

# Gender Dimensions of Artisanal and Small-Scale Mining

## A Rapid Assessment Toolkit

Adriana Eftimie, Katherine Heller, John Strongman  
Jennifer Hinton, Kuntala Lahiri-Dutt, Nellie Mutemeri

*with Chansouk Insouvanh, Michael Godet Sambo, and Susan Wagner*



THE WORLD BANK



Gender Action Plan

**World Bank Group's Oil, Gas, and Mining Unit  
Sustainable Development Network  
Sustainable Energy Department**

The Oil, Gas, and Mining Unit series publishes reviews and analyses of sector experience from around the world as well as new findings from analytical work. It places particular emphasis on how the experience and knowledge gained relates to developing country policy makers, communities affected by extractive industries, extractive industry enterprises, and civil society organizations.

The findings, interpretations, and conclusions expressed in this publication are entirely those of the authors and should not be attributed in any manner to the World Bank or its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility whatsoever for any consequence of their use.

Copyright © 2012  
[www.worldbank.org/ogmc](http://www.worldbank.org/ogmc) (or/oil or/ gas or/ mining)  
[www.worldbank.org/eigender](http://www.worldbank.org/eigender)

Cover photo: Chansouk Insouvanh  
Cover design: Nita Congress

# Contents

<b>Preface</b> .....	<b>v</b>
<b>Acknowledgments</b> .....	<b>vii</b>
<b>Abbreviations</b> .....	<b>xi</b>
<b>1 Introduction to Gender and ASM</b> .....	<b>1</b>
1.1 What Is ASM and Why Is it Important? .....	2
1.2 Gender and ASM .....	6
1.3 Why This Toolkit? .....	12
1.4 Uses of the Toolkit .....	13
<b>2 The Gender and ASM Framework</b> .....	<b>17</b>
2.1 Context: The Sustainable Livelihoods Approach.....	17
2.2 Gender and the SLA.....	19
2.3 The Gender and ASM Framework: Critical Issues and Questions.....	20
2.4 How to Use the Framework: Implementation Roadmap .....	25
<b>3 Gender and ASM Tools</b> .....	<b>27</b>
Module 1: Before You Begin.....	29
Module 2: Collecting Background Information.....	37
Module 3: Key Informant Interviews .....	41
Module 4: ASM Site Visits.....	45
Module 5: Participatory Focus Groups .....	49
Module 6: Surveys.....	65
Module 7: Reporting Back and Validation.....	67
Module 8: Charting a Course of Action—The Way Forward .....	69
<b>4 The Toolkit in Practice</b> .....	<b>85</b>
4.1 Conducting the Pilot Studies .....	85
4.2 Key Findings of the Pilot Studies.....	90
4.3 Recommendations of the Pilot Studies .....	97
4.4 Reporting Back to Stakeholders, Results Achieved, and Time Needed .....	98
4.5 Recommendations and Lessons Learned for Toolkit Implementation .....	102
<b>5 Resources</b> .....	<b>107</b>
Appendix A: Relevant Partner and Stakeholder Initiatives .....	107
Appendix B: Tips for Sample Surveys.....	109
Appendix C: Miners Survey.....	111
References.....	117
<b>Boxes</b>	
1.1 Informal contributions of ASM in different countries .....	4
1.2 A note on equality and equity.....	14

2.1 Practical versus strategic gender needs ..... 17

2.2 The Gender and ASM Framework and a rights-based approach ..... 20

3.1.1 Avoiding biases ..... 32

3.2.1 Tips for referencing background information ..... 38

3.3.1 Types of interview questions ..... 40

3.5.1 Dealing with difficult situations ..... 61

3.8.1 Gender and the professionalization of ASM ..... 79

3.8.2 Overview of adult learning ..... 80

B.1 Accuracy of surveys and sample size ..... 110

**Figures**

1.1 ASM value chain ..... 5

1.2 Unpacking ASM value chain activities ..... 8

2.1 Adapted SLA Framework ..... 18

3.5.1 Sample seasonal calendar ..... 57

**Tables**

1.1 Estimated number of miners and percentage that are female in selected countries ..... 7

2.1 The Gender and ASM Framework ..... 21

2.2 Gender and ASM Framework: Implementation Roadmap ..... 25

3.4.1 ASM site visit guide ..... 47

3.5.1 Sample daily activity clocks ..... 56

3.5.2 Sample summary of access, control, and ownership regarding resources and their benefits ..... 60

3.8.1 Possible gendered actions to increase access to and benefits from livelihood assets ..... 70

3.8.2 Possible gendered actions to increase access to and benefits from structures and processes ..... 75

3.8.3 Possible gendered actions to mitigate risks, vulnerabilities, and impacts and increase benefits ..... 77

3.8.4 Sample training needs assessment ..... 82

4.1 Gender and ASM Framework: Implementation Roadmap Steps 1–9 as applied to the case studies ..... 86

4.2 Key findings and conclusions regarding gender inequality in the case study countries ..... 92

4.3 Examples of recommendations to improve conditions for women in ASM countries and communities ..... 99

4.4 Examples of recommendations to improve conditions for ASM communities at large ..... 100

4.5 Examples of recommendations to improve conditions for women ASM miners and workers ..... 101

---

## Preface

**A**rtisanal and small-scale mining (ASM) is a global reality. It represents a long-standing and important livelihood for more than 100 million men and women around the world. In some places, communities have practiced it for generations; in other places, the prospect of new mineral finds draws large numbers of people suddenly to mining areas. Whether newly begun or long established, ASM has the potential to help men and women out of poverty when conducted in an informed and responsible way. In different communities, different techniques are used, and men and women share different divisions of labor, risks, and opportunities.

Understanding the social, economic, and environmental aspects of ASM is essential for governments, nongovernmental organizations, mining companies, and researchers to be able to contribute to positive socioeconomic and environmental outcomes from this sector. This Toolkit—including

the detailed analytical framework and instructional modules—is a unique instrument to guide research and researchers to ask the right questions and come to a gender-sensitive understanding of ASM activities.

We hope that this Toolkit will lead not only to a better, more comprehensive, understanding of ASM, but that this will lead to improved policies, extension services, interactions between large-scale mining companies and artisanal miners—and ultimately, to improved development impacts for men, women, and artisanal mining communities.



Paulo de Sa  
Sector Manager  
Sustainable Energy Department  
Oil, Gas, and Mining Unit



## Acknowledgments

**G**ender Dimensions of Artisanal and Small-Scale Mining: A Rapid Assessment Toolkit is intended as an easy-to-use toolkit for understanding men's and women's differentiated access to the resources and opportunities associated with artisanal and small-scale mining (ASM) and how they are affected by ASM. The Toolkit was produced by the Oil, Gas, and Mining Policy Unit (SEGOM) of the World Bank, through the generous support of the World Bank's Gender Action Plan.

The task team was led by Adriana Eftimie and Katherine Heller, both of SEGOM. Research was conducted by a team of international and local consultants led by Jennifer Hinton. The case studies were conducted by Kuntala Lahiri-Dutt and Chansouk Insouvanh (Lao People's Democratic Republic), Nellie Mutemeri and Michael Godet Sambo (Mozambique), Jennifer Hinton and Susan Wagner (Tanzania), and Jennifer Hinton (Uganda). Initial conceptualization and planning, background literature review, and summary of the case studies were conducted by John Strongman (consultant, SEGOM). The Toolkit also benefited from the suggestions, comments, and assistance of several World Bank staff members and consultants, including Lwanzo Amani, John Butler, Helene Carlsson, Maitreyi Das, Bernard Harbone, Robert Mugisha, Waafas Ofosu-Amaah, Anwar Ravat, and Kristina Svensson. The team would also like to acknowledge the World Bank Country Office teams in Lao PDR, Mozambique, Tanzania, and Uganda which provided valuable logistical support and assistance for the fieldwork.

The authors gratefully acknowledge the contributions of information, knowledge, opinions, time, and assistance of government, industry, and community representatives from each country case study.

In **Lao PDR**, we thank the members of the Project Steering Committee, in particular Chansavath Boupha, Simone Phichit, and other Department of Mines officials in Lao PDR for their help in the field study. We also thank the various resource persons who shared their knowledge and time, in particular the village women and men who participated in interviews and focus group discussions, and whose insights and knowledge comprise the backbone of the study.

In **Mozambique**, we acknowledge all the government personnel and agencies both for participating in interviews and for their help in identifying other key informants and sources of data, particularly the Governor of Manica; the Administrator of the District of Manica; Fatima Momade, Special Adviser to the Minister of Mineral Resources; Abdurramane Machon, Executive Director of the Mineral Development Fund; Geraldo Valoi, Provincial Director of Minerals and Energy, Manica; Natercia Macamo, our facilitator in Manica; Antonio Jorge Cumbane, Head, Small-Scale Mining Department; Eva Essupa, Sociologist, Small-Scale Mining Department; and Odette Martin, Minister of Mineral Resources Gender Focal Point.

Many people from nongovernmental organizations gave their time for interviews and were very

generous in sharing their knowledge and experience, especially Sergio Ye and Joaquim Langa, ITC, Isabel-Maria Casimiro, Centre for African Studies; Telma Mbeve and Sandra Bulha, Cruzeiro du Sul; Joaquim Oliveira Mucar, Magariro; Ricardo Mafuka and Leice Faustino, ORAM; Rosa Aalindo Phiri, Sergio Sousa, and Mari Jo Cèu Nhatimba, Chimoio Business Chamber; Dinis Napido, GEOIDE; Ma Candido and Sophia Nzira, Forum Mulher; and Julieta Sevene, Program Analysis for HIV/AIDS and Gender, United Nations Development Programme.

We also gratefully acknowledge all the miners and mine owners who participated in the interviews and workshops, particularly Joao Dos Santos, Aaron Mukudu, and Crispin Chibaya.

In **Tanzania**, we thank the government of Tanzania, including John Nayopa, of the Sustainable Management of Mineral Resources Project (SMMRP) and the Small Scale Mining Unit; from the Regional Mines Office in Arusha, Assistant Commissioner for Minerals Benjamin Mchwampaka, the Manyara Regional Commissioners Office, Regional Commissioner Henry Daffa Shekifu, Party Secretary Avelin Peter Mushi, and Simanjiro District Commissioner Halid Mandia; the Simanjiro District Office, including District Administrative Secretary Michael Lori, District Executive Director Lameck Nkya, and District Economist Pascal Temba; the Mererani Town Authority including Town Director A Ngala, Township Planning Officer Raphael Mawi, Township Water Supply Technician Mbaga, as well as Ward Executive Officer Valentino Tesha, Ward Education Coordinator Sufiani Maina, and Village Executive Officers Gotadi Mbawala and Joseph Mbaliyany.

Sincere appreciation is extended to the Mererani Community Development Officer, the late Juliet

Kimario, who demonstrated unwavering commitment to gender, ASM, and local development, and whose passing represents a huge loss to the community. The authors further acknowledge all staff of the Zonal Mines Office in Mererani, in particular Resident Mines Officer Laurent Mayalla, who provided considerable time, assistance, and insight.

Commendation is due members of local organizations, including Nastura Daudi of the TAGASTY Group, Amani Mhinda and Antony Jacob of HAKI MADINI, Zefania Joseph and Bahati Msuya of MAREMA, and Tumaini Langani and Dina Paul of World Vision. We also extend our thanks to all the local women and men miners and residents including Faisal Muller and Mshindo Godfrey Ngao, as well as Human Resource Manager/Community Development Officer Baraka Kavishe from Tanzanite One.

In **Uganda**, we acknowledge the Minister, Permanent Secretary, and Minister of State for Minerals in the Ministry of Energy and Mineral Development and the Department of Geological Survey and Mines, for support to this work. Appreciation is further extended to the World Bank and government of Uganda for their support of the SMMRP, through which initial phases of this work were undertaken. Commendation is due Ms. Mbabazi, gender and social development expert, who provided significant input throughout all phases of the primary research work.

We note our deep appreciation to the SMMRP ASM Training and Awareness Campaign Committee and supporting Department of Geological Survey and Mines officers and staff, whose work engendered the training campaign (as detailed in the National Strategy for the



---

## Acknowledgments

Advancement of Artisanal and Small-Scale Mining in Uganda) and designed and implemented the National Gender Workshop.

The following organizations are recognized for supporting the collaborative efforts of the Training and Awareness Campaign Committee: the Ministry of Energy and Mineral Development; the Department of Geological Survey and Mines; the Ministry of Gender, Labour and Social Development; the Department of Occupational Safety and Health; the Ministry of Health, Community Health Department; the Ministry of Water and Environment; the National Environmental Management Authority; the Makerere University faculty of geology; the

Uganda Chamber of Mines; and the Uganda Quarry Operators Association.

Finally, we have sought to do proper justice to the invaluable insights, information, and recommendations put forward by the more than 1,000 women and men miners, local government officials, formal and informal leaders, and others who were trained and consulted under the SMMRP as well as district and subcounty leaders consulted throughout these activities.

Special thanks to Raja Manikandan (SEGOM), for coordinating the production and dissemination process, and to Nita Congress, for the design and editing of this Toolkit.



---

## Abbreviations

ASM	artisanal and small-scale mining
CBO	community-based organization
CSO	civil society organization
GDP	gross domestic product
LSM	large-scale mining
NGO	nongovernmental organization
SLA	Sustainable Livelihoods Approach

All dollar amounts are U.S. dollars unless otherwise indicated.



# Introduction to Gender and ASM



# 1

# Introduction to Gender and ASM

## 1.1 What Is ASM and Why Is it Important?

## 1.2 Gender and ASM

- Men's and women's different roles in ASM
- Why do men and women have different roles?
- Impacts of different roles

## 1.3 Why This Toolkit?

## 1.4 Uses of the Toolkit

- Assessment of existing conditions
- Project identification, design, and implementation
- Policy and legislative reform
- Relationship building and coordination arrangements

## Introduction to Gender and ASM



**T**his publication was designed as an easy-to-use toolkit for identifying the gender dimensions of artisanal and small-scale mining (ASM). Comprehending this dimension of ASM means understanding how men and women are differentially involved in and affected by ASM, and the factors surrounding their engagement in ASM. By so doing, projects and policies can be put in place to ensure that men and women have equitable opportunities for participation at all stages of the ASM value chain, as well as access to the benefits of ASM, and that neither men nor women disproportionately bear the risks associated with ASM.

Promoting gender equity in ASM is good for business and good for development. Internationally, governments, mining companies, civil society organizations (CSOs), and mining communities increasingly recognize the livelihood importance of ASM and its potential to catalyze local development. Cumulatively, contributions to foreign exchange earnings and gross domestic product (GDP) can be substantial, although they are rarely captured in official statistics. Miners' income is often spent locally—in many cases, reinvested in agriculture or other small businesses—with significant spin-off benefits for local economies (Hinton 2009; Hinton, Levin, and Snook forthcoming). By providing a source of rural employment, ASM can help stem rural-urban migration. At the household level, ASM can play an important role in enabling families to meet their health, education, and development needs.

Many mining companies now appreciate that obtaining and maintaining a social license to

operate depends on positive relations with local artisanal and small-scale miners, and they are taking actions to work with this largely informal sector. Governments around the world are establishing policies and programs at the local and national levels to realize the development potential of ASM and address its complex challenges.

Promoting ASM as an engine for economic growth and community development depends on its being good for the economic and social development of the whole community. A growing body of evidence suggests that ASM policies, programs, and projects that are perceived to be gender neutral can, upon implementation, actually widen gender gaps and worsen rather than improve the development outcomes that governments, mining companies, CSOs, miners' groups, and communities are seeking to achieve (Hinton 2011a).

Achieving the development potential of ASM therefore requires a solid understanding of how all subsets of the community are engaged with and poised to benefit or experience risks from ASM. While there are a number of different dimensions of marginalization that might prevent different community groups from fully participating in ASM, this Toolkit responds to the clear lack of tools available for understanding the gender dimensions of ASM. The analytical framework presented in this Toolkit was developed specifically for understanding gender and ASM; however, the questions posed in it may be a starting point for understanding other dimensions of marginalization in ASM.

Gender and ASM assessments, and the recommendations for action arising from these, are critical to the objectives of every ASM stakeholder—whether the large-scale mining (LSM) company seeking to improve the outcomes of its corporate social responsibility programs, a government agency or nongovernmental organization (NGO) seeking to fulfill its policy mandate, a microfinance organization promoting small and medium enterprise development in mining areas, or an association of miners seeking to formalize its activities. To this end, this Toolkit is intended to be of use to a wide variety of stakeholders, including

- governments, particularly mining authorities, but also other agencies working on collection of national, regional, or local statistics and those undertaking rural development and ASM assistance policies and programs;
- international agencies and institutions conducting ASM interventions and support projects;
- mining companies seeking to work proactively with artisanal miners in their areas of operation;
- NGOs, community-based organizations (CBOs), faith-based organizations, and miners' associations active in ASM communities and/or gender equity promotion; and
- academic researchers.

The Toolkit is comprised of six components:

- **Section 1: Introduction to Gender and ASM.** This section defines ASM, gender, and the intersection between the two.
- **Section 2: The Gender and ASM Framework.** This section provides a question-based analytical framework and Implementation Roadmap to help users identify the gender dimensions of ASM in a given community. The framework is not

prescriptive, but rather is intended to guide users through a thought process to identify gender issues at play in each stage of the ASM value chain.

