# Analysis of formalization approaches in the artisanal and small-scale gold mining sector based on experiences in Latin America, Africa and Asia

# SUMMARY FOR POLICYMAKERS

26 October 2011

#### **Invitation to Comment**

This draft document will be posted on the UNEP Global Mercury Partnership website until the 2nd December 2011. In posting this draft, UNEP is soliciting review from a broad range of stakeholders. A finalized report will be prepared on the basis of comments received.

Any comments, corrections or suggestions for improvement on this version are most welcome.

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<sup>&</sup>lt;sup>1</sup> Please note that this document is undergoing further review by the steering group during this public consultation period.

#### Introduction

This document is a summary for policymakers based on a forthcoming report produced by UNEP in collaboration with organizations specializing in formalization of the Artisanal and Small-scale Gold Mining (ASGM) sector. This report is one of a series that aim to improve understanding of this complex phenomenon. It provides information to policy makers and other interested stakeholders on the formalization of this sub-sector of the mining economy, based on the analysis of experiences with formalization in Ecuador, Peru, Tanzania, Uganda and Mongolia. The goal is to initiate a constructive conversation on the essential elements of formalization processes, institutional considerations, legislation development or reform, and financing. The analysis is limited to the countries mentioned and identifies key strategic lessons and recommendations that inform the debate. The main findings are that:

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- Existing mining codes in Ecuador, Peru, Tanzania, Uganda and Mongolia, are, for the most part, ill-adapted for the task of formalizing ASGM but can be successfully adjusted;
- Environmental and other legislation <u>relevant to mining</u> needs to take into consideration potential concerns specific to ASGM;
- Early phase financing is a crucial gap in preliminary formalization processes; and
- Despite the many challenges, experience shows that the ASGM sector can transform itself quickly when the enabling regulatory, economic and other conditions are created.

# I. Formalization as a process

Formalization is a process that seeks to integrate ASGM into the formal economy. It can only be successfully achieved if programs and public policy deal with the different dimensions of ASGM activities simultaneously and in an integrated way.

Legalization is just one dimension of the process of formalization.

Worldwide, mining tends to be regulated through delineation and protection of property and access rights for land on which mining takes place. ASGM activities are, for the most part, not incorporated into these kinds of formal legal and institutional structures. Even where recognized, institutions and laws are typically not well adapted for ASGM. In this context, formalization means both developing or adapting mining and other laws and/or policies so that it better addresses the challenges of ASGM (i.e., the legalization component of formalization), and generating other enabling conditions and requiring accountability of the sector for this activity to emerge in the formal economy.

Lack of formalization in ASGM is widely considered as a barrier to helping miners reduce the use of mercury in their activities. Reducing mercury use (and improving other environmental aspects of ASGM) requires technical assistance and education on low-mercury and mercury-free processes and other better environmental management practices, access to credit for better equipment that allows these use of these alternative processes, means to improve profits, incentives for better land management and stewardship, and more. These needs are more likely to be met if the activity itself is formalized. If the activity itself is the activity itself is formalized.

If formalization is indeed a key factor enabling <u>improvements in</u> mercury management and <u>minimizing</u> other social <u>and wider environmental problems in ASGM</u> communities, <u>then policies and actions that lead to formalization of this sector, though challenging, will be well rewarded through avoiding significant health and environment consequences and related financial costs.<sup>iii</sup></u>

# II. Key issues and lessons from <u>Selected Country</u> experiences on formalization: <u>legal frameworks</u>

The development of legal frameworks for ASGM is still in its early stages and there is space for more comprehensive, integrated, and realistic approaches. Legislators typically face one of three tasks:

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- 1. In cases where the sector is *extra-legal* (that is, not currently governed by law nor considered illegal), development of new legislation specifically relevant to ASGM within mining codes, environmental, health and safety, trade, tax and other supplemental legislations;
- 2. <u>In cases where ASGM is *illegal*</u>, reform of existing legislation and development of new legislation specifically relevant to ASGM within mining codes, environmental, health and safety, trade, tax, and other supplemental legislations; or
- 3. In cases where current law and regulation does not appropriately address the particularities of ASGM, reform of existing legislation specific to ASGM.

