Centre for Responsible Business

THE DANISH INSTITUTE FOR HUMAN RIGHTS

**The Myanmar Centre for Responsible Business (MCRB)** was set up in 2013 by the Institute for Human Rights and Business (IHRB) and the Danish Institute for Human Rights (DIHR) with funding from several donor governments. Based in Yangon, it aims to provide a trusted and impartial platform for the creation of knowledge, building of capacity, undertaking of advocacy and promotion of dialogue amongst businesses, civil society, governments, experts and other stakeholders with the objective of encouraging responsible business conduct throughout Myanmar. Responsible business means business conduct that works for the long-term interests of Myanmar and its people, based on responsible social and environmental performance within the context of international standards.

© **Copyright Myanmar Centre for Responsible Business (MCRB), Institute for Human Rights and Business (IHRB), and Danish Institute for Human Rights (DIHR), March 2018, version May 2018.** All rights reserved. MCRB, IHRB and DIHR permit free reproduction of extracts from this publication provided that due acknowledgment is given and a copy of the publication carrying the extract is sent to the headquarter addresses below. Requests for permission to reproduce and translate the publication should be addressed to MCRB, IHRB and DIHR.

### **Acknowledgments**

The partner organisations would like to thank the Governments of Denmark, Ireland, Netherlands, Norway, Switzerland and United Kingdom for their ongoing support to MCRB.

The partner organisations would also like to thank all those who participated in the field assessments across Myanmar, and in the October 2016 consultations on the draft SWIA report. They also thank members of the Advisory Group which commented on the research plans and initial findings: David Allan, Charlotte Bisley, Daw Devi Thant Cin, Jack Jenkins Hill, Emma Irwin, U Sein Myint, John Sykes, Richard Taylor, U Thein Lwin, Cristina Villegas, Guy Williams and U Zaw Win.

MCRB is also grateful to the Union Government, and in particular the former Ministry of Mines, as well as the Governments of Shan State, Kayin State, Kayah State, Sagaing Region, Mandalay Region, Tanintharyi Region, Bago Region and Kachin State for their support in the field research phase during 2015/16.

Particular thanks are also due to PeaceNexus Foundation and Dr Richard Horsey for their support, input and comments on the conflict dimensions, as well as Gabriela Factor, Andrew Bauer, Francesca Castellani, Lorenzo Cotula and Gillian Cornish for their useful comments on the draft report. The team would also like to recognise the invaluable contributions of the MCRB mining SWIA field research team under the leadership of Aung Kyaw Soe and Khin Moet Moet Myint; Margaret Han, Hlaing Min Oo, Khin Pyae Pyae and Thet Naing Oo.

The report was written by Nora Götzmann, Elin Wrzoncki (DIHR) and Ida Jøker Krog (MCRB), together with Vicky Bowman and Aung Kyaw Soe (MCRB), with important contributions from Donna Guest (MCRB), Margaret Wachenfeld (IHRB), Tulika Bansal and Allan Lerberg Jørgensen (DIHR). Research support was provided by Kelly Matthews, Linnea Kristiansson, Elizabeth Arnott and Lukas Bogner, DIHR interns, Anders Planck-Hendriksen and Gemma Wardle, interns at MCRB, and Liya Mo, MCRB consultant who assisted with the process mapping.

All findings and recommendations in this SWIA are the sole responsibility of the partner organisations.

## CONTENTS

List of Tables, Figures and Boxes	4
List Abbreviations	5

<b>EXECUTIVE SUMMARY</b>	9
--------------------------	---

<b>1. INTRODUCTION</b>	21
------------------------	----

<b>2. MINING IN MYANMAR</b>	31
-----------------------------	----

<b>3. LEGAL AND POLICY FRAMEWORK</b>	45
--------------------------------------	----

<b>4. SECTOR-LEVEL IMPACTS</b>	74
--------------------------------	----

<b>5. CUMULATIVE AND PROJECT-LEVEL IMPACTS</b>	108
--	-----

5.1. Community Engagement and Grievance Mechanisms	112
--	-----

5.2. Community Impacts and Development	122
--	-----

5.3. Land	132
-----------	-----

5.4. Labour	144
-------------	-----

5.5. Women and Children	166
-------------------------	-----

5.6. Conflict and Security	179
----------------------------	-----

5.7. Environment and Ecosystem Services	191
---	-----

<b>6. REGION-SPECIFIC GOVERNANCE AND CONFLICT ANALYSIS</b>	204
--	-----

## **7. RECOMMENDATIONS**

7.1. Recommendations to the Myanmar Government	215
--	-----

7.2. Recommendations to Companies in the Mining Sector	225
--	-----

7.3. Recommendations to Ethnic Armed Organisations	234
--	-----

7.4. Recommendations to Civil Society	237
---------------------------------------	-----

7.5. Recommendations to Other Governments	239
---	-----

<b>ANNEX A. ADDITIONAL INFORMATION ON SWIA METHODOLOGY</b>	241
--	-----

## **APPENDIXES (separate documents available on [www.mcrb.org.mm](http://www.mcrb.org.mm))**

Main Myanmar laws regulating environmental and social impacts of the mining sector