- **Section 3: Gender and ASM Tools.** This section provides eight easy-to-use modules for gathering the information to answer the questions outlined in the Gender and ASM Framework. The tools can be used individually or together, as required, to gather necessary information.
- **Section 4: The Toolkit in Practice.** The Toolkit was finalized through implementation in four pilot studies in Lao People's Democratic Republic, Mozambique, Tanzania, and Uganda. This section provides a summary of implementation of the Toolkit in these countries.
- **Section 5: Resources.** This section provides the references for the Toolkit; three appendixes provide additional useful tools to complement section 3.
- **Supplemental CD-ROM.** The Gender and ASM Framework and the Implementation Roadmap were developed through consultations, literature review, and pilot studies. The complete case study reports, and a draft framework report including a literature review, are included on the supplemental CD-ROM.

### 1.1 What Is ASM and Why Is it Important?

There are more than 20 million artisanal and small-scale miners globally; in some African countries, ASM contributes more than 90 percent of national mineral production, as well as being a significant source of local livelihoods (Veiga and Baker 2004). ASM can be an important driver of local economic development, while simultaneously contributing to a complex array of positive and negative



## Introduction to Gender and ASM

socioeconomic and environmental impacts (box 1.1). Where properly managed, however, it can make widespread contributions to development.

Almost all countries in which ASM takes place have some official definition of it, but there is no one single definition of ASM. Typically, ASM is part of the informal sector, and little is usually recorded on the scale of its impacts and contributions. ASM may be a traditional practice, with skills passed from one generation to another (in some cases, over centuries or millennia). Elsewhere, ASM may be an ad hoc, rapid response to a discovery, rising mineral prices, severe drought, or civil strife. ASM may refer to small or microenterprises employing one or a few people, or it can involve highly organized labor chains with complex and well-established organizational structures. ASM typically involves rudimentary tools, but in some cases, it can include basic equipment such as water pumps or jackhammers or even heavy machinery.

Although the size and scope of ASM can vary widely, some common characteristics of ASM include the following:

- It ranges from informal to formal and can be disorganized or well-organized.
- It is strongly linked to rural poverty and a lack of alternatives that would provide better opportunities for income generation.
- Participation often fluctuates with commodity prices.
- It can include scavenging from and/or coexistence with LSM leases.
- It is sometimes seasonal, with mining alternated with farming, fishing, or another activity.
- It is typically labor intensive, yet may have complex labor structures, processes, and relations.



ASM practices run the gamut from the most basic methods and tools to the use of small equipment. Women's participation in ASM typically decreases with increasing mechanization. Above, a woman gold miner in Uganda uses a gourd for panning. *A. J. Gunson*

- It usually applies low levels of technology because of poor capitalization and a lack of knowledge and skills.
- It offers very low wages and insecure and unsafe jobs, and it may involve exploitative labor relations (for instance, regarding children and vulnerable persons).
- It frequently has negative environmental repercussions, often damaging the health of the local ecology, and may affect other rural livelihoods, such as farming and fishing.
- It often includes a series of intermediary buyers who are often operating illegally themselves.
- It involves the mining of precious stones and metals (such as diamonds, rubies, gold, and silver) as well as of industrial minerals (such as stone aggregate, sand, clay, and salt) and some base metals (such as tin, tungsten, or tantalum).

Although these vary among countries and communities, livelihood activities can take place at all stages of the mining production and value chain,

### Box 1.1 Informal contributions of ASM in different countries

As most ASM in the world tends to operate in the informal economy, its contributions to local and national development are typically invisible to most decision makers, government, and the general public. Nevertheless, its impact can be significant in mining villages, regions, and countries. At the household and community level, ASM provides rural employment options and results in reduced rural-urban migration. Also, miners' incomes are often reinvested in agriculture or used to stimulate other small businesses, while revenues from ASM and spin-off ventures often play an important role in helping local families meet their health and development needs.

Nationally, inputs to GDP and foreign exchange earnings, while rarely captured, can be substantial. Estimates of informal ASM contributions in a few countries lend insight into this potential:

- **Central African Republic.** Using conservative multiplier effects, as much as \$144.7 million may be injected into the economy from informal artisanal diamond mining revenues and spin-off economic enterprises. When indirect labor, induced employment, and fertility rates (4.6 percent) are considered, about two-thirds of the women, men, and children in the Central African Republic may directly or indirectly rely on artisanal diamond mining.
- **Liberia.** There are an estimated 50,000–75,000 artisanal diamond miners in Liberia, of whom about 10–20 percent are women, most of whom pan for gold at diamond sites. If half of their combined income is spent on local goods and services, more than \$13.5 million may be injected into local economies, creating markets for locally grown or supplied products and increasing the cash component of household incomes. This ASM-injected capital may further stimulate local formal and informal enterprises to contribute an additional \$33.75 million to local economies.
- **Mongolia.** Over 60,000 artisanal miners (about 30 percent of whom are women) of gold, coal, fluorspar, and other minerals are estimated to contribute over \$811 million per year to the country's GDP. An additional estimated \$505 million is spent each year in local economies near mining activities. About 600,000 Mongolians (almost 20 percent of the population) may rely to some extent on ASM. These estimates are based on direct employment (mine workers, etc.), people who provide goods and services to the mines, and induced employment (owners and workers in local shops, restaurants, and other small businesses in communities where mining revenues are spent).
- **Uganda.** Almost 200,000 women (45 percent) and men (55 percent) are engaged in artisanal mining of gold, tin, coltan, wolfram, and a range of industrial minerals. The average miner is estimated to contribute almost 20 times more to GDP than those employed in farming, fishing, and forestry. In 2008, informal (uncaptured) estimates of gold, tin, coltan, and wolfram sales suggested that ASM was actually the country's third highest foreign exchange earner. Its contributions are expected to have grown since, with increased commodity prices and the rising number of artisanal miners.

Clearly, ASM has the potential to be an engine for development. A number of critical factors determine whether this potential can be realized, among them the need to formalize ASM; redress the poor culture of savings and skills to professionalize operations; increase access to suitable microfinancing and appropriate, intermediate technologies; and ensure that any efforts to tackle these issues equitably benefit women and men.

**Note:** Estimates have been developed based on the best-available and conservative data on numbers of miners, mineral production, sale prices and incomes, spin-off multipliers, and national dependency ratios as described in Hinton, Levin, and Snook (forthcoming) and Hinton (2009, 2010b, 2011b).

## Introduction to Gender and ASM

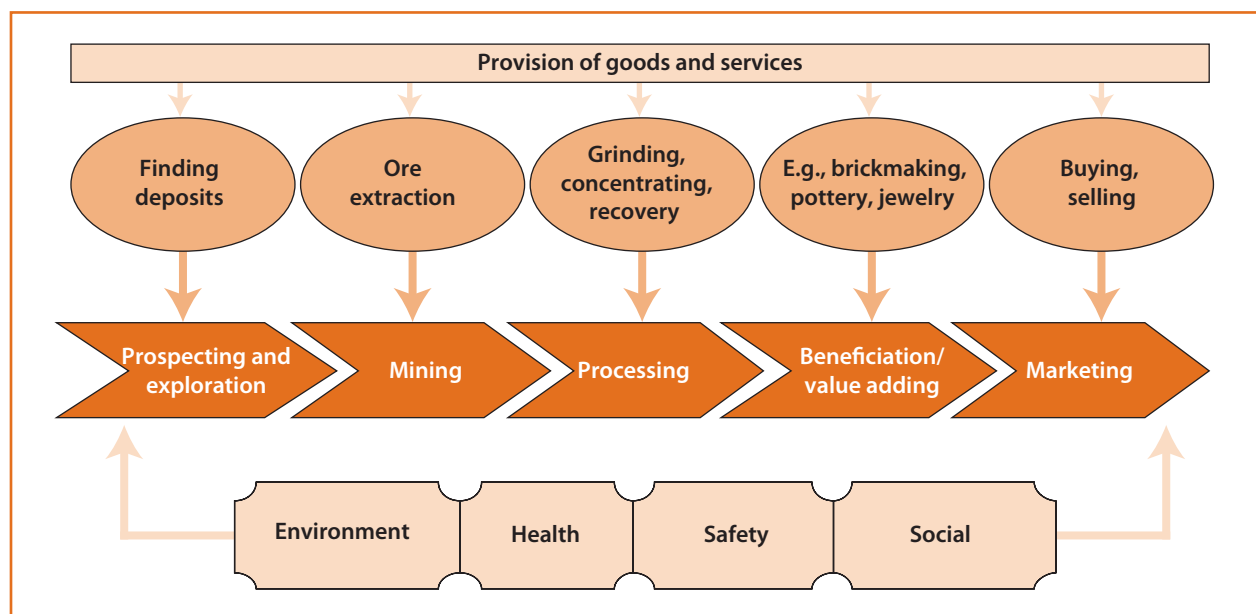
from prospecting and exploration and mining through to marketing (figure 1.1). Across all of these stages, ASM includes a wide variety of participants performing a range of functions, including wage laborers, laborers paid by production, tributors, license holders, cooperatives, dealers, and supporters (financiers, who are often license holders) (Levin and Gberie 2006). This structure and array of participants and roles varies across countries, and activities at a given site may be dominated by men or women or both.

Proper management of ASM can lead to economic opportunities and minimize associated environmental damage. Improperly managed ASM can exacerbate inequalities and lead to economic, social, and environmental risks for and within the associated communities. Challenges often associated with ASM include child labor,

physical and sexual abuse of women, population migration which creates unsustainable communities, HIV/AIDS, and poor sanitation. ASM can also create unsustainable or damaging environmental impacts, including unrehabilitated excavations, effluent dumping, improperly stored waste, dust emissions, release of chemicals such as cyanide and mercury, acid mine water, river siltation, and deforestation. ASM has been criticized too for its association with conflict and war.

All of these aspects of ASM can differ from site to site and community to community. A key goal of this Toolkit is thus to help identify these issues—particularly as they differently affect men and women—in order to provide a foundation for effective strategies and responses to the development opportunities and challenges from ASM in a given area, region, or country.

**Figure 1.1** ASM value chain



**Source:** Adapted from Mutemeri and Samba 2010.

**Note:** Ovals show livelihood activities associated with each phase of the value chain; boxes identify cross-cutting issues along the value chain.



ASM can stimulate a number of small businesses in surrounding communities. *J. Hinton*



The all-too-common health and safety risks of ASM are evident from dust exposure during lime production. *J. Hinton*



One of the main environmental impacts of ASM is degradation of land that otherwise might be used for farming. *J. Hinton*

## 1.2 Gender and ASM

Among the more than 20 million artisanal and small-scale miners active around the world, the proportion of women miners was estimated at about 30 percent in 2003; their involvement may now be much higher (Hinton, Veiga, and Beinhoff 2003). Women make up well over 10 percent to even more than 50 percent of miners in some Asian countries. In Latin America, they comprise approximately 10–30 percent; in Africa, women may make up anywhere from 40 to 100 percent of the workforce (Amutabi and Lutta-Mukhebi 2001; Jennings 1999; Lahiri-Dutt 2008; Onuh 2002) (table 1.1).

Women play a much larger role in artisanal mining than in the LSM sector, and their engagement typically declines as the degree of organization and mechanization increases (WMMF 2000). Women's roles vary between and within countries and frequently depend on the location (proximity to villages or homes) and mineral being mined (Hinton, Veiga, and Beinhoff 2003; Lahiri-Dutt 2007). In addition to working directly in mining, women often work part time at informal mining operations and occupy ancillary roles (e.g., as cooks and service providers). Because women are more frequently associated with transporting and processing materials, as opposed to digging, they are not always identified as miners (Susapu and Crispin 2001). Women's involvement is often invisible, because it frequently takes place in the domestic sphere. There thus may be significant discrepancies between the estimated and actual numbers of women involved in ASM (Wasserman 1999). Furthermore, women typically have intensive domestic responsibilities—typically working four to eight hours more than men per day—which adds to their workload; this is largely unrecognized and undervalued.

**Table 1.1** Estimated number of miners and percentage that are female in selected countries

Country	Number of miners	% female
Bolivia	72,000	35
Brazil	10,000	—
Burkina Faso	100,000–200,000	45
Central African Republic	>100,000	—
China	3,000,000–15,000,000	—
Congo, Dem. Rep.	2,000,000	20
Ecuador	92,000	—
Ghana	180,000–200,000	50
India	12,000,000	30
Indonesia	109,000	10
Lao PDR	—	50
Malawi	40,000	50
Mali	200,000	30
Mongolia	40,000–60,000	10–30
Mozambique	60,000	—
Nepal	120,000	40–50
Pakistan	400,000	—
Peru	30,000	—
Philippines	185,400–300,000	—
Papua New Guinea	50,000–60,000	20
South Africa	10,000	5
Sri Lanka	165,000	—
Tanzania	550,000	25
Uganda	196,000	45
Zambia	30,000	30
Zimbabwe	350,000–500,000	44

**Sources:** Hayes 2007; Hentschel, Hruschka, and Priester 2002; Hinton 2009, 2011a; Krishnaraj and Shah 2004; Lahiri-Dutt 2008.

**Note:** — = not available.

Despite women’s significant involvement in ASM, men hold the control and ownership of most assets. Evidence overwhelmingly indicates that land (inclusive of mining areas), incomes from mining and other activities, mining and farming



Women engage in ore grinding at home throughout the day as they perform their domestic chores. *J. Hinton*

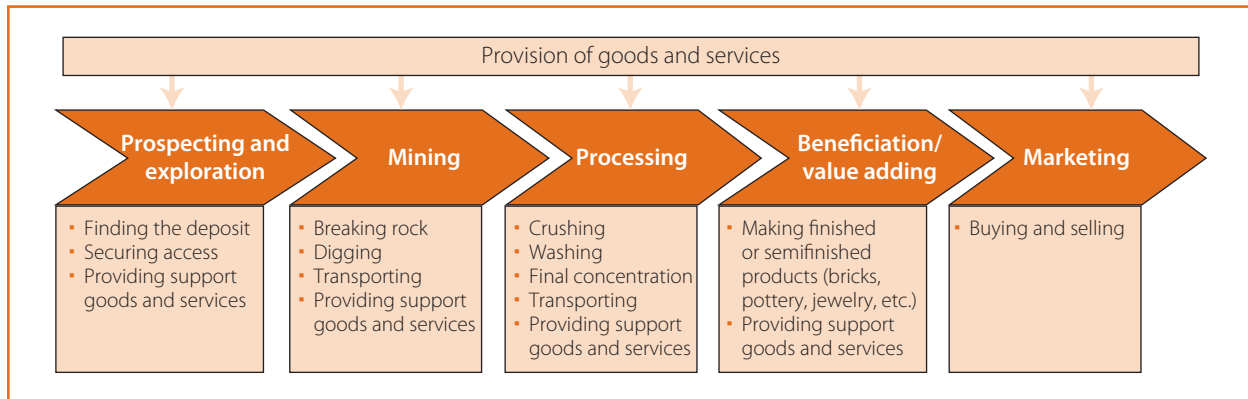
tools, homes, crops, and sometimes even children are primarily owned and controlled by men. Similarly, the benefits from these resources also predominantly accrue to men.

In whatever productive capacity, women are critical to community stability. And both women and men in ASM communities are critical to community cohesiveness, morale, and general well-being, acting as agents in facilitating positive change. Understanding the differential impacts and benefits of ASM on women and men in the broader community can play a role in achieving development outcomes.

### Men’s and women’s different roles in ASM

As noted, in most communities, men and women have different “typical” roles in ASM (although this may vary from community to community), which may occur at any/all stages along the ASM value chain (figure 1.2). In addition to being involved in mining itself, women are often heavily involved in indirect labor related to mining. For instance, in Tanzania, it was observed that 2.5 times as many women are engaged in indirect roles (such as hauling and food and water provision) than in

**Figure 1.2 Unpacking ASM value chain activities**



Source: Adapted from Mutemeri and Samba 2010.

direct mineral production. In Tanzania, women constitute about 25 percent (137,500) of the total ASM workforce (550,000) (Dreschler 2001).