Legislators must also ensure coherency between ASGM-related legislation and other relevant laws and regulations (i.e. environmental management, labour, child protection, trade, and tax, etc.). Most countries seeking to better govern mining have created a unique framework law distinct from, but linked to, other related legislation (i.e. environmental protection, workers protection, trade, and tax, etc.). Another option is to harmonize various requirements in existing laws and regulations by amending these and providing an underpinning strategy document to show how they work together and to guide implementation and enforcement. Whatever the choice, approaches must be coherent and appropriate to the national context.

#### A. Definition of ASGM activities

It is essential to distinguish between ASGM and other mining activities in law. From a national public policy perspective and especially for regulatory purposes, a definition is fundamentally important to distinguish ASGM from other mining activities. Ultimately, this definition is best decided at the national level, in close collaboration with local stakeholders and regional authorities in ASGM areas and with some level of coordination with internationally agreed norms.

#### **Box 1. Considerations for Classifying ASGM Activities**

- 1. Legally recognising the many different forms that ASGM can take is an important tool in deciding how to regulate the activity, as well as providing some opportunities for simplification
- "Artisanal", "Family", "micro", "small", and "medium" are four categories of classification in use, but there should be scope for developing a classification system that corresponds to national situations
- 3. Consideration of pre-existing legislation is critical for the definition of the scope of <a href="new/reformed">new/reformed</a> legislation and to avoid gaps, overlaps and duplication in the overall legal framework governing

# B. Mining titles and related obligations and rights

Legislators have at their disposal a wide spectrum of policy instruments to implement effective governance of mining activities. The most commonly used policy instruments are regulatory ('command and control'), but these are generally applied in combination with other measures, including economic instruments (market-based instruments), enforcement mechanisms and sanctions for non-compliance. These measures must be simplified and adapted for ASGM.

#### i. Mining titles and licences

A mining title is the first legal requirement for undertaking any mining activity. Without it, in principle, it is not possible to mine legally and therefore it is the main legal instrument used to regulate mining. The mining title defines the rights and obligations of the holder. Key lessons from formalization experiences to date include the need to:

- Adjust mining title regimes to fit ASGM conditions and not just large-scale operations;
- Simplify licensing procedures to reduce costs of 'legality' for ASGM operations; and
- Balance of rights and responsibilities in mining titles.

As discussed in Section II.A., having more than one type of ASGM mining category allows regulators to tailor requirements for mining titles to the particular and diverse challenges of different types of ASGM.

Mining titles that reflect different phases of mining activities are key. Mining phases include recognition, exploration, exploitation, beneficiation (or processing), refining (smelting), and

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RG: Agree to the suggestion of lowering cost of permits and administrative burden.

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commercialization; and in <u>large scale mining (LSM)</u>, <u>separate</u> licences are often granted for each phase. However, for most ASGM operations, the exploration and exploitation phases occur simultaneously with beneficiation/processing. It is possible, perhaps even desirable from a simplification standpoint, that ASGM mining titles allow for processing activities without additional licences except when (1) the processing plant reaches a specific size or, (2) processing is a business without any mining extraction activities.

Other important <u>considerations</u> for the design and attribution of mining titles include:

- Designating specific areas for ASG mining activity;
- Level of activity (e.g. quantity of ore mined, or depth of tunnelling, etc.)
- Duration and renewal of mining titles;
- Persons permitted to undertake ASGM activities; and
- Transfer of rights and mining titles upgrades.

