

Guidance Document:

Developing a National Strategic Plan to Reduce
Mercury Use in Artisanal and Small Scale Gold
Mining



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Foreword

The Governing Council of the United Nations Environment Programme (UNEP), by its decision 24/3 IV on chemicals management, requested the UNEP Executive Director, working in consultation with Governments and other stakeholders, to strengthen the UNEP mercury programme partnerships by taking a number of steps, including enhancing the artisanal and small-scale gold mining partnership.

In that regard, UNEP initiated regional projects in South-East Asia and South America under the Quick Start Programme of the Strategic Approach to International Chemicals Management in cooperation with a number of interested partners. The project will contribute to existing capacity-building efforts to tackle this challenging issue.

This draft guidance document is part of the commitment of UNEP to the Quick Start project. It is intended as guidance for Governments in the development of a national strategic plan relating to improving practices and working conditions in artisanal and small-scale gold mining and reducing its impact on the global environment. It aims to assist in uniting various levels of Government, miners, civil society and the public in a common mission to improve the quality of life in artisanal and small-scale gold mining communities. Any part of the text in this document may be used in drafting the National Strategic Plan.

Furthermore, at INC II governments voiced support for the inclusion in the future mercury treaty of national action plans to reduce mercury use and release from artisanal small-scale gold mining (ASGM). This guidance document and the experiences of national governments that have used it to date should provide valuable lessons and insights in moving forward.

UNEP encourages governments with active ASGM sectors to develop a National Strategic Plan. Partners within the Global Mercury Partnership stand ready to support governments in their efforts. Examples of National Strategic Plans that have already been developed are available on UNEP's web-site.

The document has been drafted by the Chemicals Branch of the UNEP Division of Technology, Industry and Economics in consultation with a number of partners. It is a draft and will be updated in the light of experience gained in its use. The document is available on UNEP's web-site in English, French, and Spanish.

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LIST OF ABBRIVIATIONS

ARM	Alliance for Responsible Mining
ASGM	Artisanal Small-scale Gold Mining
CASM	Communities and Small-scale Mining Group of the World Bank
CBOs	Community Based Organizations
IGOs	Intergovernmental Organizations
NGOs	Non-Governmental Organizations
NSP	National Strategic Plan
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization

OVERVIEW

This document is intended as draft guidance for governments in the development of a ‘National Artisanal and Small Scale Gold Mining Strategic Plan’ relating to improving practices and working conditions in artisanal and small scale gold mining (ASGM) and reducing the impact of ASGM on the environment. The guidance aims to assist in uniting different levels of government, miners, civil society, and the public in a common mission to improve the quality of life in ASGM communities.

It has been developed with the intention of addressing the ASGM in a holistic manner, including a review of legal, educational, economic, regulatory and enforcement framework as well as a budget and workplan identifying potential funding sources and partners in moving forward. Nevertheless, there is some focus on mercury reductions within this document as mercury is often considered a good first stage entry point into building relationships and tracking progress in ASGM.

Purpose and Objective

The national strategic plan is an opportunity to provide a clear basis and direction for the implementation of activities aimed at addressing ASGM. This type of planning tool is particularly useful to build on existing activities, leverage resources, unite stakeholders that are not necessarily accustomed to working together, and represent divergent interests and perspectives.

This document has two sections and four annexes.

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SECTION 1: Background and Rationale ¹

Definition of Scope of ASGM

Artisanal small-scale gold mining can be defined as gold mining conducted by individual miners or small enterprises with limited capital investment and production².

UNEP Mandate

UNEP has been given a mandate to enhance activities related to ASGM, working through networks in the UNEP Global Mercury Partnership. The overall goal of the UNEP Global Mercury Partnership is to protect human health and the global environment from the release of mercury and its compounds by minimizing and, where feasible, ultimately eliminating global, anthropogenic mercury releases to air, water and land.

This guidance document is meant to assist countries with ASGM in devising National Strategic Plans on ASGM. A National Strategic Plan (NSP) is important for governments because it sets out constructive goals and means of achieving those goals. While the focus of the NSP is on mercury releases and pollution, there are opportunities to address other factors as well. Such issues include: occupational hazards and worker health and safety, gender equality, food security, child labour, land use disputes, resource conflicts, and conflict and tensions regarding social services.

Mercury is often considered a good first stage entry point into building relationships and tracking progress in ASGM; nevertheless, this guidance document has been developed with the intention of building opportunities to better link the ASGM issue into national development agendas.

Issues and Concerns on ASGM

ASGM is a significant global development issue. An estimated ten million people in more than 70 countries depend on ASGM for income, producing about 12 % of the world's gold supply (Telmer K. and Veiga M., 2008). The number of gold miners is expected to increase as gold mining becomes increasingly lucrative: the price of gold has increased dramatically over the years, rising to over US\$1500/oz in April 2011, from \$260/oz in March 2001.