Linked Initiatives activities of development partners in the Myanmar sector

Stakeholders interviewed in field research

## List of Tables, Figures and Boxes

Table 1: Mining Licences issued by State and Type as of 31 January 2018 .....	34
Table 2: Types of Mineral Exploration and Production Permits .....	56
Table 3: Requirements for EIA, IEE or EMP in the Mines Rules .....	62
Table 4: Annex 1 of EIA Procedure (extract): Categorisation of Mining Activities .....	67
Table 5: Myanmar Extractives Revenue .....	77
Figure 1: Company experience of applying for an integrated permit .....	53
Figure 2: Environmental and Social Impact Assessment in the Mine Lifecycle .....	66
Figure 3: Small-Scale Gold Licensing Process .....	89
Figure 4: The Spectrum of Corporate Social Responsibility (CSR) .....	104
Figure 5: Mining SWIA Field Research Locations.....	246
Box 1: Terms used in the report.....	7
Box 2: The United Nations Guiding Principles on Business and Human Rights.....	25
Box 3: Impacts through Business Relationships .....	26
Box 4: Recommendations made by the OECD as part of the Myanmar Investment Policy Review Chapter on Responsible Business Conduct (RBC) .....	27
Box 5: Overview of State-owned Enterprises (SOEs) and their Responsibilities.....	49
Box 6: Royalty Rates for Minerals, Amended Myanmar Mining Law (2015) S.18 .....	60
Box 7: Overview of Terms Contained in a sample Production Sharing Contract.....	61
Box 8: Example Models for Revenue Sharing .....	82
Box 9: Eight Steps to Designing a Resource Revenue Sharing System .....	84
Box 10: Five Factors for Consideration in the Reform Process Regarding the Role of SOEs and Military-Affiliated Companies.....	94
Box 11: Mineral Resources Policies.....	100
Box 12: Corporate Social Responsibility (CSR) & Creating Shared Value (CSV) .....	104
Box 13: Relevant International Standards, Guidance and Initiatives on Community Engagement and Grievance Mechanisms .....	121
Box 14: International Standards, Guidance & Initiatives on Communities & Mining .....	132
Box 15: International Standards, Guidance & Initiatives on Land & Mining .....	144
Box 16: Legal Provisions on Contracts, Wages, Working Hours and Leave .....	148
Box 17: Health and Safety in Subsistence Mining .....	157
Box 18: Working Conditions in Subsistence Mining.....	160
Box 19: International Standards, Guidance & Initiatives on Labour Rights, Safety & Mining.....	164
Box 20: The Gendered Impacts of Mining.....	169
Box 21: Impacts of Mining on Children’s Rights.....	172
Box 22: International Standards, Guidance & Initiatives on Women and Mining .....	178
Box 23: International Standards, Guidance & Initiatives on Children’s Rights and Mining.....	179
Box 24: Karen National Union (KNU) Mining Licensing Rules and Regulations.....	183
Box 25: International Standards, Guidance & Initiatives on Security and Conflict in the Context of Mining .....	190
Box 26: International Frameworks on Mercury and Cyanide .....	194
Box 27: International Standards, Guidance & Initiatives on Environment and Ecosystem Services and Mining .....	203
Box 28: Kachin Armed Groups Involved in Mining in Kachin State.....	209
Box 29: Armed Groups Involved in Mining in Wa and Pa-O Self-Administered Areas (Shan State).....	211
Box 30: Armed Groups Involved in Mining in South-East Myanmar (Kayah, Kayin, Mon and Tanintharyi) .....	214
Box 31: Topics Covered in SWIA Questionnaires.....	245