#### Box 2. Considerations for Designing Mining Titles or Licences for ASGM

- 1. The definition and size of mining area should be treated as an instrument of public policy that can have positive or negative economic impacts on the operations, on the stability of the people that work in the operations, and on the social fabric of the local community
- 2. Designating areas: Reserves or dedicated areas for ASGM in most cases are generally difficult to implement because they can be costly and demanding for governments to enforce. In cases where this concept is used, incorporating the knowledge of the ASGM sector to help in the demarcation is essential. This approach may prove effective to implement and enforce in communities that have special territorial rights (e.g., indigenous communities). Participation of the community in the demarcation of the area is essential, as is the concept of exclusivity for ASGM to operate in the area. Cooperation of large-scale mining companies also is critical in the success implementing designated areas for ASGM.
- 3. <u>Duration and renewal:</u> Opportunities for renewal of the title is important for mining operations because it allows for investment, including in non-mercury techniques, and continuation of work until the deposit "ends." <u>Ilt allows the government to promote</u> the best practices in extraction of mineral resources <u>and allows miners the "security of tenure" to invest capital in the improvement of their process.</u>
- 4. Persons permitted: Allowing diverse forms of business entities to be holders of artisanal and small scale mining titles should be encouraged with clear concrete measures: economic incentives, simplified legal requirements for associations and partnerships, and allowing different business models (e.g, consortium, joint venture)
- 5. <u>Linking titleholders to specific mining operations is critical if environmental and social responsibilities</u> bestowed by the mining titles/licences are to be upheld
- 6.
- 7. Restricting ASM mining titles to nationals may be important to fully realize domestic poverty alleviation
- 8. **Transfer and upgrading of mining titles** through the regulatory framework is essential to create the legal conditions for better management of mining operations.

#### ii. Environmental licences

In <u>the countries studied</u>, obtaining an environmental licence is part of the process of obtaining a mining title for ASGM, though these licenses are not necessarily issued by the Mining Ministry.

# **Box 3. Considerations for Environmental Licences in ASGM**

- 1. Environmental licences for ASGM should build, to the extent possible, on established environmental legislation and policy instruments.
- 2. Evaluation of the impacts and specific guidelines for addressing them should be required for all categories of ASGM.
- 3. Environmental impact assessment (EIA), management plans, and requirements for attribution of environmental licences should take into consideration the negative impacts that different sized operations generate.
- 4. Environmental requirements (e.g., one title that includes the environmental licence and management plan) should be simplified without reducing the quality of environmental management.

#### iii. Pollution control, bans and restriction measures

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Effective guidelines and regulations to safeguard worker health and safety, and to prevent or minimize environmental and social impacts are missing from the majority ASGM frameworks in the study areas. Prescriptive and specific measures (while avoiding the creation of unwarranted obstacles) are necessary to clarify obligations. Indeed, the UNIDO Global Mercury Project, years of mercury research and experience in the field were consolidated in the document International guidelines on mercury management in small-scale gold mining which is a useful tool for governments to consider elaborating upon.

Where implemented, pollution control measures largely take the form of prohibitions, bans, or restrictions. The following areas are the most commonly controlled:

- Mercury and cyanide environmental emission and contamination limits
- Mining in river beds
- Restrictions on technology use
- Explosives.

If appropriately applied, restrictions or guidance are powerful instruments. Yet, some blanket bans and restrictions without accompanying support for alternatives or options can push artisanal and small-scale miners into non-compliance with their licences, to <u>locations</u> outside of the practical reach of formal monitoring and enforcement measures, or into illegal trade of toxic inputs or gold. Successful restrictions have <u>been coupled with</u> assistance and incentive measures to help miners adapt to the restrictions without undermining profits or dislocating the miners.

#### Box 4. Considerations for Pollution control, Bans and Restrictions in ASGM

- 1. Specific mining and environmental frameworks should apply to ASGM mining in river beds to prevent and minimize the environmental impacts that today are a reality in these very important ecosystems.
- 2. Knowledge of the use of mercury cyanide, and other toxic substances should be incorporated into regulatory guidelines applied to the ASGM context.
- 3. The regulatory framework should clearly address the requirements for buying, using, and storing explosives in the context of ASGM.
- 4. Capacity building in explosives use and storage (including construction for storage) is very important and should be adapted to the reality of ASGM.
- 5. ASGM legislation must clearly address, in detail, the requirements for compliance with any ban/restriction to be applied, referencing other legislation, i.e. health, environment, where relevant.
- 6. Any legal ban or restriction on the use of technology, methods or processes should be evaluated carefully in terms of impacts of such restrictions in the sector, including the cost of monitoring and enforcement and likely effectiveness of such a ban/restriction.
- 7. Any ban/restriction should be accompanied by accessible alternatives in terms of the performance, cost, availability, and technical complexity in use.
- 8. <u>Likewise alternatives should likewise be supported through subsidies, promotion, or other means to</u> facilitate the migration of miners to the alternatives.