ASGM activities can have widespread environmental and human health impacts, leaving extremely polluted sites that can persist for centuries. Common mercury amalgamation practices, for example, create environmental and health hazards that are felt at the local level and beyond. Mercury is a highly toxic element that is commonly used to separate the metal from the ore because it is considered effective, easy to use, abundantly available, and cheap.

There are serious long-term environmental health hazards in populations living in, near or downstream/wind of mining operations. At one of the United Nations Industrial Development Organization's (UNIDO) Global Mercury Project sites, almost 50 % of miners showed unintentional tremors. The World Health Organization (WHO) has estimated that the incidence rate for mild mental retardation is as high as 17.4 per 1000 infants born amongst subsistence fishing population near gold mining activities in the Amazon (WHO, 2008).

Long-range atmospheric transport of mercury also leads to contamination of international air and water resources. ASGM's contribution to global mercury pollution is significant. ASGM is considered the largest user of mercury globally, recently surpassing the chlorine industry. Worldwide estimates show that ASGM releases at least 1000 tonnes of mercury per year, including 400 tonnes directly to the atmosphere (Telmer K. and Veiga M., 2008).

¹ This section is intended to provide a general overview of the issue. More detailed information is available at the following web-site: <http://www.artisanalmining.org>.

² Definition currently being used for INC process.

ASGM is often a significant governance challenge, particularly in areas where it is informal and/or illegal. Also, there is currently limited opportunity for coordination within the stakeholder community involved in artisanal and small scale gold mining. This is why working with organised ASGM is crucial, and supporting training for organisational development is a key component of any strategy to mitigate the use of mercury.

SECTION 2: Forming the National Strategic Plan on ASGM

The Development of a ‘National Strategic Plan on ASGM’ is an opportunity to outline a clear and transparent basis for the support, development, and implementation of sustainable activities to reduce mercury use and releases from ASGM at the national level while also considering other social, environmental, and economic impacts. The plan should aim to coordinate and leverage national capacity for pollution prevention, risk reduction, and risk elimination associated with ASGM.

There are many potential benefits in implementing a National Strategic Plan on ASGM:

- improved health and the environment of the ASGM communities, including the reduction of global mercury releases
- stronger linkages with the overall development, human rights, and environment agendas
- improved access to required resources
- increased cooperation and collaboration
- long term sustainability of the ASGM sector
- promoting alternative livelihoods.

Annex I provides a suggested outline of a Table of Contents for a National Strategic Plan on ASGM. The suggested structure includes seven areas:

1. Executive Summary
2. Introduction and Background
3. National Overview
4. Priority Goal and Objectives
5. Implementation Strategy (10-20 pages)
6. Evaluation Mechanism
7. Annexes

It is important that the plan be based on current scientific understanding, including health and environmental effects, and appropriate social and economic analysis, uniting different levels of government, miners, civil society, and the public in a common mission.

The National Strategic Plan on ASGM will require identifying and mobilizing the institutional and regulatory tools for implementation of the plan and the creation of an enabling legal environment for responsible ASGM sector to develop. Both of these aspects create a clear starting point of the strategy.

This section outlines a suggested six step process for national governments to use in the development of a National Strategic Plan on ASGM. Annex II contains a step by step diagram to help develop the plan.

- STEP 1: Establishing a coordinating mechanism/process
- STEP 2: Gathering baseline information and developing the National Overview
- STEP 3: Setting a Goal and Objectives
- STEP 4: Formulating the Implementation Strategy

STEP 5: Evaluation Mechanism

STEP 6: Endorsing the National Strategic Plan

These steps represent tasks during the NSP process. Countries will follow different strategies in completing these steps given that situations will differ from country to country. In addition, understanding the national public opinions towards the ASGM issue will help in predicting if more effort is indeed necessary.

Much of this draft guidance document focuses on mercury releases from ASGM; however, a country's strategic plan should also incorporate economic, social, environmental, and legal aspects relating to the sector. By doing so, national governments will consider the entire ASGM sector and include in the policymaking process.

2: STEP 1: Establishing a coordinating mechanism

i) Establishing a working group

Developing a plan can be viewed as an exciting opportunity to gain new experiences, develop new skills and knowledge, and make a positive contribution to the ASGM sector. Part of the plan development will rely on the formation of a working group.

The working group would guide the project through all of its phases and ensure that there is proper project planning and management throughout the process. While not all stakeholders can be part of the working group, it is important to include a representative balance of interests to contribute to the process.

The working group should include a minimum of three members (including an identified project lead). Preferably two members should not be from the same department/ministry. It is important to ensure that representatives from both local and national levels of government are present. Members would include national and/or local officials responsible for various related aspects, such as:

- Environment: giving input on environmental issues, laws, and regulations
- Mining: statistics and data on the ASGM as well as mining sector laws, regulations, activities, and outputs
- Finance: securing the required financial commitments to development and implementation of the national strategy and to take into account potential impacts on the economy
- Public health: monitoring mercury levels in and around ASGM communities
- Education: educating local ASGM communities on the dangers of mercury (in tandem with the health sector), as well as educating miners on methods to improve practices

The working group should identify a project lead that should be able to guide the working group and have the capacity to reach out to working group members and stakeholders.