Some examples of the gender division of labor in ASM follow:

- In the Coccoase Camp at Tarkwa in Ghana, risks associated with underground mining are given as justification for women carrying gold ore and water and pounding rocks rather than digging (Akabzaa and Darimani 2001).
- Approximately 90 percent of mineral processing activities are conducted by women in Burkina Faso and Mali, where women constitute approximately 45 percent of the ASM workforce (Gueye 2001; Keita 2001).
- The labor division of men engaged in digging and women in hauling, processing, and service provision has been documented for metallic mineral and gemstone production in Bolivia, Brazil, Burkina Faso, Colombia, India, Kenya, Lao PDR, Mozambique, Peru, the Philippines, Sudan, Suriname, República Bolivariana de Venezuela, Zimbabwe, and elsewhere (Amutabi and Lutta-Mukhebi 2001; Chakravorty 2001; Dreschler 2001; Heemskerk 2000; Hentschel, Hruschka, and Priester 2002; Jennings 1999; Lujan 2004; Veiga 1997; Veiga and Hinton 2002).
- Women are also heavily involved in the mining and processing of many industrial minerals, such as clay in Bangladesh; stone aggregate, limestone, and dimension stone in Uganda; stone aggregate and sand in India; stone, sand, and clay in Ghana; and marble in Zambia (ANU and World Bank 2008, Babu 2004, Dreschler 2001, Hilson 2001, Hinton 2006, Sahnaj 2004).
- In Southern African Development Community countries, one study on small-scale mining found that only 10 percent of miners in the formal sector are women, with the remainder engaged in subsistence mining. Because women are so minimally involved in the formal sector, they typically have little experience. Also, because of their domestic roles, they have little flexibility to follow mineral rushes. Therefore, women usually work near home, in less-profitable seasonal panning activities (Dreschler 2001).
- This division of labor is also seen in the mica factories in Giridih in eastern India, where

women perform the most laborious manual jobs, while men are engaged in more specialized, mechanized jobs.

Even where men and women perform similar work, women often make less money for similar tasks:

- In a formal mine camp in Tarkwa, Ghana, women who transport gold ore and water and pound rocks yield salaries 60 percent lower than men involved in digging (Akabzaa and Darimani 2001).
- In Siguiri, Guinea, women and men work side by side washing gold from the lateritic soil. For every five calabashes (a large carrying container) of ore that the women wash, male intermediaries (buyers) receive the profits from four; the women retain only one (USAID 2000).
- When ASM is undertaken in the context of a family unit, women's work is quite often unpaid and conducted to enhance the earnings of their husbands (Amutabi and Lutta-Mukhebi 2001; Hinton 2010a; Labonne 1998).

### Why do men and women have different roles?

Men's and women's roles in ASM (or in any industry) are typically only in small part based on their different physical capabilities. The difference in roles is in large part determined by cultural or traditional factors, functions, and expectations. These differing roles are referred to as gender roles.<sup>1</sup> Although specific roles and expectations vary around the world and even within countries, most

<sup>1</sup> *Gender* is often confused with *sex*. Gender refers to social and cultural norms, traditions, and expectations; sex refers to men's and women's biological differences—the ability to give birth is a sex role, while the responsibility for raising children is an expectation related primarily to gender.

cultures usually have fairly strong prescriptions for men's and women's roles in the domestic and community spheres. Examining gender and ASM means looking at the roles men and women play: what are men and women expected to do or are limited from doing; and what are the implications for men, women, and their communities of these roles? Is there an interaction between men's and women's gender-ascribed roles (for instance, women often being responsible for gold processing involving mercury) and men's and women's differing biology (mercury can be particularly harmful to pregnant women)?

Based on gender roles, men and women often do not have equal ownership or rights over resources; they are often differentially involved in decision making; and women are often ineligible to make certain decisions for their own or their family's lives. Based on their different roles and abilities to exert influence over their own roles, men and women may be differentially affected by the sector itself, or by reforms or programs in the sector.

For instance, in a community where women are responsible for food preparation or water collection, an ASM activity that pollutes local water sources may mean that women must travel much farther and spend more of the day collecting water, leaving little time for other activities. However, in a male-only consultation on environmental concerns, this issue may not surface. Where it is a woman's role to process gold with mercury, her domestic role may mean that she conducts this processing in the home, creating health risks for the whole family. And where men control access to technology such as radios, women may have diminished access to information (such as on health risks or training) and

---

Understanding that men and women play different roles in the community and face different constraints is critical to understanding how they are differently involved in and affected by ASM, and to designing interventions to maximize development opportunities.

---

participation in public life (for example, exposure to public awareness campaigns).

### Impacts of different roles

The different roles men and women play can have different social, environmental, or economic implications—which may have additional dangerous implications for women in particular.

In the Philippines, where mercury is used for gold recovery, much of the amalgam decomposition takes place in the home using the kitchen stove (Caballero 2006). Where women are responsible for this work, there are reports of kidney pain, respiratory problems, and dizziness in women (Murao et al. 2002). Lead released from small-scale



Although women and men were both present at this training session for miners, men's involvement during hands-on training was clearly evident. S. Turyahikayo

gold mining has left hundreds of children dead in Nigeria, and has resulted in miscarriages among women in the community (Katz 2010).

In Bolivia, where tailings are primarily the domain of women, *palliris* may spend several hours per day working in tailings saturated with heavy, metal-rich acidic drainage and cyanide residues (Jerez 2001). Like the metals lead, cadmium, and mercury, cyanide gas can be fatal to humans at concentrations of around 250 parts per million in air. Chronic exposure to low concentrations of cyanide has been linked to neuropathological lesions and optical degeneration (Potter, Smith, and Api 2001).

In Peru, the mining camp Huaypetuhe in the Madre de Dios gold mining region has been characterized by high crime rates, domestic violence, and incidences of rape. This is in part attributed to the absence of police and lawlessness common in many ASM communities (Kuramoto 2001). In Suriname, acute differences in incomes between exclusively male pit workers (who are paid based on gold recovery at approximately \$360 a month) and women working as traveling merchants (who are paid approximately \$90 a month) have prompted many women to supplement their earnings by providing additional services of a domestic or sexual nature (Heemskerk 2000).

Based on their gender roles within their communities, involvement in ASM can create different work burdens for men and women, even if the roles or time demands of mining are similar. For example, in six Ugandan ASM communities, both women and men work seven to eight hours per day, on average, at ASM sites. Women then work an additional five to eight hours more than men in domestic responsibilities (child care, food





Women sometimes work side by side with men performing the same roles, like this woman fluor spar miner in Mongolia. *J. Hinton*

preparation, hauling firewood and water, etc.), leaving zero to one hours per day for relaxation or socializing for women compared to four to seven hours for men (Hinton 2010a).

Linkages between gender roles, gender inequalities, and child labor in ASM cannot be overlooked. Child labor is differentiated from child work by its general characterization as work that is “mentally, physically, socially or morally dangerous and harmful to children” (ILO n.d.) including that which interferes with their education. Because of the many hazards and risks associated with ASM, child labor in ASM is characterized by ILO Convention 182 as one of the worst forms of child labor. Given women’s substantial domestic work burden and—in many cases—abject poverty, children can begin work at ASM sites early, often accompanying their mothers. Factors such as control over earnings from mining, education status of mothers, and family well-being (in terms of economics, health, etc.), as well as the traditional significance of ASM

in a given community all seem to play a role in child labor.

Men’s and women’s noncommercial roles may also be significantly affected by ASM; and where women’s domestic burden is higher, the impacts may be greater for them. For example, Peterson and Heemskerk (2001) estimated that up to 2,300 square kilometers of forest in Suriname will have been destroyed by artisanal miners by 2010. Women, as the ones primarily responsible for fuelwood collection and for using forests for food and medicine in many ASM areas, may be more affected by changes in the availability of firewood, food, and medicinal plants.

ASM, and particularly women’s work in ASM, tends to be invisible. Most of the general public, including key policy makers, know little about the ASM subsector. Women’s work at mine sites in direct and indirect roles is even more obscure. In many ASM communities, even men and women miners often

fail to recognize women as miners due to their multiple domestic responsibilities. For example, in eastern Uganda, many women use grinding stones in the home to pulverize gold ore as they carry out activities related to child care, food preparation, digging, and other work—yet they are not identified as miners by themselves or by male miners. In the artisanal gypsum mining fields of Nigeria, women and girls are seen carrying gypsum concentrate to selling points, but their participation is not acknowledged in discussions with community leaders. The local structures that control access to deposits are all controlled by men.

The invisibility largely arises from the limited data or literature available on women's roles, coupled with the often simultaneous domestic responsibilities of women. This lack of documentation results from a mix of reasons: omission from official data because of perceived marginality of contributions, poor records stemming from the informality of ASM, and fear of government interference, among others (Heemskerk 2003b). Lack of distinction between children's and women's labor by government departments is another common impediment, with legislation often aggregating the two into a single paragraph.

Despite claiming to be gender neutral, policies and programs affect women and men differently, and can actually serve to exacerbate gender inequalities. Legislation, programs, and projects must be designed that consider gender-differentiated needs with the objective of transforming gender relations and redressing inequities in power, access, and control.

### 1.3 Why This Toolkit?

To understand and address ASM so that it provides an avenue for economic and social development



This young Tanzanian woman migrates from site to site selling maize to miners. *J. Hinton*

for whole communities—rather than exacerbate inequalities within communities—requires an understanding of how different stakeholders are involved. Including a gender approach is critical for a number of reasons.

- **Understanding the gender dimensions of ASM can lead to improved economic outcomes for women.** Improved management of ASM can lead to mitigated environmental impacts, as well as improved economic benefits from ASM. As such, improved management of ASM is often a priority among governments. Understanding the different roles of men and women can enable policy making that can improve the economic impacts for both men and women, leading to greater empowerment, decision making, and agency for women as well as men.
- **Investing in women is investing in communities.** Evidence demonstrates that investing in women is good not only for women themselves, but also for their families and communities. Women typically take a higher percentage of earnings back to their families than men do, and have a key role to play in ensuring the

health, nutrition, education, and security of those around them. Making sure that women have equitable access to the productive sphere can mean positive development impacts not only for them, but for their community as a whole (World Bank 2001). Thus, understanding and addressing barriers to women's access, and understanding the risks they face, is key to ensuring that policies and activities equitably affect men and women, and support women's full development potential.

■ **ASM is unlikely to improve without gender mainstreaming.**

To transform ASM into a formal, professionalized activity that more directly contributes to development, it is important to make access to the benefits from ASM equitable. Practical examples of how this can be understood and addressed include the following:

- An ASM training workshop is unlikely to equitably benefit women and men if specific efforts are not made to mobilize women, if training language does not include the local vernacular, and if all work is done in large mixed groups.
- If mining offices are dominated by men located 350 kilometers away and procedures are complicated and require many days away from home, women may be at a disadvantage. This is exacerbated where household finances are controlled by men and permission is needed to engage in this process.
- Legal requirements that mandate the formation of cooperatives may worsen gender inequities if, due to constraints in terms of time, financial resources, and capacity to voice opinions and views, women are unable to participate effectively.

- Large sledgehammers suitable for breaking boulders are unlikely to meet the practical needs of women involved in crushing stone in quarries. Similarly, low-cost sluice boxes given to women gold miners may not yield intended development benefits if resulting increased incomes are controlled by men.
- Larger mining and exploration companies are unlikely to achieve true community support if consultations focus on male leaders and landowners.
- Information campaigns conducted via radio are less likely to reach women due to inequities in ownership and control of radios and varying language proficiencies.

*World Development Report 2012: Gender Equality and Development* (World Bank 2011) affirms that perpetuation of gender inequalities are likely to increase costs substantially, reduce competitiveness, and impede development in countries in the globalized 21st century; the report cites slow progress toward equality in Sub-Saharan Africa and Southeast Asia. Clearly, progress toward development is tied to progress toward gender equality (box 1.2), and as an important rural livelihood in many countries, ASM is no exception.

### 1.4 Uses of the Toolkit

The gender dimensions of ASM around the world are diverse, dynamic, and distinct. Involvement and impact can vary from culture to culture, region to region, and mine to mine; and can change over time (Hinton, Hinton, and Veiga 2005). Thus, this Toolkit seeks to help users understand and effectively design policies and programs in response to needs and opportunities present in a given ASM area, community, or country. The Toolkit provides a framework of questions for

**Box 1.2 A note on equality and equity**

It is important to look not just at gender equality—for example, having equal numbers of men and women at a consultation—but also at equity—for example, ensuring that men and women have equal opportunities to participate and benefit from such consultations, even where this might mean holding separate meetings with women and men. **Gender equity** aims to improve equality of outcomes, while **gender equality** often aims simply to ensure the equality of opportunities.

Practically speaking, a company may ensure gender equality by opening up its hiring to women. But if women are effectively excluded from management and decision-making roles, there is little gender equity. Similarly, if consultation guidelines require 50 percent participation by women, but there are no provisions to ensure that women are able to contribute meaningfully, this may be gender equal but not gender equitable.

Gender equity is believed to require transformative change in terms of gender relations, recognition of differing needs and interests, and distribution of power and resources. In other words, equality of opportunities and outcomes may require differentiated treatment of women and men.

understanding men's and women's roles—and the underlying issues of access and control—as well as techniques for gathering requisite information.

---

Although gender is ideally mainstreamed at the earliest phases of conception, it is never too late to improve policy or project outcomes through increased gender responsiveness.

---

The Toolkit should be used in all stages of ASM policy, program, or project design and implementation. It can also be easily adapted for any phase related to identification of priorities, assessment, and monitoring and evaluation, as well as design and implementation at the grassroots or policy level.

The Toolkit includes a number of different tools. These can be used together for a more comprehensive assessment, or implementers can pick and choose tools to suit the specific situation. Together, the tools can be used to inform the following stages of project and policy design and implementation.

**Assessment of existing conditions**

The Toolkit uses gender analysis of select key issues of the lateral and downstream mineral trading chain to develop a baseline gender assessment. Through conscientious gender mainstreaming, adherence to principles of inclusion, and the use of gender-sensitive methods, the Toolkit can readily be expanded to suit broader multi-livelihood assessments or narrowed to focus on particular priorities on topics as varied as ASM technologies and methods, business development training needs, or occupational health and safety conditions, among many others.

**Project identification, design, and implementation**

Although gender approaches can be complex for those not familiar with the concepts, policy makers and practitioners increasingly recognize that the outcomes of any project that is founded on poverty reduction or development objectives can be improved by explicitly responding to practical or strategic gender needs.

## Introduction to Gender and ASM

The Toolkit provides guidance to help identify the priorities of women and men in ASM communities to help ensure gender-responsive project design. Practical methods and measures are suggested to promote genuine participation of, and benefits to, women and men in ASM communities, cognizant of the common and different barriers faced by them.

### Policy and legislative reform

Formalization and regularization is widely regarded as the cornerstone of ASM's advancement. Considering the overarching need to protect human rights, formalization is the process of integrating rather than controlling informal enterprises by recognizing local arrangements in legislation, reducing barriers to legalization, and creating clear benefits from participation in the formal system (Hinton 2009).

Developing conducive policies and legislation that explicitly redress gender inequities in power, access, and control presents a challenge to traditional mining institutions—but is an essential objective if the minerals sector is to contribute effectively to poverty reduction objectives.

Although single-sector approaches often provide the most efficient mechanisms, given the diverse needs of ASM, any reforms must necessarily identify entry points for collaboration. By identifying gender-differentiated needs, constraints, and opportunities, the Toolkit can significantly inform changes to policy and legislation in the minerals sector as well as those related to education, health, social welfare, small and medium enterprise development, and other critical areas.



While women constitute less than a quarter of the miners in this tin mining area, this woman leads a team of miners in these underground workings. *J. Hinton*

### Relationship building and coordination arrangements

The process-focused Toolkit employs methodologies that help identify complementary priorities and mandates of key institutions and organizations, build understanding of both ASM and gender within specific country and community contexts, and create intersectoral dialogue to address the multidisciplinary challenges often facing ASM communities. The Toolkit's Implementation Roadmap provides specific measures to

- improve linkages among mining authorities and key local government officers mandated to respond to specific challenges related to—for instance—education, health, social welfare, environmental management, and development;
- increase coordination among key agencies and institutions through heightened awareness of ASM and its development potential;
- strengthen relationships between large mining companies and communities and improve outcomes from corporate social responsibility efforts; and

- facilitate relationship building between local authorities and organizations from multiple sectors and women and men miners on the ground.

The Toolkit seeks to build the understanding of all key stakeholders through methods conducive to an open exchange of ideas and engagement by all parties.

# The Gender and ASM Framework



# The Gender and ASM Framework

2

**2.1 Context: The Sustainable Livelihoods Approach**

**2.2 Gender and the SLA**

**2.3 The Gender and ASM Framework: Critical Issues and Questions**

**2.4 How to Use the Framework: Implementation Roadmap**





This section of the Toolkit outlines an analytical framework for understanding the gender dimensions of ASM. The Gender and ASM Framework will help users gain a sense of the information they need to have to determine men's and women's ASM experience; the modules in section 3 will guide you in gathering the information identified in the framework.

The Gender and ASM Framework is founded on the concept that ownership, access, and control of assets are the primary means through which women and men can develop pathways out of poverty (Moser et al. 2001). For example, within the context of ASM, trading up assets of manual labor, basic tools, and minerals for savings, better tools, working in teams, group savings, and small equipment is an example of how human, physical, natural, social, and financial assets can be accumulated and used to improve well-being over time. The Gender and ASM Framework therefore seeks to identify opportunities and constraints faced by women and men with the objective of identifying specific recommendations and action items to mitigate the core gender inequities hindering the development of sustainable livelihoods.

The Toolkit considers a **livelihood** to be the means by which individuals and families gain adequate stocks and flows of food, cash, and other resources to meet their needs (box 2.1), together with reserves and assets to offset risks; ease shocks; and meet contingencies, crises, and emergencies (DFID 1999). The livelihood of a man or woman is sustainable when he or she can effectively use these assets to deal with shocks

### Box 2.1 Practical versus strategic gender needs

The Toolkit promotes understanding of both practical and strategic gender needs.