#### iv. Regulating the sale of ASGM product

In the ASGM sector additional licences and other administrative requirements are often requested in order to sell or export gold. These requirements (i.e. certified evaluation of the gold, restrictions on quantities to be evaluated) can pose a challenge given physical distance of ASGM activities from capitals and create security and cash flow problems. These types of overly burdensome licensing or authorization requirements for export or sales of gold may incentivize ASGM mining operations to use as few intermediaries as possible (e.g., export the gold directly). Therefore

#### v. Rehabilitation and mine closure

Rehabilitation and mine closure is a relative new area for mining in general and for ASGM in particular. Generally, obligations, where they exist, are not well-implemented. Regulations are often abstract and tend to default to the process for medium and large-scale mining. Comprehensive regulatory guidelines should be provided for consultation and mining closure based on different categories of ASGM mining titles.

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Comment [SEK10]: Note that ordinarily we would apply the "polluter pays principle" to industrial operations and hold them accountable for cleaning up contamination. As ASGM miners will have limited resources in this regard, the need for prevention – that is, helping miners transition away from mercury use/release in the first place – is especially critical.

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RG: tax incentives, deductions etc. should be mentioned as well.

Comment [U13]: Formalizat ion must not be simply taken as a license for miners to mine. It is also important that formalization acknowledge the equal requirement on miners to be accountable. Thus, rehabilitation of mines, decontamination of specified areas needs to be incorporated into the discussion. Creation of a trust fund from a portion of mining proceeds can be set up to address issues of rehabilitation and decontamination for instance.

#### C. The role of economic instruments

Due to the complex social, political and technical challenges associated with controlling the ASGM sector, assistance, incentives and disincentives for changing behaviours and practices are of interest to legislators. This is a role that economic instruments can potentially fulfil.

## D. Fiscal regimes

All formal mining categories should pay taxes, even if they are nominal, though there is a sense that taxation is too complex for the ASGM sector. Two tendencies have emerged. In some cases, ASGM is treated as <u>just</u> another economic sector with a few minor exceptions. In other cases, countries have distinguished the ASGM sector from other economic sectors and have used regimes similar to taxation of independent workers. Royalties for the ASGM sector, where they are used, vary from 0.2% to 5%.

#### Box 5. Considerations for ASGM Fiscal Regime Design

- 1. Illegal trade becomes a more attractive prospect as the cost of compliance goes up for stakeholders.
- 2. A crucial issue is the need for regional harmonization, specifically related with fiscal regimes, including taxes, royalties and fees among adjacent countries. These measures are some of the most important and effective regulatory tools to prevent smuggling.

# III. **J**institutional aspects of formalization and lessons learned

Formalizing ASGM is a shared responsibility between various stakeholders – in particular between public authorities and miners (large-scale, small-scale and artisanal) – and this should be clearly noted in formalization processes, including in legislative developments/reforms.

Clear allocation of mandates <u>among</u> public bodies is the key to efficiency and cost-effectiveness in governance. The role of Parliament (or Congress, depending on national tradition) is crucial in issuing mandates at the policy level with a common perspective on ASGM that should be upheld by all ministries involved.

Fragmentation in regulatory regimes is a classic challenge where the sector or activity being regulated is a crosscutting one. Experiences in Latin America, Africa and Asia have shown that formalization of ASGM has implications for mining codes, environmental legislation, planning laws, labour standards, chemicals and waste management, business development, gender, access to information/right-to-know' legislation, public budgets and security. One way to address this fragmentation is through designation of a coordinating body. Laws typically identify a Primary Authority responsible for supervision and management of the legislation. This facilitates the coordination of activities. For ASGM, the Primary Authority is typically the ministry for mining or mineral exploitation.