The working group should meet regularly. They should meet early on in the planning process and develop (and approve at upper level management) a set of terms of reference, workplan, and budget. Developing a terms of reference, workplan, and budget will help to ensure that each member of the working group is in agreement concerning important administrative and organisational details relevant to developing an action plan.

Important details that must be addressed are a budget and timeline for all stages of the NSP. The formulation and content of a NSP budget and timeline will no doubt differ from country to country and will present their own unique difficulties. The most important aspect of these documents is their ability to integrate within the overarching governmental structure of the country.

Given that the intention is to have the national government endorse the National Strategic Plan on ASGM, the working group is likely to be made up of mainly government officials. To ensure that the plan will be relevant, government officials should ensure that miners' views are represented in all stages of the development of the plan. The working group should establish mechanisms to consult with miners regularly, such as having regular consultation meetings with them and/or consider including miners directly in the working group. Other stakeholders, for example gold trading companies, mercury importers, and hazardous waste facilities may provide valuable insight

and should therefore be consulted and encouraged to participate. These tasks can be further assisted by utilizing pre-established networks, used to obtain and transmit knowledge as well as receive feedback from stakeholders.

ii) Establishing a stakeholder advisory group

The working group should organize a stakeholder group to help inform the working group in its decision making process (building on existing networks that may already exist). Stakeholder groups provide invaluable information and advice while the national strategic plan is formulated, executed, and analyzed. The working group should therefore work to involve the following stakeholders at regular intervals during all phases of the national strategic plan:

- Organized ASGM (cooperatives, associations, and confederations)
- Miners (particularly when ASGM is informal with no local organization, such as above)
- Community leaders and local officials (to ensure that decision makers within a community are willing to implement the plan)
- Local government officials and staff
- Environmental organizations (having a vested interest in mercury reduction and other ASGM related environmental issues)
- Academic and research institutions (can provide valuable information and do research)
- Legal (can inform the process in terms of the legality of the mining, the worker status, and the use of mercury)
- Representatives from industry and commerce (trade associations and professional bodies may provide additional information, data and/or funding)
- Public Health and safety groups (many public health and safety groups will be willing to work to achieve a reduction, or elimination, of mercury)
- Agricultural groups (potentially may assist in finding potential alternatives to mining, aids in reforestation, land restoration)
- Trade representatives (for issues related to import/export information and issues related to potential restrictions on trade)
- Gender groups (gender issues related to division of labour and social relations can provide valuable insight into addressing the issue)
- Large scale mining and other industry (may contribute to finding innovative solutions and often have insights into local ASGM activities)
- Police and enforcement officers (often have insight into the community life and needs)
- International Organizations
- Buying Agents
- Possible funding sources and institutions

Stakeholders should be consulted throughout the plan development, such as through teleconferences, direct discussions, e-mail, and face to face meetings. The knowledge and experiences of these individuals are invaluable resources during the policy planning stage. Miners and mining community members have a personal connection to the issues and understand the intricacies of how it functions in reality. Incorporating their knowledge into the structure of the NSP will ensure that the project objectives are feasible and community members are aware of its implementation.

For these reasons, stakeholder consultation is one of the most important aspects of the NSP process. The strategies a government intends to use in consulting with stakeholders should be clearly stated and thoroughly developed within their NSP document.

In most areas of the world, mining communities are often geographically removed from the central governing bodies. This is simply a function of where mineral resources naturally occur. Additionally, most of these communities are not tightly connected to the urban social structure and do not recognize or utilize the avenues of means of communication often employed by government campaigns.

These circumstances complicate the task of reaching out to stakeholders and eliciting advice and knowledge from them. Therefore, the engagement of key stakeholders in the formulation of NSPs requires the commitment of government officials as well as community leaders to facilitate engagement. Below are some common means of stakeholder engagement:

1. Provide incentives for stakeholders to participate in consultation sessions
2. Hold consultation meetings in or nearby mining communities
3. Engage leaders at the community level.

This can be very helpful in regions where the legal status of ASGM is in question and where miners may not be willing to engage with government officials in official meetings.

iii) Developing a workplan for NSP development

Months 1-3	<ol style="list-style-type: none"> 1. Initial Questionnaire is completed by the country through the project lead in consultation with key stakeholders (see Annex I). 2. National Steering Committee is formed. 3. Workplan for development of the National Strategic Plan is prepared and shared with stakeholders. 	
Months 4-9	Draft national strategic plan for ASGM is developed using information gathered through the questionnaire and in consultation with key stakeholders (including a review of legal, educational, economic, regulatory and enforcement framework as well as a budget and workplan, identifying potential funding sources and partners in moving forward).	
Months 10-12	Final plan is developed / endorsed.	