- **Practical gender needs** entail the daily and often immediate needs of women and men based on their common or differentiated gender roles, such as the need for tools, financing, and so on.
- **Strategic gender needs** are related to women's position in society vis-à-vis that of men; responding to these needs means providing them with tools to advance their position.

It is the effective response to strategic gender needs that can change the status quo in terms of a women's often subordinate position in society relative to that of men. Gender relations are determined by social rules and norms that determine how assets, labor, and authority and status are assigned (Kabeer 2008), so any policy or program seeking to change these norms must address strategic gender needs.

or stresses and increase assets and capabilities in the short and long term (DFID 1999). Because it provides the foundation for most livelihoods, the sustainability of the natural resource base must be protected.

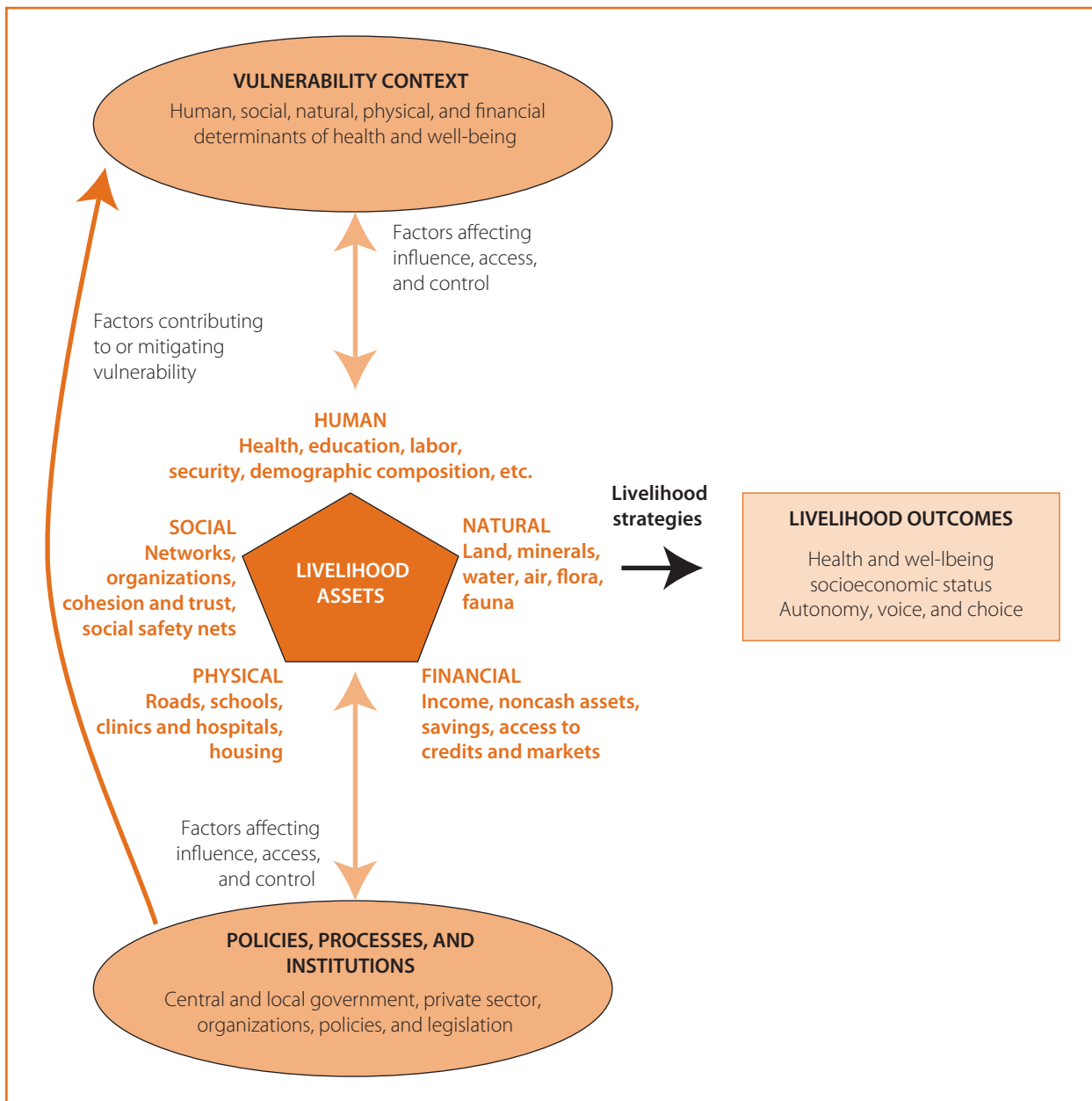
### 2.1 Context: The Sustainable Livelihoods Approach

This Toolkit utilizes the Sustainable Livelihoods Approach (SLA), a widely used framework that aims to understand how people live and cope with vulnerabilities. The SLA evolved from

sustainable development frameworks that addressed broad dimensions of environmental, social, and economic sustainability, but did not

sufficiently address inequities in access and poverty (Ellis and Bahigwa 2003; Moser et al. 2001).

Figure 2.1 Adapted SLA Framework



Source: Adapted from DFID 1999.

## The Gender and ASM Framework

The principle components of the SLA (figure 2.1) are assets, or **capital** (DFID 1999):

- **Natural capital.** The natural resource stocks, flows, and services that can enable certain livelihoods comprise natural capital. These can have a tangible (e.g., arable land, forests, minerals, water) or intangible (air and biodiversity) affect on livelihoods.
- **Human capital.** Human capital is the skills, knowledge, and ability to work and achieve good health that jointly can help enable women and men to achieve their livelihood objectives.
- **Financial capital.** The financial resources women and men need to achieve livelihood objectives, including income, credit, savings, and market access, comprise their financial capital.
- **Social capital.** Social capital includes networks and connections between people and organizations; membership in formal and informal groups; and the trust, mutual benefits, and cooperation among individuals and groups that can help provide informal safety nets.
- **Physical capital.** Physical capital can include roads and means of transport, shelter and buildings, water supplies, sanitation systems, energy sources, and communications as well as tools and equipment needed to support livelihoods.

Poverty—and the escape route out of poverty—depends on more than just having these types of capital. It also depends on the capacity of a woman or man to **access, control, and own assets**, including the factors influencing access to these assets (gender norms, how markets operate, policy and legislation, etc.) and the

broader context in which they exist (e.g., history of local development, shocks such as conflict and drought, policies and institutional practices) (Lawson, MacKay, and Okidi 2005). These circumstances can change over time, with specific factors increasing or decreasing vulnerability. The SLA tries to facilitate understanding of the social, legal, and institutional processes that determine an individual's or a group's capacity to access, control, accumulate, and benefit from assets.

### 2.2 Gender and the SLA

The Gender and ASM Framework incorporates the SLA with a strengthened gender lens—that is, specific attention is drawn to understanding men's and women's differentiated abilities to access, control, accumulate, and benefit from assets. This gender lens is meant to highlight the main factors that affect the livelihoods of women and men, illustrate how these factors are interrelated, and help identify core causes and consequences of gender inequities.

The Gender and ASM Framework breaks down each of the five types of capital into issues specific to women's and men's vulnerabilities. For example, natural capital includes land and water, both of which are crucial in the context of ASM. A woman's access to and control of land and its resources may be restricted due to inheritance laws or resource ownership rights, but the pond or river near her backyard is readily accessible and she often manages the water resources. Conversely, a man may claim ownership over these land and water resources but may share decisions concerning water use (control) with his spouse. Applying a gender lens to the SLA avoids generalizing at the household level but looks deeper at the gender relations that determine inequities in power, access, control, and autonomy—thus enabling

identification of issues where policy interventions are needed.

The Gender and ASM Framework also includes an explicit focus on individual **human rights** (box 2.2). A rights-based approach means looking at a situation in terms of whether policies, institutions, and power structures support or impede human rights—including the right to development and/or other fundamental human rights. For instance, policies and legislation that claim to be gender neutral may actually serve to worsen or improve gender inequities (Moser et al. 2001). The rights-based approach included in the framework is used to understand how rights are being supported or infringed on in situations and through policy, institutions, and power structures—this can provide an additional angle for addressing accountability, governance, and transparency (Moser et al. 2001).

Understanding the factors that determine an individual's or group's capacity to access, control, accumulate, and benefit from assets is the foundation for identifying solutions that respond directly to strategic needs.

Combining these approaches, the framework identifies the main constraints people are facing in improving their well-being and the assets or poverty-reduction measures to which they have access (DFID 1999). By identifying both barriers and opportunities, the framework supports an understanding of gender in ASM in terms of the various and interconnected issues and processes that affect men's and women's lives and livelihoods.

**Box 2.2 The Gender and ASM Framework and a rights-based approach**

A human rights-based approach identifies

- **rights holders**—the individuals or organizations that, by national and international law and convention, are entitled (or unrestricted) to have or do certain things; and
- **duty bearers**—the individuals, organizations, or the state (usually) that, by national and international law and convention, has a responsibility to do certain things.

The Gender and ASM Framework looks at ASM communities from the perspective of whether relevant institutions, policies, and power structures ensure a positive relationship between rights holders and duty bearers.

**2.3 The Gender and ASM Framework: Critical Issues and Questions**

The Gender and ASM Framework is meant to provide practitioners with a systematic guide to considering the gender dimensions of ASM. It is not prescriptive with regard to the issues at play in any particular community; such issues will change from community to community. Rather, it draws on extensive fieldwork to pose critical questions regarding common gender issues in ASM (table 2.1).

For all of the questions posed in the framework, subsequent sections of this Toolkit provide mechanisms for gathering the requisite information. The questions raised are based on the five types of capital (natural, human, financial, social, and physical), and the framework is organized according to the value chain components, or stages, of ASM activity: prospecting and exploration, mining,

## The Gender and ASM Framework

**Table 2.1** The Gender and ASM Framework

		Roles and responsibilities	Access and control	Impacts and benefits
Common issues in different dimensions of the ASM value chain				
ASM value chain component	Prospecting and exploration	<p><b>Finding mineral deposits</b></p> <ul style="list-style-type: none"> <li>What constraints do men versus women face in terms of finding minerals and deposits (knowledge, skills, personal autonomy and freedom of movement, ownership rights)?</li> <li>What variability is there in men's and women's access to and control of resources (funds, tools) needed to prospect?</li> <li>Does gender play a role in who is involved in various roles in prospecting and exploration, directly and indirectly?</li> </ul>	<p><b>Decisions about mineral deposits</b></p> <ul style="list-style-type: none"> <li>Whoever dominates prospecting and exploration is most likely to find new deposits, start negotiations with landowners/occupiers, and gain decision-making power and control of mining areas.</li> <li>Whoever controls or owns the land where prospecting and exploration occurs may make different decisions about access and benefit sharing than others who also rely on the land.</li> <li>The ability to obtain a formal prospecting license is based on awareness of procedures, financial and technical capacity, and personal freedom to get a license (including travel to regional offices).</li> </ul>	<p><b>Effects of these conditions</b></p> <ul style="list-style-type: none"> <li>What are the gender dimensions of the environmental impacts of prospecting and exploration? (Is it affecting natural resources in a way that may have differentiated impacts on men's and women's community/domestic roles?)</li> <li>Are there evident social/economic implications of prospecting that might have a gender dimension? For instance, migration from site to site or home to site can create personal security risks, social risks, and benefits (marital relations, social stigma, socioeconomic status) and community risks and benefits (sex trade, small enterprise development, exposure to new technologies) that may have different impacts on women and men.</li> </ul>
	Mining	<p><b>Extracting and hauling ore</b></p> <ul style="list-style-type: none"> <li>Is there a gender dimension to who controls the pit? Is this typically a man or a woman?</li> <li>Is there a gender dimension to who does most of the mining? Are there reasons given for why men or women might dominate (skills, strength, culture, superstition, etc.)?</li> <li>What social networks or relationships exist around processing (associations, family groups, etc.)? Are there gender dimensions to this (more men or women involved, sex-segregated associations, etc.)?</li> <li>If men dominate mining, are there any women involved (and vice versa)? What challenges do they face? For instance, do they have the social networks/tools the majority of miners have? Are they able to share in benefit-sharing structures?</li> <li>How does an individual's burden of work at the mine, in the household, and in the community affect their participation in different roles? Do men and women experience this differently?</li> </ul>	<p><b>Decisions about extraction</b></p> <ul style="list-style-type: none"> <li>Often, whoever controls the pit has decision-making power about the mine and distribution of its benefits.</li> <li>Sociocultural rules, norms, and practices can also affect who can work in the pit or underground, how different roles are valued, and how benefits of participation are shared (at the site and in the household).</li> <li>The ability to obtain a formal mining license is based on awareness of procedures, financial and technical capacity, and personal freedom to get a license (including travel to regional offices).</li> </ul>	<p><b>Effects of these decisions</b></p> <ul style="list-style-type: none"> <li>Those in control of the site and land may make different decisions about access and benefit sharing than others who also rely on the land or mine. Those in control of the pit often control benefits of mining.</li> <li>What are the gender dimensions of the environmental impacts of mining? (Is it affecting natural resources in a way that may have differentiated impacts on men's and women's community/domestic roles?)</li> <li>Are there evident social/economic implications of mining that might have a gender dimension? Impacts may be similar to those of prospecting and exploration.</li> <li>Different roles in mining may have different occupational health risks and financial benefits. Do men and women experience different occupational health risks and financial benefits?</li> </ul>

(continued)

Table 2.1 The Gender and ASM Framework (continued)

		Roles and responsibilities	Access and control	Impacts and benefits
Common issues in different dimensions of the ASM value chain				
ASM value chain component	Processing	<p><b>Processing and adding value</b></p> <ul style="list-style-type: none"> <li>Is there a gender dimension to who does most of the processing? Are there reasons why men or women might dominate (skills, strength, culture, superstition, etc.)?</li> <li>What social networks or relationships exist around processing (associations, family groups, etc.)? Are there gender dimensions to this?</li> <li>What is the organization of work (teams, individuals, units), and how does this affect benefit sharing?</li> <li>How does processing relate to individuals' burden of work in the household and community—is processing something done in the home alongside domestic chores? What are the gender dimensions of this?</li> <li>Is there a gender disparity in who has access to resources (funds, tools, water, energy) needed to process minerals?</li> </ul>	<p><b>Decisions about processing</b></p> <ul style="list-style-type: none"> <li>Is there a gender dimension to who owns equipment and resources required for processing?</li> <li>How are processing operations organized (e.g., are they controlled by those who control the pit)? Is there a gender dimension to this?</li> <li>Sociocultural rules, norms, and practices can also affect who works in processing, how different roles are valued, and how benefits of participation are shared (at the site and in the household).</li> </ul>	<p><b>Effects of these decisions</b></p> <ul style="list-style-type: none"> <li>What are the gender dimensions of the environmental and health impacts of processing? (Is it affecting natural resources in a way that may have differentiated impacts on men's and women's community/domestic roles?)</li> <li>Are there evident social/economic implications of processing that might have a gender dimension? Impacts may be similar to those of prospecting and exploration.</li> <li>How are benefits of processing shared within the household? Is there a gender dimension to this?</li> </ul>
	Goods and services	<p><b>Goods and services</b></p> <ul style="list-style-type: none"> <li>Who is providing direct goods and services to mining activities, such as loading and hauling and selling tools and supplies? Who is providing indirect goods and services to mining activities, such as provision of food or drinks? Is there a gender dimension to this—are more men versus women engaged—and is there a possible explanation for this disparity (do men or women have better access to required resources, social networks, or relationships, time, or ability to engage)?</li> </ul>	<p><b>Decisions about goods and services</b></p> <ul style="list-style-type: none"> <li>Is access to the site open? Is there gender disparity in how goods and services are bought from providers?</li> <li>What are the gender dimensions of who controls the proceeds of goods and services provision?</li> </ul>	<p><b>Effects of these decisions</b></p> <ul style="list-style-type: none"> <li>What are the gender dimensions of goods and services provision? Such provision can create social risks and benefits (sexual harassment, socioeconomic status) and community risks and benefits (sex trade, small enterprise development, exposure to new technologies, crime and security, environmental degradation) that may have different impacts on women and men.</li> <li>Different roles in goods and services provision may have different occupational health risks and financial benefits. Do men and women experience differentiated occupational health risks and financial benefits (e.g., risk of sexual violence may be higher for women who sell goods in the mines)?</li> <li>Is goods and services provision affecting resources in a way that may have differentiated impacts on men's and women's community/domestic roles?</li> </ul>

(continued)