Enforcement is essential and its absence is one of the main causes of high levels of illegality in the ASGM sector. Government agencies, in their role as guardian of natural resources, mining property rights, public health and environmental quality, must ensure that mining operations are abiding by environmental or social requirements. The general lack of capacity of government mining and environmental institutions, aggravated by the heavy public management burden required by the ASGM sector, affects the central administration as much as the provincial and local levels.

Besides government, other elements of society also have an important role to play in the formalization processes. This includes miner's associations foremost, as well as large-scale mining and academia. It is especially key for marginalized ASGM groups to be positively engaged for formalization plans to lead to the desired goals.

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#### Box 6. Considerations for Institutional Roles and Responsibilities in Formalizing ASGM

- 1. Parliamentary mining commissions are potentially powerful mechanisms to align the various ministries on how ASGM is viewed and regulated. They also raise awareness of the impacts of this activity.
- Decentralization of responsibility for ASGM, and the capacity of the local, regional and national
  government institutions to deal with ASGM, needs to be addressed with a clear strategy suitable to the
  national context.

3.

The results of implementation of the public policy should be monitored.

4. Miner's associations, large-scale mining representatives and academia should be positively engaged if formalization is to be successful.

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# IV. Financing implementation of formalization

While international and national budgetary sources of public funding are important to assist with the process of formalization, much less is known about the possibilities for private sector financing and mechanisms for channelling resources to the ASGM sector for the purpose of assisting compliance.

## A. Options for public-private cost sharing

Cost sharing between public and private sectors is required to support one-time financing needs for legislation development and early phase activities in formalization processes, including strategic planning, institution and relationship building and gathering baseline information. As such, the key thrust for early phase financing is (1) increased national budget allocations for ASGM activities, (2) diverting some or increasing revenues from formal gold mining royalties and tax receipts to assistance for ASGM formalization and (3) encouraging large-scale - small-scale partnerships as an element of private sector contributions.

# B. The role of credit mechanisms in achieving longer term financing

Longer term financing for miners themselves is key for continuation of formalization processes; indeed access to credit and financial gain should be one important outcome of formalization in this sector. The most likely sources of finance for miners identified to date include private investment, local credit mechanisms, i.e. microfinance schemes. Little work has been done to date on the experience with these schemes in ASGM however.

#### C. Ethical market initiatives

Market initiatives that create a "sustainability premium" benefiting miners who produce gold in verifiably ethical processes, that directly or indirectly involve the ASGM sector, include the following:

- a) Fairtrade and Fairmined Gold
- b) Initiative for Responsible Mining Assurance (IRMA) xii
- c) The Responsible Jewellery Council (RJC).

These initiatives show that the ASGM sector is likely to respond well when it has an opportunity and that it is possible to work in sustainable initiatives when they are appropriately designed to address the particular needs and challenges of the sector. However, the majority of these schemes are new and as yet unproven.

Comment [SEK18]: This needs to be explained in plain language – eg, miners who produce gold according to set environmental standards earn a higher price for their products

# V. Concluding Remarks and Key Messages

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The research and analysis undertaken in this report "unpacks" critical public policy elements and presents relevant lessons regarding policy implementation for ASGM based on experiences with formalization in Latin America, Africa and Asia. The key messages are as follows:

Formalization is the key factor enabling outreach on mercury management and other social
concerns in ASGM communities; therefore, there will be substantial benefits in terms of avoided,
health and environment consequences from formalization policy actions.