2. STEP 2: Gathering baseline information and developing the National Overview

Before the plan is developed, baseline information should be gathered to form the basis for a “National Overview.” The National Overview is a snapshot of the scope and scale of national ASGM situation and activities, and should therefore include information on:

- Legal, including a review of legal and regulatory status of ASGM.
- Political elements surrounding ASGM.
- Geographic considerations and pertinent statistics.
- Economics, such as earnings per capita, mercury supply, use and demand, information on gold trade and export.
- Mining, including information on ore bodies, processed used, the number of people directly/indirectly involved in ASGM (including gender and age considerations).
- Environment, detailing known information such as environmental destruction, contaminated sites, mercury releases in soil, air and water.
- Health information on health and developmental impacts, mercury exposure through various media.
- Leadership and organization of ASGM at national and local levels.
- Innovative experiences in addressing AGSM.

Gathering information generally takes three to six months, depending on the existing knowledge base and relationship with miners. Strategies on how to gather the information will vary from country to country and will need to be adapted to national and local conditions. A guideline for information gathering is provided in Box 1.

Box 1: Strategies for Gathering Baseline Data

1. To start, the project lead will want to consult existing databases and review/analyze current and past projects to gain an understanding of the status of the issue at the national level.
2. Mercury use and release information is important for the NSP and might be available from previous activities implemented in the country. Accurate data is likely to be a luxury for governments. Therefore, the project lead, together with stakeholders, should make efforts to estimate and approximate the amount of mercury used in the country. If this data is not available, UNEP’s Toolkit for Identification and Quantification of Mercury Releases can be used to gather baseline industry data.
3. Furthermore, conducting surveys and interviews, engaging the miners, and contacting experts/community leaders are some other ways to gather further baseline data. Note that adequate training must be given to technical officers who are working directly with miners and other interest groups to ensure they are able to effectively convey the survey questions and present suggestions.

In addition to coordinating and consulting relevant stakeholders, the engagement of national and local government agencies can provide valuable data on materials and worker profiles. Statistics related to revenues being earned, boarder crossing surveys, or trade data can assist in setting a baseline for these projects. Acquiring information from the gold trade will provide insights into the mercury trade due to their linked uses.

Annex I includes a list of questions for consideration in the data collection process. The information can be compiled in a number of ways, and the working group will need to establish a process to undertake this work most effectively. In order to ensure a comprehensive national overview, it is

suggested that it is developed in close collaboration with all stakeholders through e-mail, teleconferences, and face to face discussions and meetings.

Once the information has been collected and analyzed, there is a basis to define the objectives of the strategy.

Acknowledging the areas in which there is little or no information is also important. Such “information gaps” should be noted and, when feasible, studied and/or researched further. A readily available solution to knowledge gaps is improved information sharing amongst agencies and regional cultural authorities. The use of a national database or reporting system may provide the most accurate means of securing allusive information.

Gathering accurate and targeted baseline information is critical because it forms the foundation on which the problem can be defined and the objectives formulated. Different countries will have different levels of baseline knowledge.

2. STEP 3: Setting a Goal and Objectives

Setting specific goals and objectives at the outset of the project is critical in establishing and evaluating the success of the NSP. First, identifying the problem, then setting goals and objectives will save time, effort, and resources as well as reduce the risk of failure.

Establishing the problem statement:

When embarking upon the development of the plan, it is useful to begin by establishing a problem statement. A problem statement is a brief description of the specific problem that the plan will address. It should include enough contextual detail to establish why it is important. A problem statement outlines the *need* for the strategy which is an essential fact for decision makers.

An example of a problem statement might be:

Artisanal and small scale gold mining is an important source of income to XX people in XX country. These activities have serious long-term environmental and health impacts for populations living in, near or downstream/wind of such operations. There is a need to promote sustainable actions in this area to protect human health and the environment.

Establishing the goal:

Building on the problem statement, it should be possible to establish a goal for the plan. The goal is a concise statement that describes the plan's purpose. Goals must be realistic and based on a particular country situation as well as consultation results. In some cases, establishing an overall goal related to mercury may be a practical approach that could be considered a good first entry point.

In such a case, an example of a goal might be:

Protect human health and the environment from ASGM practices through continued minimization and elimination of mercury use and release in ASGM.

Establishing the objectives:

Objectives state, at a finer level of detail than the goal, the specific outcomes that the action plan expects to accomplish – answering the question “What needs to be achieved to get from where we are now to where we want to be?”.

Setting objectives in this area is complex given its interlinkage with poverty, health, education, market access, and environmental impacts, but the objectives can be set-up separately to cover such governance, environmental, and social aspects. Issues related to mercury exposure can act as an initial entry point to environmental issues.

Some example related objectives might include:

- *ASGM is formalized nationally by XX date.*
- *Mercury use is reduced by 70% by XX date through elimination of major inefficient and unsafe practices of mercury use.*
- *XX miners are trained by XX date to reduce occupational exposures to mercury (thereby reducing atmospheric emissions), and to protect residents and residential areas from mercury hazards (such as training on proper storage and disposal of mercury).*
- *ASGM primary license holders or mine managers develop and begin to implement Environmental Action Plans by XX date to institute reasonable safety measures to protect employees and residential areas. AND / OR National policies are developed that promote safety measures to protect employees and residential areas.*

- *Develop and implement an innovative pilot project by XX date to promote cleaner production; such as using economic instruments, creating opportunities to locally manufacture affordable ore concentrating equipment or supporting local capacity to meet fair trade of gold standards and market it.*
- *Initiate and implement an alternative livelihoods (AL) initiative by XX date to promote alternative forms of employment and more generation through an integrated local development approach.*

Consulting further detailed information will prove useful in outlining other important objectives that are tailored for your country. UNEP publications and links to other important programs such as UNIDO's Global Mercury Project can be found online at:

<http://www.unep.org/hazardoussubstances/Mercury/MercuryPublications/ReportsPublications/tabid/3593/Default.aspx>.