## List of Abbreviations

<b>ADB</b>	Asian Development Bank
<b>ARDS</b>	Acute Respiratory Distress Syndrome
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>ASM</b>	Artisanal and Small-scale Mining
<b>BGR</b>	German Federal Institute for Geosciences and Natural Resources
<b>CCCMC</b>	China Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters
<b>CDA</b>	Community Development Agreement
<b>CEDAW</b>	Convention on the Elimination of All Forms of Discrimination Against Women
<b>CPB</b>	Communist Party of Burma
<b>CRC</b>	Convention on the Rights of the Child
<b>CSO</b>	Civil Society Organisation
<b>CSR</b>	Corporate Social Responsibility
<b>DICA</b>	Directorate of Investment and Company Administration
<b>DGSME</b>	Department of Geological Survey and Mineral Exploration
<b>DIHR</b>	Danish Institute for Human Rights
<b>DoM</b>	Department of Mines
<b>EAO</b>	Ethnic Armed Organisation
<b>ECC</b>	Environmental Compliance Certificate
<b>ECD</b>	Environmental Conservation Department
<b>EHS</b>	Environment, Health and Safety
<b>EIA</b>	Environmental Impact Assessment Note: This SWIA reflects the preference of ECD by using 'EIA' to refer to what may elsewhere be referred to as ESIA or ESHIA.
<b>EMP</b>	Environmental Management Plan
<b>ESIA</b>	Environmental and Social Impact Assessment
<b>ESHIA</b>	Environmental, Social and Health Impact Assessment
<b>ESMS</b>	Environmental and Social Management System
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>ESMP</b>	Environmental and Social Management Plan
<b>EU</b>	European Union
<b>FDI</b>	Foreign Direct Investment
<b>FPIC</b>	Free, Prior, and Informed Consent
<b>GAD</b>	General Administration Department
<b>HRIA</b>	Human Rights Impact Assessment
<b>HSE</b>	Health, Safety and Environment
<b>ICJ</b>	International Commission of Jurists
<b>ICMM</b>	International Council on Mining and Metals
<b>IHRB</b>	Institute for Human Rights and Business
<b>IFC</b>	International Finance Corporation
<b>IEE</b>	Initial Environmental Examination
<b>ILO</b>	International Labour Organisation
<b>JV</b>	Joint Venture
<b>KIO</b>	Kachin Independence Organisation
<b>KNSO</b>	Karenni National Solidarity Organisation
<b>KNU</b>	Karen National Union
<b>LGBT</b>	Lesbian, Gay, Bisexual and Trans-gender people
<b>MCRB</b>	Myanmar Centre for Responsible Business
<b>ME-1</b>	Mining Enterprise No.1

<b>ME-2</b>	Mining Enterprise No.2
<b>ME-3</b>	Mining Enterprise No.3
<b>MEC</b>	Myanmar Economic Corporation
<b>MEITI</b>	Myanmar Extractives Industries Transparency Initiative
<b>ME Observers</b>	Mining Enterprise Production Monitors
<b>MFMA</b>	Myanmar Federation of Mining Associations
<b>MGE</b>	Myanmar Gems Enterprise
<b>MIC</b>	Myanmar Investment Commission
<b>MoD</b>	Ministry of Defence
<b>MoECAF</b>	Ministry of Environmental Conservation and Forestry
<b>MoLIP</b>	Ministry of Labour, Immigration and Population
<b>MoM</b>	Ministry of Mines
<b>MoNREC</b>	Ministry of Natural Resources and Environmental Conservation
<b>MPE</b>	Myanmar Pearl Enterprise
<b>NCA</b>	Nationwide Ceasefire Agreement
<b>NDA-K</b>	New Democratic Army-Kachin
<b>NGO</b>	Non-government Organisation
<b>NLD</b>	National League for Democracy
<b>NLUP</b>	National Land Use Policy
<b>NRGI</b>	Natural Resources Governance Institute
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>OSH</b>	Occupational Safety and Health
<b>PNO</b>	Pa-O National Organisation
<b>PPE</b>	Personal Protective Equipment
<b>PSC</b>	Production Sharing Contract
<b>RBC</b>	Responsible Business Conduct
<b>SECP</b>	Stakeholder Engagement and Communications Plan
<b>SME</b>	Small and Medium-sized Enterprises
<b>SOE</b>	State-owned Economic Enterprise
<b>SWIA</b>	Sector Wide Impact Assessment
<b>TB</b>	Tuberculosis
<b>UMEHL</b>	Union of Myanmar Economic Holdings
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation
<b>UNGPs</b>	United Nations Guiding Principles on Business and Human Rights
<b>UWSP</b>	United Wa State Party
<b>VFV</b>	Vacant, Fallow and Virgin Lands
<b>VPSHR</b>	Voluntary Principles on Security and Human Rights
<b>WHO</b>	World Health Organisation
<b>3Ts</b>	Tin, Tantalum and Tungsten