## The Gender and ASM Framework

**Table 2.1** The Gender and ASM Framework (continued)

	Roles and responsibilities	Access and control	Impacts and benefits
<b>Common issues in different dimensions of the ASM value chain</b>			
<b>Marketing of minerals</b>	<b>Buying and selling minerals</b> <ul style="list-style-type: none"> <li>Is there a gender division in terms of who primarily buys and sells minerals?</li> <li>What is the organization of work (teams, individuals, units), and how does this affect benefit sharing?</li> </ul>	<b>Decisions about buying and selling</b> <ul style="list-style-type: none"> <li>What factors control who undertakes buying and selling of minerals? Is there an explanation for this (skill in identification and valuation, connections and networks, etc.)?</li> <li>Decisions concerning use of benefits from buying and selling minerals may not be equitably shared in the household.</li> <li>Who has access to resources (funds, assessment tools, links to larger buyers) needed to buy and sell minerals? Is there a gender dimension to this?</li> </ul>	<b>Effects of these decisions</b> <ul style="list-style-type: none"> <li>Sellers and low-level buyers with lower socioeconomic status often have less capacity to negotiate fairer prices. How does this relate to gender?</li> <li>Buying and selling minerals can create social risks and benefits (marital relations, theft, socioeconomic status) and community risks and benefits (sex trade, small enterprise development, crime, and security) that may have different impacts on women and men.</li> </ul>
	<b>Specific questions to examine for each dimension of the ASM value chain</b>		
<b>ASM value chain component</b>	<b>Cross-cutting</b> <ul style="list-style-type: none"> <li>What are the same and differentiated roles of women and men?</li> <li>What skills and knowledge are needed to do different roles? Who has them? Who can get them?</li> <li>How is work organized (e.g., individuals, groups)? Do women and men hold equal decision-making roles?</li> <li>Are opportunities to participate in different roles equal for women and men? Why or why not?</li> <li>How do women's and men's burden of work at the mine, in the household, and in the community affect their capacity to take on different roles and receive different benefits?</li> <li>What are the development implications of this at the individual, household, and community levels?</li> </ul>	<ul style="list-style-type: none"> <li>Are women and men on an equal footing in access to and control of information, training, land, mineral resources, credit and financing, education, health care, and other public services? Why or why not?</li> <li>How do women's and men's different roles and the organization of work affect who has access and control?</li> <li>How are decisions made about what and how things are done and who can do it? Who makes these decisions?</li> <li>Who makes decisions about how benefits are used at the mine site and in the household/community?</li> <li>What strategies are used to gain access and control (use of personal relationships, formation of groups or associations, savings and investment)?</li> <li>What are the development implications of this on the individual, household, and community levels?</li> </ul>	<ul style="list-style-type: none"> <li>Has women's or men's general welfare (food, health care, education, income, etc.) improved or declined due to ASM?</li> <li>What are the social risks and benefits to women and men in terms of marital relations, social relationships, and overall socioeconomic status?</li> <li>What are the health risks and benefits to women and men in terms of personal security, occupational safety, environmental health, access to health services, and control of personal health decisions?</li> <li>Are women and men equally affected? Benefiting? How?</li> <li>How are women or men made more or less vulnerable through their roles and responsibilities, and through different levels of access and control?</li> <li>What strategies are used by women and men to deal with impacts and increase benefits?</li> <li>What are the development implications of this at the individual, household, and community levels?</li> </ul>
	<b>Opportunities and constraints</b> <ul style="list-style-type: none"> <li>What are legal, cultural, social, educational, environmental, political, and other opportunities to redress gender inequalities?</li> <li>What are legal, cultural, social, educational, environmental, political, and other constraints to redress gender inequalities?</li> <li>What can be done to address constraints? What can be done to make the most of opportunities?</li> </ul>		

Source: Authors.

processing, goods and services, and marketing of minerals. For each component/stage, the framework poses questions relating to roles and responsibilities, access and control, and impacts and benefits.

Consider the following in using the framework:

- The scope of information may appear daunting; however, multiple issues can be tackled using the same method. For example, key informant interviews with senior male and female miners can yield information on the history of mining in an area, factors affecting women's and men's participation, gender-differentiated benefits of mining, and the main hazards faced by women and men engaged in different roles.
- Multiple sources of information are often cited for the same issue. This can support validation of data (through triangulation) and can ensure that data gaps are filled.
- The Implementation Roadmap (table 2.2) provides a step-by-step plan by which the data can be collected and analyzed. Specific guidance on the methods to be employed are detailed in the modules contained in section 3.

## 2.4 How to Use the Framework: Implementation Roadmap

The questions posed in the Gender and ASM Framework call for the use of a range of qualitative and quantitative data-gathering tools. Basic guidance on these methods is provided below; note, however, that depending on country- and

community-specific conditions, adaptation of these approaches may be necessary. Answering any question or set of questions, and identifying the gender dimensions of any aspect of ASM, typically requires integrating data from multiple sources and stakeholders; a variety of tools and methodologies may be required.

Implementation of a Rapid Gender and ASM Assessment can take up to approximately 45 days based on a single community assessment, if all steps and methods are included. Although the Implementation Roadmap is tailored to the specific task of generating a **baseline of the gender dimensions of ASM** in a given community or region, the framework and its methodologies can be readily adapted to suit specific priorities and applications. These adaptations may relate to policy reform, which typically requires more focused consultation and broad-based implementation; and design of projects at the grassroots or community level or national-level programs; among other uses.

---

Adapt the Implementation Roadmap to meet the objectives and priorities of your assessment.

---

The roadmap suggests systematic, replicable implementation of a Rapid Gender and ASM Assessment to enable comparisons among communities and countries and to track progress within communities.



## The Gender and ASM Framework

**Table 2.2 Gender and ASM Framework: Implementation Roadmap**

Step	Key questions and actions	Toolkit section	Days needed
<b>Design and planning</b>			
1 Determine gender assessment objectives	<ul style="list-style-type: none"> <li>What is your intended focus? An assessment of gender and ASM in a country or community? Policy reform? Project or program design? Engendering monitoring and evaluation frameworks?</li> </ul>	1.4	3–5
2 Review the Gender and ASM Framework	<ul style="list-style-type: none"> <li>How would answering the critical questions serve your objectives?</li> <li>What aspects of the five types of capital are most important to help meet your objectives?</li> <li>How should the tools be adapted to meet your objectives? Develop a scope of work.</li> </ul>	2	
3 Develop implementation plan, schedule, budget	<ul style="list-style-type: none"> <li>How much time and money are needed to apply the methodology and fulfill your objectives?</li> <li>Who will undertake the assessment?</li> </ul>	Module 1	
<b>Data collection</b>			
4 Understand the national and local contexts	<ul style="list-style-type: none"> <li>Meet with national agencies and organizations</li> <li>Review key policies and legislation</li> <li>Collect and review available secondary data (national and local)</li> </ul>	Module 2	3
5 Conduct key informant interviews	<ul style="list-style-type: none"> <li>Local authorities and local government technical officers (also collect additional secondary data)</li> <li>Formal and informal leaders (including female and male miners and dealers)</li> </ul>	Module 3	3
6 Conduct ASM site visits	<ul style="list-style-type: none"> <li>This may include additional key informant interviews</li> <li>Ensure co-identification of issues on-site</li> <li>Identify and mobilize participants for subsequent focus groups</li> </ul>	Module 4	3
7 Conduct participatory focus groups	<ul style="list-style-type: none"> <li>Can integrate multiple topics in sessions with the same participants</li> <li>May also identify and mobilize selected participants for additional key informant interviews</li> </ul>	Module 5	4
8 Conduct in-depth interviews	<ul style="list-style-type: none"> <li>Conduct interviews with a minimum of 1 female and 1 male miner, license holder, and dealer</li> </ul>	Module 3	2
9 <sup>a</sup> Conduct sample surveys	<ul style="list-style-type: none"> <li>Miners survey: ensure an equal number of men and women miners are surveyed</li> <li>Household survey: random sample household survey</li> </ul>	Module 6	5
<b>Interpretation, validation, and write-up</b>			
10 Preliminary write-up	<ul style="list-style-type: none"> <li>Conduct comprehensive analysis and interpretation</li> <li>Develop a preliminary write-up including key findings, conclusions, recommendations, and any data gaps</li> </ul>	Module 7	10
11 Reporting back	<ul style="list-style-type: none"> <li>Report back to stakeholders, focusing on filling information gaps, validating/correcting findings, and identifying critical recommendations</li> <li>Incorporate findings in the final report</li> </ul>	Module 8 Module 10	6
12 <sup>a</sup> Respond to capacity gaps	<ul style="list-style-type: none"> <li>A training needs assessment can be incorporated into the field activities</li> <li>Conduct training workshops in response to practical and/or strategic gender needs identified during the assessment</li> </ul>	Module 10	5
13 Next steps—using your assessment	<ul style="list-style-type: none"> <li>Ensure all participants receive final reports as well as any other key stakeholders responsible for specific recommendations/action items</li> <li>Follow up with key decision makers to support gender-responsive action</li> </ul>	Module 10	3

Source: Authors.

a. Optional.



# Gender and ASM Tools



# Gender and ASM Tools

**Module 1: Before You Begin**

**Module 2: Collecting Background Information**

**Module 3: Key Informant Interviews**

**Module 4: ASM Site Visits**

**Module 5: Participatory Focus Groups**

**Module 6: Surveys**

**Module 7: Reporting Back and Validation**

**Module 8: Charting a Course of Action—The Way Forward**

**3**



**T**he gender and ASM tools contained in this Toolkit provide step-by-step methods to follow in answering the critical questions outlined in table 2.1. By understanding the different assets women and men have—and their common and differentiated freedoms and capacities to use, make decisions about, and benefit from these assets—we can better understand the ways in which ASM can alleviate or exacerbate poverty for women and men, girls and boys. This knowledge provides the critical starting point in determining how ASM can become a catalyst for equitable poverty reduction and wealth creation through gender-responsive policy and intervention.

Applying the Toolkit in itself represents an opportunity to help redress gender inequities, particularly if structured, participatory methods are used. Whether used independently or integrated into a larger socioeconomic assessment, the tools are designed to do the following:

- Identify the practical and strategic gender needs of women and men directly affected by and engaged in mining through gender analysis of existing key institutions, policies, and programs; baseline information on mining

areas; gender division of labor; and access to, control over, and ownership of resources and their benefits.

- Increase women's as well as men's voices in influencing the policies and programs that affect them through thoughtful design of engagement processes, strengthening links between women and men miners and local and national authorities; and building capacity through action-based research.
- Foster appreciation by mining authorities concerning gender and other key organizations concerning the minerals sector in order to increase commitment and buy-in, support informed participation, and establish essential linkages between these authorities and organizations.
- Identify key recommendations and critical action items for a variety of stakeholders in support of men's and women's increased opportunities to drive their own social and economic development.

The Toolkit's approach recognizes that development will not be sustainable unless women and men both participate and are empowered to drive their own futures.



## Gender and ASM Tools

### Module 1: Before You Begin



3

#### Module 1

#### Description

This module describes important points to think about before the Rapid Gender and ASM Assessment is designed and implemented. It covers the following:

- **Who participates.** Usually the resources (time, money, people) are not available to interview, survey, or engage with every person in a community, mine site, or area of interest. Consequently, researchers choose a smaller, more manageable subset of people—a sample—to participate in the work. Who and how participants are identified and mobilized are important in ensuring the representativeness and gender responsiveness of the information collected.
- **Reliability of findings.** A highly communicative key informant may be open to sharing information but may be expressing his or her own opinions. While this is still an important input, the accuracy of the information provided should be considered. In some cases, people who are very willing to talk to researchers may have their own agendas or interests. Researchers' own personal biases can also affect reliability. When have you collected enough information to have confidence that your findings are reliable and can be generalized?
- **Ethical responsibilities.** A number of ethical guidelines pertain to various project phases (design, implementation, data analysis and interpretation, and results interpretation).

#### Purpose

The purpose of this module is to help users effectively design and plan their Gender and ASM Assessment by understanding

- who and how participants in the research can be identified and selected,
- how meaning can be reliably drawn from the data, and
- ethical issues that might arise while doing the Gender and ASM Assessment.

#### When to use this module

This module should be used at the beginning of any project or program to assess ASM issues on the ground. Because the basic principles in this module should be understood by everyone involved in collecting or analyzing data, it should also be used when new research assistants join an existing project or program and may need to be revisited as the work is conducted.

#### How to use this module

This module provides practical guidance for individuals involved in designing the Gender and ASM Assessment or integrating these tools into a more detailed baseline study.

#### How to identify participants: samples

The most accurate way to understand a group or segment of a population (such as women or men miners, mineral dealers, or farmers) is by interviewing or surveying every single person in that group. Of course, this is far too expensive and

time consuming to be practical. By taking a proper sample of a population, we can feel fairly confident that findings from the assessment can be generalized to the wider group.

### Sampling

Sampling involves identifying a portion of the study population (e.g., a community or mining area) from which data can be collected and interpreted to provide insight about a whole population or a certain segment of a population (e.g., women or men miners). There are many ways to sample a population, but one simple method is described below.

#### Steps

**Step 1:** Review the steps below with the research team and discuss what it means when you design and implement your assessment. How and with whom will you begin? List groups of people that should be sampled. One of the most suitable ways to sample for a Gender and ASM Assessment is by approaching people based on their appropriateness to inform your work—this is called **purposeful sampling** and is more commonly used to identify people for interviews and focus groups.

If you are going to conduct sample surveys, you will need a **random sample** of a statistically significant number of people to make sure your results can be generalized. See appendix B for guidance on how to do this.

**Step 2:** For reasons related to access to a community, it is usually good to start with a formal local leader and/or community development officer. Once you have explained the objectives of your assessment, ask this person to recommend women and men who can provide useful information or are local experts about specific issues.



Providing for child care during focus groups can help women participate. *J. Hinton*

These people may become key informants for interviews and focus groups, and should at least include the following:

- Men and women miners, including those involved in digging, crushing, grinding, and mineral recovery activities (e.g., panning); haulers; pit bosses; and others
- Formal and informal leaders
- Heads of mining or mineral dealer associations (and, in some cases, other livelihood groups, women's associations, and community-based organizations)
- Government officials and key technical officers (e.g., environment or social welfare officers)

If you are focusing on the entire mineral production and trading chain, it is also necessary to include buyers or dealers as well as those involved in adding value (e.g., jewelry fabrication) and other complementary activities.

Keep in mind that key informants often recommend friends, family members, and colleagues, so it may be good to identify additional independent starting points. You may already have a few contacts in the participating community(ies) but, if



## Gender and ASM Tools

### Module 1: Before You Begin

not, an ASM site visit can also be a good independent starting point.

**Step 3:** Hold initial discussions with these persons to begin data collection and gauge if they should be included in in-depth interviews and/or focus groups. Ask them to recommend other people they think would usefully inform the research—this is called **snowball sampling**, and it helps start the process of relationship building in the community.

**Step 4:** Ask key informants to identify important social groups, individuals, networks, and affiliations in the community that should participate in the work.

#### **Practical considerations**

- People may preferentially recommend groups and individuals with whom they have personal relationships (e.g., family members) or political affiliations. While it is logical for interviewees to recommend people they know, there may also be a perception that benefits (financial, social status) come with being selected. This bias may effectively direct the research, potentially resulting in key omissions or biases.
- Particularly if the assessment is done in a short time, identifying independent starting points in snowball sampling may mean you need to go “on the ground” (to the mine site, local shops, etc.).
- People who are most vulnerable, the poorest of the poor, may not be identified by purposive sampling because they may be less vocal, effectively invisible, or perceived to be less knowledgeable by your starting points. Consequently, you may need to find a different entry point to these subsets of the population to ensure they are included.

- The representativeness of a key informant should be considered, but it is often difficult to determine if someone is representative, especially at the beginning. Communities are heterogeneous, and the views of one youth miner, for example, may not reflect those of all youth miners.
- Women are sometimes not identified as miners or representatives of other groups; they may not even self-identify as miners if they are not involved in digging. Women and men may see women’s activities as part of their normal duties of providing household subsistence or supplementing the work of their husbands (e.g., doing manual ore grinding in the home while looking after children).

#### **How to improve the reliability of findings**

A rapid assessment is, by definition, conducted in a short period of time, but efforts can be taken to ensure the reliability and accuracy of your findings.

#### **Steps**

**Step 1:** Review the section below and box 3.1.1 with the research team and discuss the implications of bias when you design and implement your assessment. Make a list of how you will deal with different biases in the community(ies) where you are working. Discuss other factors you might expect to affect the accuracy of the data. How will you deal with them?

**Step 2:** As you are collecting data through discussions, interviews, focus groups, and site visits, note data that come from multiple sources and any discrepancies. Cross-checking or validation should be done delicately, as it may be taken as a sign of mistrust.