Every objective formulated by the working group should pass relevant criteria. For example, using the "SMART" objectives, the working group can better evaluate whether or not the proposed objectives are:

- Specific
- Measurable
- Assignable
- Realistic
- Time-dependent.

If the objective fails to meet a criterion, it may be better to reevaluate the objective now rather than to realize later that the objective was not achievable. For example, setting an objective that seeks a 100 % reduction in mercury demand within the next two years, though potential possible may prove difficult for several reasons. Although the objective is specific, measurable and assignable (meeting the first three criteria), it may not be realistic to achieve such a dramatic reduction in mercury demand in such a short time period. Because the objective does not meet all of the criteria, the working group should therefore develop a more realistic objective that operates within the two year time horizon.

Stakeholders must be engaged from the outset in this area. The plan's objectives can only be set and met successfully if the objectives receive the support of stakeholders.

2. STEP 4: Formulating the Implementation Strategy

The implementation strategy is a major part of the National Strategic Plan on ASGM. It will lay down the foundation for the follow-up work and clarify the responsibilities of national agencies and other partners and stakeholders. The plan, although written at a national level, should be tailored to match the local needs and circumstances, and should therefore be developed in consultation with all potential stakeholders and partners at the national, regional, and local levels.

The strategy should include the following elements:

- a. Workplan in support of the National Strategic Plan on ASGM objectives
- b. Outreach plan
- c. Timeline
- d. Overall budget

A number of questions are listed below for the working group to consider when developing the overall strategy for addressing ASGM and in formulating the implementation strategy. They may also help to establish the national priorities.

- Which communities use the most mercury or have the highest concentrations of mercury in air, water and land samples? Which communities have the capacity (financially and socially) to carry out environmental and health related projects? Who needs the information the most?
- What is the legal/regulatory status of small scale mining? Does the status allow for intervention?
- Are there ways to predict the preferences or priorities of constituents? If not, how might this information be elicited?
- What are the most successful protection initiatives that have been implemented to date in your country (purpose, timeline, estimated budget, activity lead, results)? What made them successful? How were they funded? What are the lessons learned?
- What activities related to ASGM are currently on-going or planned for in your country (purpose, timeline, estimated budget, activity lead, expected results)?
- Are there general mining initiatives that could be linked to ASGM work?
- What other kind of regional policies and actions might be needed to support this sector (e.g. regional coordination, tracking trade, raising awareness)?

The working group will also want to consider what are the specific steps to change the practices at scale and what resources are required to make these changes (financial, human, political, and social)?

- Training: Where is the training required? What type of training? How many people must be trained? How many trainers will that take? What existing training mechanisms exist?
- Local production/availability of equipment: Do you need innovation? Training of artisans? What will you do to promote the market?
- Key participants: Who needs to agree to/ not oppose these changes? Who needs to actively champion these changes?
- Financing: Who are the possible donors and what are their interests (e.g. what international bodies, governments, private sector, local NGOs, mining groups)?
- Data: Are there still gaps in the knowledge base? Do additional studies need to be conducted to fill in these gaps?

a. Workplan in support of the National Strategic Plan on ASGM objectives

The workplan in support of the plan objectives should list the planned activities associated with each objective and how the activities will be implemented (activity, purpose, timeline, estimated budget, activity lead, expected results).

The activities should support, complement, and supplement effective existing programmes in ways to focus on activities that will lead to globally significant mercury reductions.

It is strategic to develop linkages to Millennium Development Goals (and other high level national development initiatives). Linking the activities into existing national development processes and their products, such as poverty reduction strategies and Millennium Development Goal- based National Development Plans, can play role in raising the profile and priority of the activities at the national level and in leveraging resources. A useful general overview of how the sound management of chemicals relates to the Millennium Development Goals was developed jointly by the United Nations Development Programme and UNEP and is available on the UNDP web-site³.

The working group should assign the tasks to a lead department or organization best positioned to implement the activity. For example:

- Tracking mercury use may be assigned to the relevant government department as lead, working closely with mining organizations and customs officials.
- Formulating policies and actions may also be assigned to the relevant government department, working closely with stakeholders.
- Educating nurses and health care workers on the dangers of mercury and reaching out to miners and their family could be assigned to a health department or organization, working closely with other health promotion actors.

b. Outreach Plan

Given the particular challenges in this area, a dedicated outreach plan for awareness raising is suggested. The reason for the outreach plan is to analyze and plan for the effective dissemination of factual information to the people who are either affected by mercury or who are in some way responsible for caring for people who may be affected by mercury to inform them about hazards associated with mercury. Planned activities should link to existing programmes and networks as much as possible and should build on past and current experiences.