## Box 1: Terms used in the report

### Formal mining sector

- **Formal operations:** Mines that have been granted a minerals permit from the central Union Government or its representatives will be referred to as **permitted or licensed operations**. According to the Myanmar Mines Law and Rules, permits can be granted for a range of mining activities, including **large-scale, medium-scale** (category introduced in the 2015 Amended Law but not yet defined), **small-scale** or **subsistence** mines.
- **Large-scale mine:** A large-scale mine, permitted according to the Myanmar Mines Law and Rules, is an operation of industrial mineral production with substantial investment, using sophisticated technology and know-how. A **large-scale mine site** connotes the area surrounding a permitted, large-scale industrial mine, including ancillary infrastructure, such as processing facilities or factories, that are on the site. On a large-scale mine site, there might also be several subcontracted, smaller operations. These operations are not licensed for independent mineral production by the central authorities.
- **Small-scale mine:** A small-scale mine, permitted according to the Myanmar Mines Law and Rules, is an operation involving the commercial extraction of minerals, requiring small investments and a comparatively lower possibility of mineral productivity. In practice, some permitted small-scale mines are larger, as sites may consist of several, adjacent small-scale concessions. A 'small-scale mine site' may therefore be larger than the size specified by the above regulations. As with large-scale mine sites, there might also be several subcontracted, smaller operations on a small-scale mine site. These are not permitted for mineral production by the central authorities.

### Informal mining sector

- **Informal operations:** Mines which have been granted permissions by an ethnic armed organisation (EAO), or mining activities that take place on land leased by a company but for which the company does not hold a government-issued minerals production permit, are referred to in the SWIA as **informal operations**.
- **Subsistence mine:** According to the 2015 Amended Myanmar Mines Law, a permitted subsistence operation carries out mineral production by using either hand tools or machinery equipment of limited horse power. However, all subsistence mines encountered during SWIA field research operated without a permit and periodically relied on machinery which exceeded the specification. Therefore, subsistence mines are included in the report as part of the informal mining sector.
- **Artisanal and Small-scale Mining (ASM)** is a term frequently used to refer to mining that relies on simple techniques and physical labour, which is often performed without formal mining permits, has a low productivity, lacks safety measures, health or environmental protections, may be practiced seasonally, and is characterised by economic insecurity.
- **Subcontracted mine operation:** On a licensed large- or small-scale mine site, the operation of an adit (an entrance to an underground mine, which is horizontal or nearly horizontal, for the purpose of entering, draining water and ventilating the mine) or pit may be subcontracted out to individuals or smaller companies, called

**subcontracted mine operators** in this report. Such arrangements most frequently function on the basis of production sharing between the permit-holder and the subcontractor. The subcontractor has to respect the rules set by the permit-holder.

- **Subsistence mining area:** Where many very small mines operating at subsistence-level with limited investment are clustered close together geographically, it is referred to in this report as a **subsistence mining area**. Such areas were frequently found to include informal small-scale and subsistence mines, miners working on waste piles, cooperatives of panners and, in some areas, small-scale mines that had been granted permissions to mine by a local ethnic armed organisation (EAO). An alluvial or hard rock **subsistence mine site** is usually structured around a '**pit owner**' who has established control of a small area, often by having raised the capital to invest in machinery.

### Workers

- **Workers:** Workers in the **formal mining sector** include **employees** who are directly employed by the licensed operator. These workers usually, but not always, have a formal, written employment contract and a fixed monthly wage. Such operations may also employ **contract labour**, workers contracted by a third-party to work for the main company, as well as **daily workers or casual workers** who are employed on a day-by-day basis, subject to availability of work. Such workers are paid only for the days they work and the pay may vary according to the type of work carried out on a particular day. Subcontracted mine operations also employ daily workers. Individuals and groups, sometimes family units, may also pay a fee to a permit-holder to pan or sort through mine waste on the permit-holder's concession and usually have to share their production with the permit-holder. These workers are referred to as **subsistence miners**.
- On subsistence mine sites, usually the pit owner operates the pit helped by workers employed on a daily basis or a production sharing basis. On gold mine sites, there may also be panners. **Panners** are more often self-employed and many adult gold panners work in groups of three to five, splitting their production evenly.

NB: The definitions and examples given above are based on practices observed during field research carried out by MCRB from December 2015 to May 2016 and as they relate to the production of limestone, gold and tin. It is to be expected that there are several other operational arrangements used in Myanmar's mining industry, not least in the large informal sector.