### Box 3.1.1 Avoiding biases

Efforts should be made to avoid specific biases so as to develop a better understanding of women's and men's livelihoods in rural poverty:

- **Spatial bias.** We presume that the assessment community will be selected according to certain criteria, ease of travel generally among them. If sites near towns, especially large urban centers, are the focus, special efforts may be needed to reach less accessible and more marginal communities. Even within villages, the poorer people may not be visible on the main streets and in the typical places where people meet. This is “hidden poverty,” and it needs to be uncovered.
- **Project bias.** Avoid selecting participants from places where it is known that something is being done, where money is being spent, staff are stationed, and a project is in hand. If an ASM project is ongoing, be wary of how perceptions of benefits or affiliations may affect design and implementation of the assessment.
- **Person bias.**
  - **Rural elite bias.** Make sure that rural elites—the less poor and more powerful and influential community members, such as village leaders, headmen, traders, religious leaders, teachers, and paraprofessionals—are not your main source of information, although they may be the most fluent and accessible informants.
  - **Male and female bias.** Even though men often think they can legitimately talk about women's issues (and vice versa), remember that a large proportion of women are often among the poorest, inconspicuous and inarticulate. They may be the hardest to learn from. In a meeting or workshop, they may even decline to sit in public or speak, especially in a mixed forum of men and women.
  - **User and adopter bias.** Although those who are using and adopting innovations may be more likely to receive attention, try to reach those who are weak and powerless to join in and find out why they could not do so. Look beyond those who are active and present to those farther removed, including the elderly and inactive.
- **Dry season bias.** The livelihoods of the poor living in areas of marked wet-dry weather vary widely depending on the season. The most difficult time for them is usually the wet season when food is in short supply, prices are high, and work is hard. This season is usually hardest for women, children, and vulnerable groups.
- **Diplomacy and tact bias.** People may not wish to discuss their income or poverty; and some people may be sensitive about strangers coming into their village and speaking to certain groups, such as women, the disabled, or the elderly. Respect the fact that, in the eyes of the community, a research project may seem invasive.
- **Professional bias.** Regardless of whether it is in the social sciences, health, engineering, or geology, our professional background is not value free and can make it hard for us to understand the linkages of deprivation. To the extent possible, keep training, values, and interests from interfering with the task at hand.

Consider that certain types of data are different from others. Trying to get information on the number of women and men miners or the history of mining activities in an area may need to

be verified by gathering data on the topic from multiple sources. Other information—for example, that obtained through in-depth interviews—is important simply because of what it says about

## Gender and ASM Tools

### Module 1: Before You Begin

an individual's life, experiences, perceptions, and views, and does not need to be triangulated but should be presented as such.

**Step 3:** Continue gathering data on an issue or topic until multiple participants provide the same information. This is called **data saturation**. In principle, the more people interviewed (one on one or in focus groups), the more reliable your data are. In reality, interview as many subjects as necessary to find out what you need to know. In the case of a rapid assessment, approach a minimum number of key informants to obtain general knowledge, and then focus on a few intensive case studies to fulfill your study objectives.

#### **Practical considerations**

Noetstaller et al. (2004) note the following:

- In some cases, people who are most eager and willing to talk to researchers may have alternative agendas or interests.
- The generalizability of findings across a population or time frame largely depends on the sample size used and how participants are identified (e.g., whether they are representative or appropriate).
- ASM may be migratory, seasonal, and diverse (e.g., in terms of cultural backgrounds or beliefs); the population may change quickly in a short period of time.
- ASM may be illegal. This can make it difficult to identify representative persons from the groups (particularly if local counterparts restrict access to them or profess that they do not exist). It may also be more difficult to obtain accurate information due to mistrust of researchers, disbelief about confidentiality, fears of being robbed or of having to pay taxes, and an interest in keeping certain aspects of ASM secret.

- Some communities or community members may suffer from “research fatigue.” They may be tired of participating in research or assessments conducted by people who appear to be doing nothing. Questions may also be considered irrelevant.
- Sometimes people may not know the answer to a question but will give one anyway.
- Some topics (e.g., domestic violence, drug abuse, power in the household, local politics) may be very sensitive. Some women or men may feel or be put at risk or stigmatized by addressing these issues in a discussion. Ensuring confidentiality is extremely important if and when these situations arise; handle these topics carefully.

Time, space, funds, and other resources may keep the research from being continuous. Repeated visits to the same ASM community may be needed, but watch out for research fatigue among community members, leading to a deterioration in information and its reliability. Too many repeat visits from outside can be just as bad as too few.

#### **How to fulfill ethical responsibilities**

There are important ethical issues, moral implications, and consequences that can arise during the Gender and ASM Assessment. A number of ethical guidelines exist for various project phases (design, implementation, data analysis, and results interpretation); the most basic requirements are described here.

#### **Steps**

**Step 1:** Review the section below with the research team and discuss what it means when you design and implement your assessment. Write statements of consent and confidentiality

that should be included at the beginning of your interview questionnaires, focus group guides, or sample surveys to remind you to apply them before any data collection begins. Identify measures to ensure that confidentiality can be maintained.

## Module 1

**Step 2:** Before any data collection, introduce the purpose and objectives of the assessment and make sure participants understand that any information they provide will be held in the strictest confidence.

If tape recordings are used (e.g., during interviews), they should be coded alphanumerically (referenced to a separate, confidential list of participants) and kept in a secure place.

**Step 3:** Clearly inform the participants that they are completely free to participate or not. Explicitly ask for their consent to participate. Although written consent (in the participants' language) is ideal, oral consent is sufficient, particularly if someone is not literate.

Remind participants who are involved in multiple interviews or focus groups that they are free to withdraw from participating at any time. They may be asked to restate their consent periodically.

### Practical considerations

- Watch for telltale signs that someone is uncomfortable or ill at ease, particularly if discussing personal or sensitive issues. It may be wise to change the subject or bring an interview to a close.
- If someone walks in as an interview is being conducted (e.g., a male household head when



A woman marble miner takes a break to look after her baby. *J. Hinton*

an in-depth interview is being conducted with a woman), it may be a good idea to change the subject, particularly if a personal or sensitive topic is being discussed.

- If a project or program is planned or ongoing, some women and men may be coerced into participating or believe that they must participate even if they do not want to do so. Be cautious of this sort of pressure and how it may bias results.
- Any reports or presentations of findings should be careful not to identify individual participants by name or in photos without consent. If you

## Gender and ASM Tools

### Module 1: Before You Begin

have any reservations that consent is not fully understood, or that someone can be put at risk even if they give consent (e.g., due to engaging in illegal ASM or mineral dealing), err on the side of caution.

- Be aware of your biases (box 3.1.1) and how these may affect your conduct of the assessment. Your personal views of the rural poor, men or women, or elites may influence how you deal with people during the assessment.

### Module 1



## Gender and ASM Tools

### Module 2: Collecting Background Information



#### Description

Background information, or secondary data, is information or data that already exist before the fieldwork is conducted. Such information may include published or unpublished reports, maps, and statistical databases (e.g., census data) and can give more detailed insight into a community, country, or issue. Sources of background information may include the following:

- National statistics bureaus, other government agencies, donors, or NGOs
- In-depth reports on research conducted in the area of interest (academic theses, reports by regional economic development communities)
- National or regional poverty assessments and development plans
- Mining departments (mining legislation; data on production, concession maps)
- Central banks and commodity buying agents (for production and import/export statistics)
- Regional governments (district, state, or provincial profiles)
- Local governments, health clinics, and schools
- CBOs and NGOs active in the community of interest

#### Purpose

The purpose of this module is to help users understand

- types of background information and where to look for these; and

- how background information should be cited, interpreted, and used in the Gender and ASM Assessment.

#### When to use this module

This module should be used at the beginning of the data collection phase to provide an understanding of the local and national contexts. It is also useful to collect and analyze secondary data during or after fieldwork as it can help fill in data gaps and confirm or refute findings from primary data collection.

An in-depth literature review is most critical during an initial assessment, but even if the objective of the assessment relates to program design or monitoring of an activity, it is useful to get up to date on new secondary data.

#### How to use this module

This module provides practical guidance for individuals involved in collecting and analyzing background information for the Gender and ASM Assessment.

#### Steps

**Step 1:** Review the steps below and box 3.2.1 with the research team and discuss this as you proceed with data collection and report writing. Decide on a referencing system (properly citing the information sources consulted) and when and how to use it. Ensure that all team members involved in writing fully understand the importance of referencing and of not copy and pasting text from other documents.

### Box 3.2.1 Tips for referencing background information

Review these issues with members of the assessment team:

- Many referencing standards exist. Decide on a referencing system for published and unpublished reports, books, websites, and personal communications and when and how to use it. Doing this before the research starts will save a lot of time when finalizing reports.
- It is unacceptable to copy something from a website, book, newspaper, journal, or any other published source. The most blatant example of this is to directly copy something—even if it is only a phrase or two—word for word. This is plagiarism; if you use something word for word, it must be in quotes, referenced, and acknowledged.
- Another reason to use references is to provide the reader with the source of your information. When you provide a fact (especially data and statistics), you must say where you obtained it, unless it is “general knowledge” (which is a subjective assessment). Providing sources allows your reader to verify your statements and makes your reporting credible and verifiable.

**Source:** Based on Van Bramer 1995.

**Step 2:** Review the full list of gender and livelihood data that you want to collect and identify which data are likely to exist already.

**Step 3:** Conduct an Internet search on your country and community. Many international organizations, government agencies, and NGOs publish background information on the Internet; you can also find or be referred to journal articles or academic works (e.g., dissertations).

Good sources of information may include, in addition to national and local government websites, the World Bank, the United Nations Development Programme’s Human Development Reports, the World Health Organization, and other UN websites. The Communities and Small-Scale Mining initiative’s website maintains a country-searchable database that may be a useful source of ASM

information ([www.artisanalmining.org](http://www.artisanalmining.org)). Census data can frequently be found on national statistics bureau websites.

**Step 4:** Visit a library. Many government agencies have resource centers or libraries containing a wealth of information and librarians able to point researchers in the right direction. University libraries may contain detailed reports on your communities of interest, which may be the subject of graduate-level theses.

**Step 5:** Visit mapping departments. Maps collected from the environment, lands, mining, forestry, and water ministries can provide useful information on infrastructure, mining activities, land use, natural resources, and location, population, and size of settlements, among other things, and will help in planning for subsequent fieldwork.



## Gender and ASM Tools

### Module 2:

### Collecting Background Information

**Step 6:** Talk to key resource persons as initial discussions are held at the national and community levels. Technical personnel in central or local government may be extremely helpful in finding published and unpublished reports. Such personnel may include environment, health, social welfare, planning, and other officers. Their local-level counterparts may be extremely useful in helping you understand what has been done in your district or area of interest (in terms of surveys, qualitative research, or other projects). Many key persons in ministries, NGOs, and other organizations may have insight into secondary data sources that you may have had difficulty in accessing through traditional channels.

**Step 7:** Outline and begin drafting your preliminary assessment report. This will help you analyze and understand your secondary data and see what gaps still exist.

#### Practical considerations

- When using the Internet for research, bear in mind that anyone can post information and that some of it may be unreliable. Try to use websites from established, trustworthy organizations.
- Make sure everyone on the research team understands the importance of originality of work. The credibility of your entire assessment may be undermined if parts of the report are plagiarized. Respect the efforts and contributions of authors of existing work, and make sure you reference it properly.
- Secondary data collection should be systematic to make sure you cover all the bases. You can design your own system of collecting and compiling data (in coordination with the other team members), but beware of information overload and of spending too much time on what is supposed to be a rapid assessment.



## Gender and ASM Tools

### Module 3: Key Informant Interviews



3

#### Description

Interviews with key informants, or those with specialized knowledge, can provide considerable insight about a certain issue or topic. Also, it may be easier to discuss certain sensitive or highly complicated issues with individuals as opposed to a group. This module provides practical guidance to conduct a useful and productive interview aimed at obtaining real-world information on aspects of gender roles and livelihoods in ASM, through a professional, structured, and purposeful conversation.

#### Purpose

The purpose of this module is to provide practical guidance in interview techniques in ASM communities so as to

- provide qualitative data, such as descriptions of the lives and world of the interviewees;
- gather specialized knowledge or insight about a certain issue or topic; and
- discuss certain sensitive or highly complicated issues in an individual as opposed to a group setting.

#### When to use this module

This module should be used after collecting background information and relevant data, and during and in the field.

#### Whom to interview

In ASM communities, an elderly woman or man, a woman or man who is head of a household,

or a woman or man entrepreneur can provide glimpses into livelihoods that are difficult to trace through questionnaires. The approach you take in your interview will depend on the individual with whom you are dealing.

Review your research objectives and critical questions. Who can best help you answer these questions and provide a real understanding of women's and men's lives in ASM communities?

#### Different approaches to interviews

There are many different forms of interviews and interview subjects, each of whom may require different approaches. The interaction among interview subjects may lead to spontaneous and emotional statements about the topic being discussed.

#### How to use this module

Review and perform the following.

#### Steps

**Step 1:** Frame your research questions. Proposed interview questions should be prepared in advance and build upon the background data—such as information on the ASM site (type of activities, organization of work), standard demographic data (sex, age, language, ethnic group), and socio-economic data (occupation, income)—collected in module 2.

Do not ask about causal relationships (“What prompted women to take up ASM?”), or establish general trends (“Are there more women in ASM now than before?”). Do try to focus on meaning

Module 3

and experience (“How do community leaders see women’s work in ASM?”). You may focus on perceptions of causality (“How do women in ASM see their health ailments?”). Avoid presuppositions (leading questions, such as “Should women work in ASM?”).

**Step 2:** Choose the type of interview to use. The default option in most cases is the **individual, face-to-face interview**. But in some cases, a particular form of qualitative interviewing may be more appropriate. For example, you may want to follow a **life-story approach** or use **telephone interviews** to reach high-level or time-poor individuals.

**Step 3:** Define your sample, and contact and recruit participants. In quantitative studies, a sample that statistically represents the study population is of central importance (see appendix B). Since interviews are part of qualitative research, interviewers often use opportunistic and ad hoc sampling strategies. The most important criterion is **diversity**—recruit participants to represent a variety of designations, statuses, and positions that may throw light on different aspects of livelihoods and on different experiences. This kind of targeted sampling is known as **purposive**.

The number of participants will depend on many practical factors (such as available time). In general, try to focus on a few selected aspects or dimensions that define the group and then seek diversity. In a study that is aimed mainly at livelihoods, for example, you would need to interview government officials at the local and national levels; NGOs; the village elders; and female and male miners, buyers, and service providers.

Sampling and recruiting participants may take place at different stages in the course of your

study. You may “snowball” your acquaintances in the community and move from one contact to another. In some areas, you may gain access through a gatekeeper (such as the village head), and then use one or more insiders to help in recruiting participants.

**Step 4:** Develop an interview guide. Although flexibility is key in qualitative interviewing, you need to have a roadmap or guide that outlines the main topics to cover. The format of the interview guide will vary according to your needs and preferences.

Questions seeking six types of information should generally be a part of your guide (Patton 1990); box 3.3.1 presents forms in which these questions are phrased:

- **Background/demographic questions.** These are straightforward descriptive questions about personal characteristics such as age, sex, occupation, and ethnicity.
- **Experience/behavior questions.** These focus on specific and overt actions, such as “What do you do when the money lender refuses to give you a loan?”
- **Opinion/value questions.** These ask what participants think about a topic (such as women’s health status) and how these thoughts relate to their livelihoods, such as “What do you think is the best way to deal with women’s poor health in ASM?”
- **Feeling questions.** These focus on participants’ emotional experiences. Phrase your question clearly to differentiate it from the previous category; for example, ask a woman, “What feelings did the harassment evoke in you?” rather than “How did you feel about the harassment?”

## Gender and ASM Tools

### Module 3: Key Informant Interviews

#### Box 3.3.1 Types of interview questions

- **Introducing questions.** “Can you tell me about...?” “Do you remember an occasion when...?” “What happened in the fight between X and Y...?” Such opening questions may produce spontaneous, rich descriptions, with the informants providing what they experience as the main dimensions of the phenomenon being investigated.
- **Follow-up questions.** Answers are extended through a curious, persistent, and critical attitude. This can be done through direct questioning of what has just been said. Also, a nod, murmur of assent, or pause can indicate to the subject to continue with the description.
- **Probing questions.** “Could you say something more about...?” “Can you give a more detailed picture of what happened?” “Do you have further examples of this?” Pursue answers, probing their contents but without stating what dimensions are to be taken into account.
- **Specifying questions.** Follow up with more operationalizing questions, such as “What did you think then?” “What did you actually do when...?” “How did your body react?”
- **Direct questions.** Directly introduce a topic or a dimension: “Have you ever received money for...?” “When you think of digging, do you think it is a man’s job?”
- **Indirect questions.** Apply projective questions such as “How do you believe others manage their money?”
- **Structuring questions.** Indicate when a theme has been exhausted by saying: “Now I would like to introduce another topic...”
- **Silence.** Rather than making the interview a cross-examination by continually firing off questions, allow pauses in conversation. These pauses give the subjects time to associate and reflect.
- **Interpreting questions.** Rephrasing may be a part of such questioning, such as “So you mean that...?” “Is it correct that you...?” “Does that mean...?”

### Module 3

- **Knowledge questions.** These ask for factual information the participant holds, for example, “What do you know about the processing of ore in your community?” and “When did mineral processing methods change?”
- **Sensory questions.** These ask questions about what the participant saw, heard, touched, tasted, or smelled. Such questions are particularly important in studying external interventions that change ASM-based livelihoods.<sup>1</sup>

<sup>1</sup> After King and Horrocks (2010).

#### **Practical considerations**

- In interviews, active listening—the interviewer’s ability to listen intently and engage with what is being said—can be of more use in obtaining information than asking a lot of questions.
- Do not depend solely on your interview guide. To get a deeper and real understanding of gender issues, qualitative methods combined with field observations are essential.
- Poor people tend to give prudent replies to questions and often understate their sources of food and incomes.