In developing a community outreach plan, care should be taken to review and consider broader environmental and health protection outreach initiatives within a country, so that the national strategic plan and its components are not undertaken in isolation or in a fragmented way.

As the outreach plan is being developed, some questions that should be considered include:

- Are there existing networks in place to deliver the message to miners and their families?
- What role could governments, NGOs, private sector, health sector play in promoting alternative practices?
- Are resource materials available and relevant? What other outreach materials are required?
- Whose resources are required?

³ At the following link:
www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2429

With the above in mind, the outreach plan should identify the target audience(s) and include a list of the existing and planned outreach activities for each target audience (including a timeline, responsible organization, budget, outreach potential of the activity).

The use of existing social networks may be one of the least expensive and most effective ways to transmit information about mercury, including: speakers can visit schools, and materials can be developed for students that they can then take home to their parents; healthcare providers and religious leaders are also often very important sources of information for a community, since their advice is generally respected; there are also many community-based organizations whose charter includes the dissemination of public health information and/or community economic development. Community-based organizations often communicate regularly with other groups with similar goals.

The message can be delivered in a number of ways, for example:

- Public meetings and workshops are useful to deliver messages to small groups and can be effective in covering topics in-depth.
- Printed material such as leaflets, posters and/or stickers draw attention to the issue and can be made appropriate for most audiences.
- Large-scale publicity such as signs, radio or television advertisements or public service announcements can also be effective in drawing attention to an issue. Media campaigns can be expensive if they involve advertising. Some newspapers, radio and television stations, however, may set aside space/time for free public service announcements.
- On-site training is appropriate when detailed information is required to make a difference. It is often best received from local people and most effective with repeated follow-up.

The overall objective of the outreach plan is to promote the understanding of mercury related issues and their associated risks. It is therefore helpful to establish goals for the effort so that progress can be measured over time. This will require an adequate understanding of the initial conditions so as to compare them to the outcome of the NSP.

This section of the NSP should set priorities for an outreach plan but another, more specific outreach plan document is necessary to fully address the various facets of this process.

c) Timeline

The working group should define when the national plan begins and ends, thereby creating a timeline. The timeline should contain project “milestones” that correspond to the objectives set forth by the working group. Because project milestones are reference points that clearly mark distinguishable events in the national plan, the project milestone can be used as a tool to monitor progress as the national plan is being implemented.

d) Budget

The working group should ensure that the necessary funds and in-kind resources are accounted for in a budget in a detailed and comprehensive way.

A successful national plan does not necessarily require a large budget, but rather a budget that is well managed, realistic and enables the national plan to be implemented successfully at minimal cost. Costs are especially minimized when the working group is composed of a wide range of members, as the resources of each member’s organization or interest can be pooled together. Enough funds should be allocated to ensure miners participation at each step of the decision-making process.

This process should include economic and statistical information, which should be written in the economic language of the finance ministry. This will enable the NSP to obtain higher priority within the national budget process. Creating a NSP that is coherent with other governmental policies will prevent situations where the NSP is undermined by other programs or undermines pre-existing policies.

Additionally, a focus on sustainable financing measures, linked to legal and institutional frameworks can add to the NSP's success. Within their NSP, a country should identify possible funding sources available to them including in-kind resources available. These should also include bilateral, multilateral, and community based financing schemes.

2. STEP 5: Evaluation Mechanism

Specific criteria should be developed as a means to evaluate the overall success in implementing the National Strategic Plan on ASGM. In doing so, the plan will be inherently designed to measure and track progress and successes. This duty may be best suited for a regional working advisory group consisting of participating NSP countries.

An evaluation mechanism should include a periodic review, monitoring, and evaluation process for activities concurrent with the agreed milestones. The working group should work together to create criteria with which to evaluate each objective that the national plan hopes to achieve. At various set stages of the project, the degree of success in achieving the objectives of the national strategic plan should be evaluated. If the objectives are not being fully met, the national plan should be reviewed and adjusted accordingly.

During the implementation of the national plan:

Information and data should be collected during the implementation of the activities and reported upon. Data can be collected through an ongoing evaluation of individual projects, as well as through questionnaires distributed to the miners, government officials, civil society and others.

Accurate and detailed information and data should be collected as the national plan is implemented for two reasons. First, should there be unforeseen difficulties in implementing the national plan, the information and data can be used to recalibrate the national plan to ensure a more successful outcome. Second, the data and information collected during the national plan's implementation should be used to evaluate the national plan's success upon its conclusion.

Ultimately, analyzing the feedback from the questionnaires and the data and information from the questionnaires that can be used to weigh the activity outcomes against the criteria set forth in the national plan that will determine whether or not the objectives were successfully met. Using evaluation criteria may also be useful; sample criteria are outlined below:

- Efficiency and effectiveness of measures;
- Affordability;
- Cost-effectiveness based on benefit-costs analysis;
- Practicability including socio-economic considerations;
- Timing aspects, including the sequence of projects;
- Resource allocation;
- Urgent health and/or environmental needs.

