

Terms of Reference – Short-term Services

Project Number and Name: 2014-084 Mexico – Assessing the Artisanal Gold & Silver Mining Sector

Date: March 2, 2015

Student: Gabriel Jiminez

Position: Graduate Research Assistant

Program Area: Transformation of Artisanal and Small-Scale Mining (ASM)

Research Project: Assessment of the Metallic Mercury Producers in Mexico

The purpose of this assessment is to collect and analyze available information from the Mexican Mercury Industry in order to identify the inventory of Hg mines, describe the supply chain. The report also identifies the unofficial primary production therefore not yet quantified by the government.

- Inventory of Hg mines in Mexico and their evident environmental and health impacts
- Quantify mercury production
- Approach to the Mexican Geological Survey to identify state-by-state geological and mining monographs of the official mercury producers.
- Supply Chain of mercury in Mexico (how this is reaching artisanal gold miners)
- Legal and Informal miners
- Invasion of artisanal miners
- Understand Mexican government legal framework for mining and their enforcement measures.
- What is the current methods used by Hg miners
- Conduct Interviews

Tasks/Responsibilities: Will be accountable for the effective and efficient management of the assigned research project, including ensuring that it is delivered within budget and according to the established CIRDI policies and procedures. Other responsibilities include:

- Familiarizing oneself and using the project management/tracking software deemed appropriate by the Sr. Program Lead.
- Develop research project work plan and budget in consultation with the Sr. Program Lead, Program Officer, and Finance Manager.
- Monitor results as they relate to the research project objectives and the ASM program area.
- In consultation with the Sr. Program Lead and Program Officer, develop criteria and indicators relevant to the mandate of the Institute in order to guide evaluation of results and outcomes.
- Implementation and Execution. Oversee the research project life cycle from concept note, delivery of work, to final project evaluation. Ensure quality control over deliverables.
- Identify and solve problems, and remove obstacles as required to ensure successful research project delivery. Monitor and respond to risks as they occur.

- Write and produce regular written updates and reports on research project progress.
- Develop presentations for developing country partners, the Executive Board, Advisory Council, and strategic partners.
- Ensure research files are in compliance with UBC ethics procedures.
- Conduct in-depth literature searches of scientific publications and resources as required.
- Work collaboratively with faculty and professional staff across the three coalition universities, multiple strategic partners, and in-country partners.
- Collect baseline data relevant to the ASM program area.
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Communications activities:

- Provides information to the Institute communications team on research project activities for communication purposes
- Prepares drafts for review of presentations and reports related to research project activities for internal and external audiences.

Reporting to: Jeffrey Selder, Sr. Program Lead; working closely with Mikhaela Meznaric, Program Officer

Supervision Received: The Research Assistant will work under the direction of the Senior Program Lead, Transformation of Artisanal and Small-Scale Mining (ASM). Works in close collaboration with Program Officer and other program and administrative staff. He/She is required to work independently and within established policies, procedures and standards. Work is reviewed in terms of achievement of specific goals. The incumbent must be able to identify circumstances that require consultation with other staff, and be able to seek out that consultation.

Supervision Given: Provides instructions to support staff and resources, as required for the development and delivery of specific research project deliverables.

Duration of the Assignment: March 2nd, 2015 – December 24th, 2015 (10 months).

Rate: \$3000/month

Level of Effort: Part time in compliance with UBC policies

Appendices:

- Appendix A: Additional DFATD Clauses
- Appendix B: Confidentiality
- Appendix C: Invoice submission information
- Appendix D: Timesheet Reporting
- Appendix E: CIRDI Travel Guidelines
- Appendix F: Emergency Contact
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- Appendix H: CIRDI Branding, Acknowledgement, Media
- Appendix I: Standard UBC Terms and Conditions

Terms of Reference – Short-term Services

Project Number and Name: 2014-081 Ecuador – Assessing Ecuador’s gold Supply Chain

Date: March 2, 2015

Student: Max Thomas

Position: Graduate Research Assistant

Program Area: Transformation of Artisanal and Small-Scale Mining (ASM)

Research Project: Gold Supply Chains, Ecuador

Assessment of the supply chain is crucial to providing a comprehensive analysis and conclusion to the Ecuador’s formalization process. The problem with Ecuador’s supply chain in regards to ASGM comes from the lack of clarity and perceived bias cascading from the top of the legislation. The mining legislations in the country tend to favor the artisanal nature of mining exploration and development, as the categorization of mining entities is based on tonnage processed and income generated. The current legislation is meant to secure that the majority of the revenue derived from natural resources stays in the country, which can be interpreted from the country’s: 5% royalty tax on all sales; 25% income tax; 12% tax on all profits; 70% windfall tax, and; 12% VAT. The objectives of this project are to:

- analyze strengths and weaknesses of the formalization process of the ASGM sector in Ecuador
- find strategies to maximize purchasing of gold from informal sector through legal channels
- identify methods that are most efficient in minimizing loses of tax revenue, whilst maximizing and enhancing benefits for government and communities

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Terms of Reference – Short-term Services

Project Number and Name: 2014-085 Assessing Regional suitability for Implementation of a Training Center

Date: March 2, 2015

Student: Maria Clara Varga

Position: Graduate Research Assistant

Program Area: Transformation of Artisanal and Small-Scale Mining (ASM)

Research Project: Assessment of Regional Suitability for Implementation of Training Centre, Cachoeira do Piriá, Brazil

Para State, Brazil is a hot bed of artisanal mining activity, and a hub for some 200,000 artisanal gold miners in the Brazilian Amazon. There is an urgent need to undertake multiple stakeholder relations, environmental assessment, and mercury analysis assignments. This project will focus primarily on assessment and analysis, with the following outcome objectives:

- on-the-ground review of current processing methodologies used by artisanal miners
- identification of production levels, safety issues, key challenges for miners
- determine receptiveness of local and state Governments, as well as mineral title owner, Brazil Resources Inc. (BRI) to establishing a Training Center (ITCAM) in Cachoeira
- assuming positive reception of the ITCAM idea:
 - establish training center designs, curriculum, personnel, etc.
 - establish an implementation plan for the training center that focuses on sustainability

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Duration of the Assignment: March 2nd, 2015 – December 24th, 2015 (10 months).

Rate: \$3000/month

Level of Effort: Part time in compliance with UBC policies

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Terms of Reference for Ruby Stocklin- Weinberg



PROJECT DESCRIPTION**PROJECT NUMBER 2014-004**

Project Title: INCAM – Indonesian Centre for Artisanal Mining – Phase I

Region: Indonesia

Countries: Indonesia

Start date/duration (months): April 2015 to October 2015

Project Lead: Ruby Stocklin-Weinberg

Institute Partners: Canadian:

Institute Partners: in-country: Dr. Abdul Haris, Agency for the Assessment and Implementation of Technology (BPPT), Jakarta, Dr. Dewi Krisnayanti, IRC-MEDMIND, University of Mataram, Lombok, Mr. Bardolf Paul YTS (NGO from Kalimantan),

Institute Partners: international: Dr. Christopher Anderson, Institute of Agriculture and Environment, Massey University, New Zealand; Dr. John Tychsen, Geological Survey of Denmark and Greenland (GEUS), Denmark; Professor Xinbin Feng, Institute of Geochemistry of the Chinese Academy of Sciences, China

Background:

The Indonesia Centre for Artisanal Mining (INCAM) initiative was conceived in May 2013 as a result of a workshop in Mataram in West Nusa Tenggara, Indonesia with the presence of staff and students of UBC. This workshop concluded with the participants deciding to establish a Centre for Research Excellence for AGM in Indonesia that was aligned with an Indonesian Training Centre for Artisanal Miners modelled on the Canadian Institute for Extractive Industries and Development (CIIEID) ITCAM initiative in Ecuador.

Indonesia is the world's second largest mercury polluter, after China, from AGM. Recent estimates (Ismawati et al.2013), state that the amount of mercury released into the environment in Indonesia can range from 280 to 560 tonnes/a. The INCAM initiative will play a significant role supporting the Mercury-free National Implementation Plan team to meet its objective of phasing out mercury use nationwide in several ways. INCAM has the mandate to identify, develop and implement non-mercury mining technology throughout Indonesia

The Indonesian Centre for Artisanal Mining (INCAM) is being established by a team of national and international scientists and officials from the Indonesian Government (BPPT), the University of Mataram (Indonesia), the University of British Columbia (Canada), and Massey University

(New Zealand) to address the consequences of ASGM within the context of the National Implementation Plan. INCAM's mission statement is 'to contribute with education and technology to the transformation of artisanal miners into responsible small-scale miners while striving, through a collaborative effort, to help them reduce poverty and improve quality of life for workers and affected communities'.

To achieve its mission, INCAM is to be established as a department in BPPT's Centre for Mineral Resources with headquarters in Jakarta. The department will comprise of two sub-departments, the Centre for Research Excellence in Artisanal Mining (CRE-AM) and the Indonesian Training Centre for Artisanal Miners (InTCAM). CRE-AM will assess the suitability of existing and new technology for implementation at ASGM field locations, ensuring that the technology is safe and fit-for-purpose. Based on a partnership model, CRE-AM will create the opportunity for national coordination of ASGM operations in Indonesia and seeks representation from all relevant stakeholders (governments, NGOs, universities, companies).