## Gender and ASM Tools

### Module 3: Key Informant Interviews

- ASM is often a seasonal activity. The “basket of livelihoods” that different members of communities draw from may vary according to the seasons.
- In transcribing and/or translating tape-recorded interviews, it is helpful if the transcriber/translator has access to the interviewer to ensure meanings and nuances are accurately reflected.



Interviewing miners in Ban Nahi, Pathen Valley, Lao PDR. *K. Lahiri-Dutt*

## Gender and ASM Tools

### Module 4: ASM Site Visits



3

#### Description

In carrying out an assessment of gender issues in ASM, it is useful to collect information on the communities being studied through direct interaction and observation of the people and the operation. This can be accomplished through a structured ASM site visit. The site visit should include the following:

- Observation of the different players at the mining site—miners, mineral buyers, vendors of food and other provisions, other service providers, proportions of men, women, and children etc.
- Open-ended discussion with whomever is encountered on the site; semi-structured sessions guided by a simple checklist can be conducted with groups found on site
- Inspection of the operation, including the following:
  - Location of mining site and its proximity to water courses, dwellings, crop field roads, etc.
  - Type of digging and mining methods
  - Processing methods
  - Equipment used
  - Disposal of waste
  - On-site dwellings
- Observation of impacts on the immediate environment (water bodies, forests, crop fields, etc.)

The site visit can coincide with sampling, interviews, etc. Sufficient visits should be conducted to provide a representative picture of the communities being studied.

In planning the site visit, consider the following:

- How many sites need to be visited for representative coverage?
- Which sites will be selected? What criteria will be used to select them?
- How will permission be sought to gain access?
- What are the practices and prohibitions to be respected when on site?
- How long should each site visit be to obtain the data needed?

#### Purpose

The purpose of this tool is to provide a systematic means of collecting information on the mining activities at the ASM community level. The method of gathering information is by observation of the activities and informal interaction and discussions with different actors found at the location during the visit. The information collected will be supplemented by data collected through other primary data collection methods such as the miners survey and participatory focus group discussions.

#### When to use this module

The module should be used after a scan of the area is carried out. The scan should provide a

Module 4

broad picture of the ASM activities in the area. It should provide information on the nature of activities, different roles of women and men at the site, presence of children and their roles, seasonality of activities if any, whether activities occur only on certain days of the week, whether there is any cultural sensitivity to be taken into account during the ASM site visit, etc.

The procedure outlined here can be used to identify participants for other processes of gathering information—e.g., miners surveys and participatory focus group discussion.

#### How to use this module

Perform the following steps.

**Step 1:** Obtain a list of possible sites to be visited and identify a liaison appropriate to the area. Tell the liaison what the researcher needs to see and the people he or she needs to interview.

**Step 2:** Evaluate the list of possible sites according to the criteria for selection of suitable sites. This evaluation can be done through key informants and other stakeholders who have contact with or knowledge of the ASM communities. Suitable ASM sites should satisfy the following criteria:

- Appropriate current ASM activity
- Accessibility in terms of physical access to the location
- Willingness of ASM community to be included in the study
- Utility of the site in informing the assessment

**Step 3:** Once you have selected a site or sites, identify a local facilitator so as to address issues of language and cultural sensitivities. Schedule visits;



Understanding the organization of work, gender division of labor, methods used, and benefits and risks associated with different roles is an important component of profiling ASM activities. *J. Hinton*

where possible, make requests in advance and notify the communities of possible dates of visits.

**Step 4:** Introduce yourself and your team as soon as you arrive at the site. Explain the purpose of the visit and confirm permission to be at the site as well as for what will be done with the information collected.

- Researchers should describe their requirements in terms of what they would like to see (sites and documents where available), who they want to talk with, and how long the visit will take. Interviewees should be as gender representative as possible, and cover as many stakeholder types as possible.
- Ensure that participants can access at least a summary version of the resulting report and that they know from whom they can obtain it (e.g., lead miner, local development officer).

**Step 5:** Proceed with the site visit, using table 3.4.1 as a guide for collecting information.



## Gender and ASM Tools

### Module 4: ASM Site Visits

**Table 3.4.1 ASM site visit guide**

Source of information	Information collected (gendered)
<b>Areas to visit</b>	
Active and inactive mining and processing areas (ore extraction)	<ul style="list-style-type: none"> <li>▪ Different roles and functions observed on site (diggers, panners, pit bosses, transporters, etc.) and who is performing these (men, women, boys, girls)</li> <li>▪ Scale of activities—number of workers and type of work men/women/boys/girls are doing (include all mining and nonmining activities, including support roles such as hauling ore and water, food provision, etc.)</li> <li>▪ Type and depth of excavation</li> <li>▪ Location of mining area in relation to other land uses that may be related to other livelihoods of women, as well as proximity to the home (where women have household and caregiving duties)</li> <li>▪ Step-by-step description of mining, hauling, and processing methods and equipment used; who is doing the work; how revenues are shared or different roles are paid (e.g., based on production versus paid labor versus unpaid labor)</li> <li>▪ Efficiencies in extraction—recoveries (%) and production, use of water and energy (and who is providing these resources) and ergonomics for men and women in their common and different roles</li> <li>▪ Health and safety issues and other working conditions of women and men and girls and boys in their common and different roles</li> </ul>
Source of water	<ul style="list-style-type: none"> <li>▪ Proximity of water source to workings and who fetches it and how for mining and processing use (men and/or women)</li> <li>▪ Adequacy of supply for mining and processing requirements</li> <li>▪ Impacts of water extraction in competition with other uses (e.g., domestic use) and how this affects women who might be the principal collectors of water</li> <li>▪ Environmental impacts (gendered) of mining and mineral processing on water source</li> </ul>
Source of energy	<ul style="list-style-type: none"> <li>▪ Proximity of energy source to workings and who fetches it and how for mining and processing use (men and/or women)</li> <li>▪ Adequacy of supply for mining and processing requirements</li> <li>▪ Impacts of fuel extraction in competition with other uses (e.g., domestic use) and how this affects women who might be the principal collectors of fuel (wood, etc.)</li> <li>▪ Environmental impacts (gendered) of mining and mineral processing on fuel source (e.g., deforestation if wood fuel; air pollution if diesel)</li> </ul>
Waste disposal	<ul style="list-style-type: none"> <li>▪ Types of wastes generated and the location of waste disposal in relation to remote communities and other land uses</li> <li>▪ Environmental impacts of waste disposal, particularly on the livelihoods of both men and women (in mining and nonmining livelihoods)</li> <li>▪ Health and safety impacts on men and women at the site and in affected areas (e.g., downstream)</li> </ul>
On-site accommodation	<ul style="list-style-type: none"> <li>▪ Location of buildings in relation to other land uses, waste disposal, and impact on remote communities</li> <li>▪ Nature of accommodation (thatch roof huts, wooden structures, etc.)</li> <li>▪ Water and sanitation conditions</li> </ul>

(continued)

**Table 3.4.1 ASM site visit guide** (continued)

Source of information	Information collected (gendered)
<b>People to talk to at the site</b>	
License holder	<ul style="list-style-type: none"> <li>▪ Validity of license and conditions</li> <li>▪ Impression of mining operation; facilitate viewing of relevant documents</li> <li>▪ Experience in mining and the ASM sector from a gender perspective</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Miners, processors, haulers and transporters	<ul style="list-style-type: none"> <li>▪ Experience in mining and role in the operation</li> <li>▪ Methods, production levels, recoveries, and income from different roles and jobs</li> <li>▪ Sources of financing for tools, equipment, and activities (e.g., savings, microfinance, sponsors)</li> <li>▪ Personal impression of the impact of mining on their lives as men and women</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Security	<ul style="list-style-type: none"> <li>▪ Experience in mining and personal impression of the operation as men and women</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Buyers	<ul style="list-style-type: none"> <li>▪ Experience as buyer of ASM products</li> <li>▪ Description of the nature of trading transactions and the gender perspective</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Any children on-site	<ul style="list-style-type: none"> <li>▪ Role and rationale (what they do and why)</li> <li>▪ Impression of the impact of mining on their lives as girls and boys</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Remote community	<ul style="list-style-type: none"> <li>▪ Impression of the impacts of the mining activities on the livelihoods of men and women</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
Service providers (suppliers of equipment, food and other provisions, fuel, etc.)	<ul style="list-style-type: none"> <li>▪ Impression of the impacts of mining on their livelihood from a gender perspective</li> <li>▪ Demographic information (age, sex, ethnic group, etc.)</li> </ul>
<b>Documents to be viewed (if available, data should be obtained from participants also)</b>	
Production records	<ul style="list-style-type: none"> <li>▪ Level of production and productivity of the deposit (e.g., grade, recoveries)</li> <li>▪ Minerals being produced</li> </ul>
Licenses	<ul style="list-style-type: none"> <li>▪ Type, validity, and conditions of license</li> </ul>
Employee records	<ul style="list-style-type: none"> <li>▪ Number of workers and demographic information about the workers</li> <li>▪ Presence or absence of women and children in the workforce</li> <li>▪ Gender roles in job allocation</li> </ul>
Wage payments	<ul style="list-style-type: none"> <li>▪ Equity of wages between men and women</li> <li>▪ Level of wages paid</li> </ul>

Source: Authors.

## Gender and ASM Tools

### Module 5: Participatory Focus Groups



#### Description

A focus group is a facilitated meeting that collects qualitative data about an issue or topic. Sometimes called “discussion groups” or “group interviews,” they usually last one to three hours and are typically undertaken with specific separate groups (male youth, female youth, male miners, female miners, male farmers, female farmers, etc.).

**Participatory methods** are often core components of community-based research. There are several models of participatory methods with varying degrees of participation, each of which is believed to be equally valid. At one end of the participatory approach spectrum, community participants are directly involved in all phases of study design, data collection, and analysis. At the other end of the spectrum, community participants contribute as respondents during interviews, focus groups, or surveys. In general, these approaches all involve some type of collaboration between the researchers and those being studied; knowledge sharing, or mutual education of the researchers and the researched; and the objective of generating local knowledge to improve conditions or practices.

Participatory methods are incorporated directly within interviews or focus groups, or can be used

---

Participatory methods recognize that the process of undertaking community-based assessments is as important as the outcome.

---

separately for different purposes (e.g., community visioning). Undertaking participatory methods with women and men separately and/or together can aid in the understanding of gender issues in the community of interest.

Integrating participatory methods into focus groups can help

- ensure that the Gender and ASM Assessment is “people-centered”;
- increase the voice of community members in identifying relevant issues;
- support policies, projects, and programs that better respond to individual women and men and to vulnerable groups within the community;
- encourage skills and knowledge building of both the gender assessment researchers and the participating community, including peer-to-peer learning;
- support culturally appropriate methods; and
- strengthen relationships among stakeholders playing different roles in the community.

A number of tools exist to help understand the gender dimension of ASM and within ASM communities. Based on the information needs of the Rapid Gender and ASM Assessment, four main tools are outlined here. These tools can be used independently or—as presented here—as part of workshop lasting four half-days or two full days.

- **Human rights and mining rights.** Introducing concepts of gender can be difficult in many



Understanding cultural norms and practices can provide useful insight. A traditional marriage ceremony (*kwanjula*) in Uganda. *J. Hinton*

## Module 5

communities. Approaching gender from the perspective of human rights and its links to development at the family and community levels can be an easier way to (1) understand local perceptions of rights and how they are realized, and (2) introduce the concept of gender and gender equality.

- **Daily activity clock.** This is a useful tool for identifying the gender division of labor in ASM communities. A “gender division of labor” is the way society assigns tasks, responsibilities, and activities to women and men according to their sex; these are also called gender roles. Gender roles are categorized into three groups:

- **Productive roles:** Work that is mainly in the public sphere for trade or money

(commercial work); examples include breaking rock to sell stones, panning and selling gold, working for pay in a small shop, or selling tomatoes at a market

- **Reproductive roles:** Work that is mainly in the private sphere, associated with maintaining and sustaining a family or household; examples include preparing food, fetching water or wood for home use, digging to feed the family, or looking after children or the elderly; also called “domestic work”
- **Community roles:** Work for the collective good of the community that is usually unpaid and in the public sphere; often, work related to power and prestige is

## Gender and ASM Tools

### Module 5: Participatory Focus Groups

assigned to men (running community meetings, roles at burials or weddings) and low-status work to women (cooking for events)

- **Seasonal calendar.** Similar to a daily activity clock, a seasonal calendar is useful for understanding how gender roles change cyclically throughout the year. For example, the effects of annual dry seasons on the time it takes to fetch water, engagement in mining, and increased reliance on different livelihoods can provide insight into seasonal vulnerability (e.g., food insecurity) and the coping strategies of women and men during these times.
- **Access, control, and ownership regarding resources and their benefits.** Resources are any of the assets, materials, abilities, etc., that can be drawn on when needed. Resources can be natural (minerals, forests, water), human (labor, skills), physical (houses, roads, bicycles, radios), social (extended families and friends), or financial (savings).

Resources are used to create benefits that in turn can be used to improve quality of life, deal with shocks or stresses (such as drought or illness of family members), and, ideally, accumulate other useful assets. Someone may have access to and control of a resource (such as chickens) but may not have control or decision-making power over its benefits (e.g., money from selling eggs).

#### Purpose

This module provides guidance on how to conduct participatory focus groups through four half-day or two full-day sessions on human rights and ASM; gender division of labor; seasonal calendars; and access, control, and ownership regarding resources and their benefits. The sessions end with

a discussion of stakeholder recommendations. The purpose of this module is as follows:

- Understand how much time (and why) women and men each spend on money-making work compared to domestic, unpaid work and what this might mean in terms of gender (in)equality in ASM communities.
- Understand how to plan activities to fit into the roles, responsibilities, and schedules of men and women. For example, what are the best times of day to have a meeting or workshop? What can you do to encourage participation of women as well as men?
- Learn to design programs and policies to respond to the different needs of women and men based on their roles. For example, if women are mainly grinding rock with a grinding stone, they may need targeted training about the hazards of dust and ways to improve mineral recoveries during processing; men responsible for digging pits may need targeted training about pit wall stability and how to conduct exploration. Responding to these practical needs should not limit choice and autonomy in different roles (e.g., women may want to learn about exploration, and men may want to learn about optimum grinding sizes). Ask, don't assume, what people's needs are.
- Identify where and why inequalities exist—for example, related to rest and relaxation time, time spent making money, and factors contributing to participation roles that give social status (such as time spent with local formal and informal leaders).
- Understand how gender roles change cyclically throughout the year. For example, you may become aware of how women and men transition into different activities at different

times of the year. These transitions may relate to reduced or increased access to minerals (in association with water availability), the need to temporarily leave mining to perform roles critical to household food security (such as planting and harvesting), or other activities that may be unknown to the researcher.

- Identify gender-differentiated opportunities and constraints in terms of diversifying livelihoods and identifying alternative or complementary activities. This identification is accomplished by understanding the measures women and men use to mitigate vulnerabilities at different times of the year. It also takes into account factors affecting access to and control of different activities and prospects for improving quality of life by accessing a different range of livelihoods.
- Identify key resources and assets that can be used to help women and men escape poverty. Some assets may be more or less significant to women and men than otherwise thought; thus, this helps clarify the role and uses of different assets and their importance in the participating community.
- Understand the capacity of women or men to access and control resources and benefit from them. Resources are used to create benefits. That does not mean that both women and men receive or have control over these benefits. For example, women may have access to, control over, and even ownership of chickens, but the men may be the ones to determine when these are eaten or sold (control of converting the resource into money) and may keep the money from the sale of eggs (ownership of this benefit).
- Understand the common and different opportunities and constraints faced by women and

men particularly as they relate to using assets and resources to escape poverty or increase or decrease vulnerability to circumstances, shocks, or stresses. Specific recommendations can be developed from this, building on opportunities and measures to mitigate constraints.

#### **When to use this module**

This module should be used during field activities and once you have some understanding of your community of interest through initial discussions, ASM site visits, and before or after in-depth interviews.

In your work plan for the assessment, include time for mobilizing appropriate participants (including vulnerable persons), organize an easy-to-access venue, and make arrangements for food and drinks and on-site child care for infants and small children. Although each of the participatory focus groups can be run independently, they are designed here to be run in sequence with the same group(s) to build on the knowledge and findings from previous sessions.

#### **How to use this module**

Supplies and materials needed to run the focus groups described below include flipcharts and flipchart markers or chalk and a chalkboard, and a dedicated note taker to ensure that all input from participants is captured in detail. The note taker (and facilitator, where possible) should be fluent in the local language and prepared to capture key statements, remarks, and word-for-word quotations from participants.

#### **Tool 1: Human rights and mining rights**

**Step 1:** Welcome participants to the focus group, and begin with introductions and a brief

## Gender and ASM Tools

### Module 5: Participatory Focus Groups

discussion of the objectives. You can also post an agenda on the wall and review it. Discuss any logistical issues (concerns with time, location, lunch, etc.) and ensure that you have the consent of participants before you begin.

**Step 2:** Introduce the main objective of this session: to understand the importance of human rights, mining rights, and land rights to the development of individuals, families, and communities.