This section should include a mechanism for monitoring and reporting back outcomes, community sentiments, and overlooked successes or failures. The data, information, and analysis will form the basis for future planning. Taking the lessons learned from the implementation process will foster a more robust and effective NSP.

2. STEP 6: Endorsing the National Strategic Plan

To ensure institutional support, commitment from national decision makers needs to be obtained at various stages of the plan development process: at the beginning, at critical points identified during the process, and at the end when the plan has been finalised. There are different forms of commitment, such as formal agreements and ministerial directives. Raising awareness about the plan from the outset is a good way to gather support.

Essential to the success of the NSP is the consultation of various stakeholders during the plan's development. This aspect of the NSP process is especially important in endorsing the final project. The technical knowledge and experiences acquired by miners and mining community members over years of working in ASGM must be incorporated into the final NSP and utilized to its full potential. The objectives of the NSP will be near impossible to achieve if local realities are ignored. When stakeholders are involved in the formulation and consultation process, they develop a sense of ownership over the NSP and thus exhibit a greater willingness to ensure its goals are met.

An important component of obtaining high level commitment involves assessing potential obstacles or bottlenecks. Such obstacles or bottlenecks could include: competing priorities that might threaten support for the plan; a lack of awareness about the topic or issue; and contradictory or duplicative mandates (or lack of a mandate) related to the plan. Such obstacles may have already been identified in the plan itself and addressed. In other cases, these will require further attention.

An essential activity is to distribute some form of the plan in a timely and appropriate manner, in pre-approved form, to those who have an influence over its approval. It is also important to modify the materials to target different audiences linking activities to broader government wide priorities.

Commitment from external decision makers may also need to be obtained outside of the national approval process. For example, some obligations may be placed on nongovernmental sectors, such as industry, to remove some burden from the government regarding action plan implementation.

References

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United Nations Institute for Training and Research (UNITAR) (2005). Guidance on Action Plan Development for Sound Chemicals Management. Available at – [www.unitar.org/cwm/publications/cw/ap/UNITAR action plan gd 26 apr 05.pdf](http://www.unitar.org/cwm/publications/cw/ap/UNITAR_action_plan_gd_26_apr_05.pdf) (much action planning material was used from this document)

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ANNEX I: Questions for consideration in data collection.

BACKGROUND DATA COLLECTION

The answers to the following questions will be important in the development of the detailed national baseline analysis.

Basic sectoral profile questions:

- How many people are engaged in ASGM mining in your country?
- Where does mining take place within the country (throughout, or concentrated geographically?)
- Who does the mining – family landowners, migrant workers, immigrant workers, workers hired by landowners? Are women and children involved in the work? Do they work as individuals, collectively, or how?
- How much gold do these miners produce each year? What price do they get for gold?
- How much are they typically earning per year (or day)?
- How do the miners get access to mercury? At what price?
- How much mercury do they use to produce gold? [(K)g/mercury per (k)g/gold produced is most useful metric.]
- What are the common technologies and practices used by the miners? Which of these use the most mercury? How is crushing performed? Is mercury added to the whole ore (before or during crushing) or to concentrates? How is amalgamation performed? How is the amalgam burnt?
- How do they purify the gold (if they do) – charcoal stove, gas torch, other?
- What is the local availability of alternative technologies/local workshops? What is the level of local knowledge about alternatives?
- What do the miners think about mercury versus alternatives?
- Who buys the gold from the miners? Where does the purchase take place? Do the buyers process the gold? If so how – do they use any environmental protection methods when processing the gold?
- Is there large scale gold mining in your country? Identify the companies. Are any of these companies currently working with ASG miners? Are any in direct conflict with ASG miners?

[Please describe how information was obtained and from whom.]

Environmental Questions:

- What is the scale of the impacts they are having on the landscape (take photos if possible)?
- How much habitat (land and water) has been impacted?
- Are there any studies or data on environmental contamination or health impacts from ASGM? Are there plans for rehabilitation of any resulting contaminated areas?

[Please describe how information was obtained.]

Legal/social questions:

- What is the legal/ regulatory status of small scale mining? If not already legal, what issues could arise with legalization?
- Are the miners organized? How?
- Do miners have access to capital?
- What is the current system by which miners get gold to market (Who do they sell gold to? Where do they get their mercury? Who are the final exporters?)
- Are miners sensitive to price of mercury?

- Is artisanal and small scale mining included in your national poverty reduction strategy?

Education/Health Care

- Are you aware of environmental awareness raising campaigns and/or worker health and safety campaigns in your country that may be linked to miners and the mining communities?
- Are there any existing health care or social service programs geared towards miners and/or mining communities (such as AIDs awareness, water sanitation and/or health and safety programs)?
- What is the average education level in your country? What about the average miner's education level? Are there incentives for children to stay in school in your country?
- Are there learning institutions in your country for mining or geology?
- Do the miners / mining communities have access to health care?
- Do you have high fish consumption levels in your country?