Field trips were conducted by UBC in Lambok, the field site where the INCAM will be implemented. The Canadian Embassy to Indonesia has been following the steps of this project and is interested in finding financial support for INCAM's activities. The CIRDI workshop on Training Centres for Artisanal Miners in Ecuador in December 2013 included three representatives from the Indonesian Government.

The level of training is variable and will be modified to the level of the audience. It is recognized that each educational initiative will require site-specific considerations, and INCAM will be able to handle these demands because of the equipment, instrumentation and logistical support provided by its facilities.

This **first phase** of the project will assess through interviews the capacity of various stakeholders and the feasibility, design, curricula, location, organization and potential sources of funding of the INCAM, particularly with respect to its current field activities. This will generate a pre-cursor for a Business Plan that make suggestions for how the INCAM will function and where its services are most needed. The Project described in this TOR refers to a feasibility study of Phase 1 activities pertaining to INCAM's overall development.

Objective of the Project:

- Assess the feasibility and potential impact of INCAM
- Discuss the design and implementation plan with local stakeholders
- Provide recommendations on the potential structure, scope, operational management and funding of INCAM field programmes
- Discuss types of curricula and potential trainers
- Assess the level of success of current INCAM activities

APPROACH AND METHODOLOGY

The Researcher will use a mix of qualitative methods to achieve the Project's objectives, including:

- Desktop review of comparable programmes in the ASM sector and telephone interviews with ASM training experts to identify critical themes to investigate with Indonesian-based stakeholders;
 - Review of **INCAM** planning documents
 - Field trip to Indonesia to meet with INCAM proponents and mining actors in Lombok
-

Province to establish readiness and identify capacity gaps that will need to be addressed to establish INCAM activities in Lombok, carrying out interviews and focus groups with key stakeholder. Field activities to also include interviews with main stakeholders and discussion with artisanal miners and needs assessment.

- Group interviews with relevant stakeholders about the most appropriate Key Performance Indicators to evaluate the success, appropriateness and sustainability of INCAM's field activities.

EXPECTED PROJECT OUTCOMES & RESULTS

Final Output:

Generate a **Report** with details for the implementation of the INCAM. The Report will include the following components:

- Recommendations on the structure, scope, operational management, type of knowledge delivery & training needed and funding model of INCAM
- Indication of seed funding required to support the establishment of INCAM in the field
- Indication of ongoing investment required to sustain and support INCAM, and where that funding should come from;
- Recommendation of potential pilot sites appropriate types of future INCAM interventions; and
- Assessment of how scalable and replicable INCAM's planned interventions are at present.

DURATION OF THE ASSIGNMENT

The duration of the assignment will be from 01 April to 01 October 2015.

INPUTS

- The Researcher will report directly to Jeff Selder.
- The Researcher will work remotely, using her own computer.
- The Researcher will work up to 20 hours per week.

INDIVIDUAL WHO WILL PERFORM THIS ASSIGNMENT

Ruby Stocklin-Weinberg

LOCATION WHERE ASSIGNMENT WILL BE PERFORMED

Remotely in North America and one field mission to Indonesia

PAYMENT SCHEDULE

The Researcher will be paid \$4000 per month.

CONTACT PERSONS

The Researcher's point of contact at CIRDI will be Jeff Selder, jwselder@gmail.com.

The researcher's point of contact at UBC will be Marcello Veiga veiga@mining.ubc.ca

The Researcher's point of contact at INCAM will be Chris Anderson
c.w.n.anderson@massey.ac.nz

The Researcher's point of contact at BPPT will be Yudi Prabangkara.

PROJECT MILESTONES

Detailed project budget for desk study, field mission and reporting (date TBD)

Interim field report following the field mission (date TBD)

Draft Report to be submitted to Marcello Veiga and Jeff Selder for technical input (date TBD)

Final Report (date TBD)

Please note that the TORs also include the appendices indicated:

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CIRDI ICIRD

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DEVELOPMENT
INSTITUTE

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CANADIEN
INTERNATIONAL DES
RESSOURCES ET DU
DÉVELOPPEMENT

Terms of Reference – Short-term Services

Project Number and Name: 2014-082 Peru – Perceptions of Small & Large Scale Mining in Tambogrande

Date: March 2, 2015

Student: Zará Toledo

Position: Graduate Research Assistant

Program Area: Transformation of Artisanal and Small-Scale Mining (ASM)

Research Project: Perceptions of Small and Large-Scale Mining in Tambogrande, Peru

Hand in hand with the great mining investment that has been taking place during the last 15 years, Peru has also witnessed the proliferation of artisanal mining. Paradoxically, the cities that have expressed strong opposition against *large-scale* mining have seen *artisanal* mining grow and flourish. The main objective of this project is to investigate why artisanal mining does not face the opposition that large-scale mining does. This study will have significant implications for the formalization process and mitigating conflicts.

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Rate: \$3,500/month

Level of Effort: Part time in compliance with UBC policies

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