- ASGM formalization is a multidimensional and multi-actor process that requires the integration of policies, and strong coordination between institutions and stakeholders. Knowledge exchange among different actors (including the miners, the government, the market, civil society, and the academia) will contribute to implementable solutions in this complex sector. Generating, disseminating and institutionalizing this knowledge is a clear and important challenge in which all stakeholders play a role.
- Successful formalization strategies tend to:
  - o Incorporate simple approaches and implementation efforts
  - o Foster positive economic conditions for miners and local communities,
  - o Addresses critical needs of the sector
- In terms of applying policy instruments to ASGM
  - o Official classification of ASGM activities allows for the simplification of legal and administrative requirements without compromising environmental and social standards. With distinct categories it becomes easier to define the corresponding <a href="appropriate">appropriate</a> mining and environmental licences with particular tenure and environmental and fiscal rights and obligations.
  - o Mining titles are the main policy instrument used to control formal mining activity. These titles need to be uniquely designed for ASGM.
  - o Environmental licences and plans for mine closure and rehabilitation, including decontamination are the necessary preconditions for any mining activity, bearing in mind the need for simplified approaches to account for varying capabilities.
  - oBlanket bans and restrictions without accompanying support for alternatives and other mechanisms, can push artisanal and small-scale miners into non-compliance with their licences, to locations outside of the practical reach of formal monitoring and enforcement measures, or into illegal trade of toxic inputs or gold. Thus, the implementation of such restrictions should be carefully considered, and needs to be accompanied by technical and other assistance for miners to help them comply and transition.
- Cost sharing between public and private sectors to finance the development of legislation, and early phase implementation initiatives is required to support both one-time financing needs for early phase activities in formalization processes, including strategic planning, institution and relationship building and gathering baseline information. The earliest phases of financing are likely to be sourced from public budgets at the national level.
- Longer term financing for miners themselves is key for continuation of formalization processes; and indeed access to credit and financial gain should be one important outcome of formalization in this sector.

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#### **ENDNOTES**

World Bank, 1995. Artisanal Mining Round Table: Issues for discussion. Background paper for the World Bank International Round Table on Artisanal Mining. Washington, D.C. May.

http://www.communitymining.org/attachments/059\_ARM\_Series5\_Legalisation\_guide\_ASM.pdf

Veiga, Marcello, Stephen Roberts, Carlos Peiter, Glória Sirotheau, Maria Laura Barreto & Gilson Ezequiel. Filling the Void: The Changing Face of Mine Reclamation in the Americas. Department of Mining and Mineral Process Engineering, University of British Columbia, Vancouver, and CETEM - Centro de Tecnologia Mineral, Rio de Janeiro, 2000. Van Zyl, Dirk; Carlos Villachica & Jose Mogrovejo. Guia para el Cierre y Abandono de Minas. Dirección General de Asuntos Ambientales, Ministerio de Energía y Minas. Lima, 1997

viii To obtain more information about economic instruments literature please consult Tietenberg, T.H. Economic Instruments For Environmental Regulation Oxford Review Of Economic Policy, Vol 6, Not <a href="http://www.econ.yale.edu/~nordhaus/Resources/tietenbert\_instruments\_1990.pdf">http://www.econ.yale.edu/~nordhaus/Resources/tietenbert\_instruments\_1990.pdf</a>

Stavins, Robert N. Experience With Market-Based Environmental Policy Instruments .John F. Kennedy School of Government, Harvard University and Resources for the Future. Prepared for The Handbook of Environmental Economics.Edited by Karl-Göran Mäler and Jeffrey Vincent. Amsterdam: North-Holland/Elsevier Science.Revised: October 26, 2001

UNEP. The Use of Economic Instruments in Environmental Policy. Opportunities and Challenges, 2004. United Nation publication <a href="http://www.unep.ch/etb/publications/EconInstruOppChnaFin.pdf">http://www.unep.ch/etb/publications/EconInstruOppChnaFin.pdf</a>

fix Adapted from Guidance on Managing the Placement of Chemicals on the Market currently under development at UNEP Chemicals Branch See http://www.chem.unep.ch/unepsaicm/mainstreaming/UNEP\_GuidanceDocInteg\_default.htm 
x See the forthcoming case studies; OIT. Programa de Actividades Sectoriales. Los problemas sociales y laborales en las explotaciones mineras pequeñas. Op.cit; Centro de Investigación y Planificación del Medio Ambiente, CIPMA y Centro Internacional de Investigaciones para el Desarrollo, IDRC Iniciativa de Investigación sobre Políticas Mineras, IIPM, Minería, Minerales y Desarrollo Sustentable en América del Sur. Equipo MMSD América del Sur. IIED, WBCSD 2002; Barreto; María Laura. FORMALIZACIÓN DE LA MINERÍA EN PEQUEÑA ESCALA EN AMÉRICA LATINA Y EL CARIBE. ESTUDIO FINANCIADO POR EL PROGRAMA MINERÍA ARTESANAL Y EN PEQUEÑA ESCALA (MPE) del IDRC/CRDI/MPRI/IIPM. Julio de 2003