Stakeholders

- Besides miners, who are the key stakeholders at national regional and local levels, including community-based organizations active in mining communities, large scale mining companies and buyers/sellers of gold (including your Central Bank)? Please list and provide contact information where possible.

Annex III. Suggested Table of Contents for a National Strategic Plan

1. Executive Summary

- Summary of the National Strategic Plan
- Provides an overview for decision makers

2. Introduction and Background

- Rationale and context
- Overview of the preparation process (1 page maximum)

3. National Overview

- Summary of the detailed national baseline analysis (maximum 5 pages)
 1. Legal, including a review of legal and regulatory status of ASGM.
 2. Geographic considerations and pertinent statistics.
 3. Economics, such as earnings per capita, mercury supply, use and demand, information on gold trade and export.
 4. Mining, including information on ore bodies, processed used, the number of people directly/indirectly involved in ASGM (including gender and age considerations).
 5. Environment, detailing known information such as environmental destruction, contaminated sites, mercury releases in soil, air and water.
 6. Health information on health and developmental impacts, mercury exposure through various media.
 7. Leadership and organization of ASGM at national and local levels.
 8. Innovative experiences in addressing AGSM.

4. Priority Goal and Objectives

- List of the problem statement, goal and objectives of the plan (maximum 1 page)

5. Implementation Strategy (10-20 pages)

- Workplan in support of the National Strategic Plan on ASGM objectives
- Outreach plan
- Timeline
- Overall budget

6. Evaluation Mechanism

- Brief description of how the national plan's strategy will be evaluated and tracked (maximum 1-2 pages)

7. Annexes

- Terms of reference of the working group (including names and contact addresses of members)
- Detailed national baseline analysis (20 pages maximum)
- Overall, detailed budget

ANNEX IV: List of Relevant Resources

UNEP Global Mercury Partnership

The UNEP Global Mercury Partnership is a voluntary and collaborative relationship amongst various parties, governmental, non-governmental, public and private, in which all participants agree to work together in a systematic way to achieve the goal of the UNEP Global Mercury Partnership.

The overall goal of the UNEP Global Mercury Partnership is to protect human health and the global environment from the release of mercury and its compounds by minimizing and, where feasible, ultimately eliminating global, anthropogenic mercury releases to air, water and land.

ASGM is one of the partnership areas identified within the UNEP Global Mercury Partnership. Many members of the partnership have experience in guiding countries in developing ASGM projects and national strategic plans. Countries are invited to seek guidance from the partnership area as they develop their National Strategic Plan (Contact mercury@unep.org). For more information, please go to the following web-site:

www.chem.unep.ch/MERCURY/default.htm

United Nations Industrial Development Organization (UNIDO)

UNIDO has been involved in the ASGM sector for more than 15 years. The recently completed Global Mercury Project executed by UNIDO in 6 countries assisted ASGM in increasing their output while reducing mercury emissions. The project has shown that only a multisectorial and coordinated approach can have some success in alleviating the multiple problems faced by these communities. Learning from this pilot phase, UNIDO developed a more elaborate plan to address the sector. The phase II of the Global Mercury Project is now under implementation. For more information, please go to <http://www.globalmercuryproject.org/> where a large database of publication is available.

Communities and Small-Scale Mining (of the World Bank)

Communities and Small-Scale Mining (CASM) provides a coordinated network of shared information, a set of complete resources for use at the local level and a clearinghouse to distribute information to regional clean production centers. CASM also awards small grants to community leaders, organizers, miners' groups, NGOs and others. For more information, please go to <http://www.artisanalmining.org/>.

The Alliance for Responsible Mining (ARM)

The Alliance for Responsible Mining (ARM) is an international NGO created by multiple supply chain players and operating from the South. It has developed and tested with miners, a certification scheme called Standard Zero for Fairtrade Gold, for gold that is produced by organized ASGM that respect a set of social, economic, labour and environmental standards. The scheme includes an environmental section aimed at the reduction of the use of mercury over time and the responsible use of cyanide. If miners use NO mercury or cyanide and instead use the gravity separation method, the miners will receive an environmental premium on top of the fair trade premium. ARM aims to use market access incentives to improve the social and environmental performance of ASGM, and improve the quality of life in ASGM communities. <http://www.communitymining.org>

Harmonization System for responsible artisanal and small scale metals production

The Madison Dialogue Metals Working Group is working to develop an information-sharing and harmonization system for responsible artisanal and small-scale metals production. This group is building on existing activities and initiatives and is being facilitated by EARTHWORKS.

Contact Person: Scott Cardiff scardiff@earthworksaction.org.

The Artisanal Gold Council

The Artisanal Gold Council (AGC) is a non-profit organization dedicated to improving the opportunities, environment, and health of the millions of poor people involved in artisanal and small scale gold mining in the developing world, and in doing so, improving the gold sector at large. Further information can be found at: <http://www.artisanalgold.org/>