<sup>&</sup>lt;sup>i</sup> For more information about the methodology please see the Case Sudies Annex.

ii Spiegel SJ, Veiga MM. 2007. Report on the policy and governance initiative: enhancing multi-stakeholder approaches to address mercury, small-scale gold mining and the institutional dynamics of change. United Nations Industrial Development Organization, Vienna, Austria. Available from: <a href="https://www.globalmercuryproject.org">www.globalmercuryproject.org</a>.

iii Note to UNEP to fix this up and post final version. (Env for development paper)

iv International Labour Office (ILO), 1999. Social and labour issues in small scale mines: Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-Scale Mines. International Labour Office (ILO), Geneva; Dahlberg, E.H., 1997. Report of the Expert Group Meeting, UNIDO High Impact Programme: Introducing new technologies for abatement of global mercury pollution deriving from artisanal gold mining. United Nations Industrial Development Organization (UNIDO), Vienna

<sup>&</sup>lt;sup>v</sup> Part of this and the following section is draw from the case studies, literature cited and also from the guidelines developed by the author of this report. To access the guidelines please see:

vi Spiegel SJ, Veiga MM. 2010. International guidelines on mercury management in small-scale gold mining. Journal of Cleaner Production 18: 375–385. doi: 10.1016/j.jclepro.2009.10.020

vii Villas Boas, Roberto & Laura Barreto Eds. Cierre de Minas: Experiencias en Iberoamerica. CYTED-UNIDO, Rio de Janeiro, 2000.

xi Adapted from UNEP (2011) DRAFT Guidance on the Development of Legal and Institutional Infrastructures for Sound Management of Chemicals and Measures for Recovering Costs of National Administration (LIRA-Guidance), United Nations Environment Programme, DTIE Chemicals Branch, Geneva. Available at:

http://www.chem.unep.ch/unepsaicm/mainstreaming/Documents/GCO\_SteerComm4/LIRA%20Guidance\_March%202011%20(Final).pdf

xii IRMA website: www.responsiblemining.net

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#### Susan Egan Keane

11/28/2011 1:54:00 PM

This approach may prove effective to implement and enforce in communities that have special territor al rights (e.g., indigenous communities). Participation of the community in the demarcation of the area is essential, as is the concept of exclusivity for ASGM to operate in the area

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Susan Egan Keane

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English (Canada)

#### Page 3: [5] Comment [U4]

User

12/3/2011 6:06:00 PM

This should be more nuanced. For artisanal and small scale, this should be kept to individuals or natural persons. Medium scale on the other hand, you can begin considering other legal entities to participate. Allowing other business entities to participate in small-scale mining concerns dilutes and confuses the tenuous divide between legitimate small-scale miners from LSM mining pretending to be small-scale.

#### Page 3: [6] Comment [SEK5]

Susan Egan Keane

11/28/2011 3:02:00 PM

Why? Not obvious

#### Page 3: [7] Comment [SEK6]

Susan Egan Keane

12/2/2011 10:48:00 AM

Consider adding some comments (one-two sentences or another numbered item) about the practicality of each ASGM miner performing a full EIA for their area, mentioning that these requirements should be tailored to ASGM conditions.

#### Page 3: [8] Comment [SEK7]

Susan Egan Keane

12/2/2011 10:50:00 AM

What does this phrase mean? Does it mean that the requirements should consider the fact that different size and type of operations pose different types of environmental threats? Different operations pose different threats but it is not necessarily a function of size. For example, river dredging is terribly damaging even for small dredges. Also small operations of whole ore amalgamation may use more mercury than larger operations that perform concentrate amalgamation. Also mines in protected areas can cause large environmental impacts regardless of size