**Step 3:** Begin by asking, “What is a human right?” Ask participants to list examples and write them on a flipchart. Ensure that the following are included: the right to life, liberty, and security; the right to education; freedom from torture and cruel, inhuman, or degrading treatment; and the right to form trade unions and associations.

**Step 4:** Clarify that human rights are internationally guaranteed by the Universal Declaration of Human Rights and a number of conventions (list the conventions to which the host country is a signatory).

**Step 5:** Ask participants, “Who is entitled to have human rights?” Ensure that women, men, girls, boys, youth, adults, and the elderly are specifically listed, rather than just “human beings.”

**Step 6:** State that “Human rights are the birthright of all human beings,” and ask whether women and men, boys and girls all equally hold their human rights. Highlight and discuss issues such as freedom from cruel or degrading treatment, right to education, and the right to form associations, among others.

**Step 7:** Ask participants, “What are the effects of a lack of human rights on individual, family,

and community well-being?” Discuss and solicit examples of individual, family, and community well-being. Emphasize how gender differences in human rights access affect development outcomes.

**Step 8:** If the host country has amenable legal provisions that support equitable rights, mention and discuss them (e.g., related to equitable marriage rights, rights to equal pay for equal work, free access to information of the state).

**Step 9:** Discuss who is responsible for protecting human rights, and list all responsible persons/groups. Ensure that individual women and men are also listed as being responsible for protecting human rights. Introduce the concept of **rights holders** and **duty bearers**.

**Step 10:** Discuss the reasons women and men are not equally receiving their human rights. This will invariably turn into a discussion on culture. Ask participants to list (while writing on a flipchart) all of the changes in cultural practices in the past 20–30 years concerning boys and girls, and women and men. This will likely relate to things such as food (e.g., women traditionally not allowed to eat chicken), education (e.g., girls being sent to school more than in the past), and marriage, among others.

**Step 11:** Discuss why and when culture changes.

**Step 12:** Write “gender” and “sex” on a flipchart and introduce the concepts. Write down participant examples of gender and sex characteristics, and clarify as needed.

**Step 13:** Refer back to gender inequalities in human rights and their links to development as

highlighted by the participants earlier in the session.

**Step 14:** Introduce mining rights to the group by briefing them on the prevailing laws and licensing system for ASM. This is an opportunity to build capacity on what is likely not known by local miners (including procedures for becoming licensed).

**Step 15:** Ask, “Who holds the mining rights for the area where you are working?” Likely, most ASM operations will be informal and unlicensed. Have participants explain how rights of access are informally obtained to ASM areas (e.g., through landowners, perhaps even village government). Ask, “Who is responsible for gaining access to the areas? Who makes decisions about the site once mining begins?”

**Step 16:** Discuss the concept of rights holders and duty bearers in the context of ASM (whether it is formal or informal). Have participants list (as you write down and clarify) the rights of rights holders and the obligations of duty bearers.

**Step 17:** Discuss who the rights holders are (and whether women and men equally share these rights) and who the duty bearers are (and whether women and men equally share obligations). Ask what the implications of these differences are on (1) how decisions are made concerning where to mine and who is taking on what roles, and (2) who is benefiting from mining (and making decisions about how benefits are shared).

**Step 18:** Write “individual,” “family,” and “community” on a flipchart. Ask participants to explain how gender differences in decision making at the mine site and distribution and control of benefits from

ASM may affect development at the individual, family, and community levels; write examples on the flipchart as they are provided.

**Step 19:** To summarize the session, ask a different participant to briefly summarize each main issue discussed: human rights and who has them, formal and informal mining rights, gender versus sex, and how gender inequities in access and control of human rights and mining rights are linked to development.

**Step 20:** On a separate wall of the building, have flipcharts prepared with headings of “individual,” “household,” “community,” “local government,” and “central government.” Based on the participant findings and conclusions from the session, solicit recommendations from participants related to gender, rights, and development.

**Step 21:** If there is time, ask each participant to share one thing they will do differently in the future or the most interesting thing they learned. Ask for any additional comments, conclusions, or final remarks.

**Step 22:** If necessary, make a final, brief concluding remark. Thank everyone for their effort and contribution. Close the session.

#### **Tool 2: Daily activity clocks**

**Step 1:** Welcome participants back to the focus group and briefly discuss the objectives of the session. Revisit the agenda on the wall and review it. Discuss any logistical issues (concerns with time, location, lunch, etc.) and ensure that you have the consent of participants before you begin.

**Step 2:** Beforehand, post a series of flipcharts on one wall, each with a different heading: “individual



## Gender and ASM Tools

### Module 5: Participatory Focus Groups

women and men," "ASM associations," "local government (specific offices or agencies)," "central government (specific ministries or departments)," "others." Leave a few blank. Explain that over the course of the workshop, you will collect participants' key recommendations for each and discuss them at the workshop's end.

**Step 3:** Break your participants into small groups of five to nine people. Have participants work in separate groups of women and men. Post a large flipchart (based on table 3.5.1 with a few examples) and discuss how groups can fill in their own daily activity clocks, together developing a few examples.

**Step 4:** Introduce definitions of "productive work," "reproductive work," and "community work" and ask for examples of each. Do not introduce the discussion questions yet.

**Step 5:** With large flipcharts, on a chalkboard, or in notebooks, have each group together develop their average daily schedule with columns listing time of day and activity. For each time period, participants should very specifically list the activities they undertake.

**Step 6:** Give each group about 20 minutes to complete the exercise, walking from group to group to clarify instructions or answer any questions as needed.

**Step 7:** After they are through, each group should report back results to the whole group. Post their flipcharts on the wall to compare them later.

**Step 8:** Discuss each of the following together:

- What are the main similarities and differences between women's and men's clocks?
- On average, how many hours in a day do women and men spend on each productive, reproductive, and community role? (Decide together and mark next to each role.)
- How do the differences in time spent in different roles affect women's and men's well-being and their capacity to improve their individual well-being? Try to elicit specific examples. How do these differences affect family/household well-being? How do they affect community well-being? How does the extent that women and men participate in mining affect their individual and family benefits?
- How do different resources of women and men play into determining how long it takes to do things? For example, without transport (e.g., bicycles), women or men may spend long hours walking to sell goods they have produced. Refer to the previous session on rights and discuss if, and in what way, women's or men's rights are being violated.
- What important conclusions can be drawn from this activity?
- What specific recommendations do you have for different actors? Write these on the flipcharts posted on a wall at the side (with headings as in the previous session on the growing "wall of recommendations").

**Step 9:** Ask if anyone has anything else to add. Thank everyone for their participation and close the activity.

#### **Adapting daily activity clocks to assess child labor and gender**

Child labor is a far too common issue at many ASM sites and one that is often tied directly to gender inequalities. In ASM areas where child labor is

**Table 3.5.1** Sample daily activity clocks

Men		Women	
Time	Activity	Time	Activity
		5:00 a.m.	▪ Wake up and pray, fetch wood and make fire
6:00 a.m.	▪ Wake up and pray, greet family, wash face	6:00 a.m.	▪ Fetch water, prepare breakfast, sweep the compound, tend to chickens
7:00 a.m.	▪ Check animals, check health of family, take breakfast, send children to school, bathe	7:00 a.m.	▪ Take breakfast, wash dishes, prepare children for school, send children to school
8:00 a.m.	▪ Go to work (digging at mine)	8:00 a.m.	▪ Go to work (panning and hauling water at mine)
9:00 a.m.			
10:00 a.m.			
11:00 a.m.			
12:00 p.m.	▪ Take lunch and wash plates, rest	12:00 p.m.	▪ Give lunch to children and father, take lunch, clean up after lunch
1:00 p.m.	▪ Go back to work (digging at mine)	1:00 p.m.	▪ Go back to work (digging at mine)
2:00 p.m.			
3:00 p.m.			
4:00 p.m.	▪ Return home, take animals for water, go for <i>malwa</i> (local drink) and relaxation	4:00 p.m.	
5:00 p.m.	▪ Bring animals back home	5:00 p.m.	▪ Return home, bathe self and children
6:00 p.m.	▪ Take supper	6:00 p.m.	▪ Prepare supper, take supper
7:00 p.m.	▪ Visit <i>sinalia</i> (available single woman in the area)	7:00 p.m.	▪ Clean up after supper, braid hair
8:00 p.m.		8:00 p.m.	▪ Pray and go to bed
9:00 p.m.			
10:00 p.m.	▪ Bathe		
11:00 p.m.	▪ Sleep		
5 hours	▪ <b>Reproductive role:</b> prayers, greetings, checking the home, washing the face, taking breakfast, grazing animals, preparing for lunch, washing plates, getting rest	8 hours	▪ <b>Reproductive role:</b> fetching wood and water, cooking, breast feeding, preparing for and welcoming visitors, mourning, giving birth, looking after children
7 hours	▪ <b>Productive role:</b> going to work, digging using ox plow, building for people (construction)	7 hours	▪ <b>Productive role:</b> going to work at the mine, selling eggs from chickens, braiding hair, brewing <i>malwa</i> (local alcohol)
1 hour	▪ <b>Community role:</b> visiting relatives, talking politics, helping or going for burials, cleaning roads and wells	1 hour	▪ <b>Community role:</b> cleaning the church, cooking for weddings, going for burials, cleaning roads and wells

Source: Authors.

an issue, conduct the session described above with a separate group of young men and young women. If this is not possible, you can do this with

the previous group of participants (representing a cross-section of ages) but focusing on the daily activity clocks of boys and girls.

## Gender and ASM Tools

### Module 5: Participatory Focus Groups

The main questions and topics to address in the discussion include the following:

- Definitions of child labor versus child work
- Differences and similarities between boys' and girls' clocks
- Hazardous invisible work in which both boys and girls are involved—is it different for boys and girls? What might this mean for their development?
- Resources available to male and female workers to help them perform these roles
- How child labor interferes with schooling and what this might mean for their development and rights—are children's rights being violated? If so, how?

If conducted with the same group as in the previous session, discuss how gender inequalities of young and adult women are linked with child labor.

#### Tool 3: Seasonal calendars

**Step 1:** Welcome participants.

**Step 2:** Introduce the activity by presenting an empty seasonal calendar with each of the months marked clearly from January to December (figure 3.5.1). Agree on the months of rainy and dry seasons and mark these on your sample calendar. Tell the participants that you are now going to explore how activities might change throughout the year and how people may perform a range of activities.

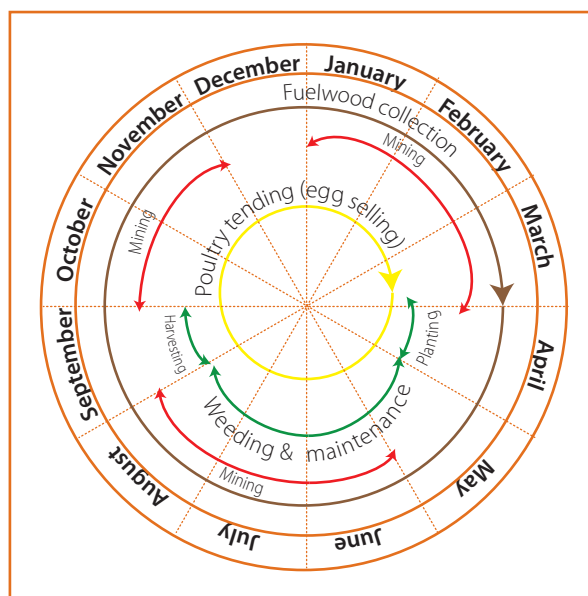
**Step 3:** Divide the participants into small groups of five to nine people. Have participants work in separate groups of women and men.



Understanding the links between child labor and gender inequalities in ASM helps inform context-appropriate pro-poor, rights-focused strategies. *J. Hinton*

**Step 4:** With large flipcharts, on a chalkboard, or in notebooks, have each group together develop their average seasonal calendar by month. Ask them to draw a large circle and break it into 12 sections, one for each month. For each time period, participants should discuss and show the activities they undertake during different months of the year.

**Figure 3.5.1** Sample seasonal calendar



Source: Authors.

**Step 5:** Give each group about 20 minutes to complete the exercise, walking from group to group to clarify instructions or answer any questions as needed.

**Step 6:** After they are through, each group should report the results to the whole group. Tape their flipcharts on the wall to compare them during the discussion.

**Step 7:** Discuss each of the following together:

- What are the main similarities and differences between women's and men's calendars? How are women and men differently responding to seasonal changes?
- What are the impacts on women and men in undertaking different activities? How does this affect (positively or negatively) their different chances of dealing with and addressing poverty? Discuss the concept of vulnerability and who is most vulnerable at different times of the year and why.
- What conclusions can be drawn about the interconnection between different livelihoods? Are there environmental issues associated with different livelihoods that can affect different activities in positive or negative ways? What does this mean in terms of environmental protection?
- What important conclusions can be drawn from this activity?
- What specific recommendations do you have for different actors? Write these on the flipcharts posted on a wall at the side.

**Step 8:** Ask participants to summarize any key conclusions and findings from the day, referring to the agenda. You may need to make additions to ensure that key points are revisited.

**Step 9:** Ask if there are any questions about the exercise. Thank everyone for their participation and close the session.

#### ***Adapting seasonal calendars to assess child labor and gender***

In ASM areas where child labor is an issue, conduct the session described above with a separate group of young men and young women. If this is not possible, you can do this with the previous group of participants (representing a cross-section of ages) but focusing on the seasonal calendars of boys and girls.

The main questions and topics to address in the discussion include the following:

- How boys' and girls' involvement in ASM changes throughout the year
- Differences and similarities between boys' and girls' calendars, and what this might mean for their development
- How child labor interferes with schooling, and what this might mean for their development and rights

If conducted with the same group as in the previous session, discuss how the gender inequalities of young and adult women in seasonal calendars are linked with child labor.

#### **Tool 4: Access, control, and ownership mapping**

**Step 1:** Welcome participants back. Ask them to list some of the key conclusions or insights that they found most interesting or useful from the previous tools.

**Step 2:** Introduce the activity, starting with these three concepts:

## Gender and ASM Tools

### Module 5: Participatory Focus Groups

- **Access**—who usually uses or is free to work with the resource
- **Control**—who usually makes decisions regarding how and when the resource is used
- **Ownership**—who the resource belongs to; who you talk to if you want to buy the resource

Write the concepts and their simple definitions clearly on a flipchart and post them at the front of the room throughout the exercise.

**Step 3:** Prompt a discussion on how resources are used to create benefits and how benefits may help women and men deal with difficult circumstances or events (e.g., drought, illness, injury) or escape poverty (e.g., accumulate savings and other assets such as livestock, invest in entrepreneurial ventures). Ask for and list examples on a flipchart.

**Step 4:** Separate women and men into small groups and ask each group to separately perform the following:

- Make a table with four columns (see table 3.5.2 for an example).
- In the first column, list all of the resources that they (as women or men) can draw on.
- In the second, third, and fourth columns, determine who has access to, control over, and/or ownership of each resource. Put an “M” to indicate men and a “W” to indicate women.
- Each group should then list the different benefits that come from each resource.
- Determine who has access, control, and ownership regarding each of these benefits (as above)

**Step 5:** Give each group about 20 minutes to complete the exercise, walking from group to

group to clarify instructions or answer any questions as needed.

**Step 6:** After they are through, each group should report the results to the whole group. Tape their flipcharts on the wall to compare them during the discussion.

**Step 7:** Discuss each of the following together:

- Who mainly uses different resources and benefits? Who has control and ownership of different assets?
- What gender inequalities exist? What does this mean in terms of their human rights? How about mining rights, decisions about mining, and control over benefits of mining?
- Do the inequalities identified affect development at the individual, household, and community levels? How?
- What key conclusions can be drawn from the exercise?
- What recommendations can they make based on their findings and conclusions? Write these on the flipcharts posted on a wall at the side.

**Step 8:** Ask if anyone has anything else to add. Thank everyone for their participation and close the activity.

#### **Synthesizing participant conclusions and recommendations**

This activity is conducted when all four tools have been used together.

**Step 1:** Welcome participants back.

**Step 2:** Review each of the tools (human rights; gender division of labor; seasonal calendars;

**Table 3.5.2** Sample summary of access, control, and ownership regarding resources and their benefits

Resource/benefit	Access	Control	Ownership
<b>Resource</b>			
Hoe	Y (both M and W)	N	Y (both M and W)
Panga	N	N	N
Axe	Y (both M and W)	N	N
Saucepan	Y	Y	Y
Plates	Y	Y	Y (both M and W)
Bicycle	Y (both M and W)	N	N
Animals	N	N	N
Iron box	Y (both M and W)	Y (both M and W)	N
Road	Y (both M and W)	N	Y (both M and W)
House	Y (both M and W)	Y (both M and W)	Y (both M and W)
Kitchen	Y	Y	Y
Food	Y (both M and W)	Y (both M and W)	Y (both M and W)
Chairs	Y (both M and W)	N	N
Clothes	Y (both M and W)	Y (both M and W)	Y (both M and W)
Church	Y (both M and W)	Y (both M and W)	Y (both M and W)
<b>Benefit</b>			
Land	Y (both M and W)	N	N
Education	Y (both M and W)	Y (both M and W)	N
Income	Y (both M and W)	N	N
Trees	Y (both M and W)	N	N
Food	Y (both M and W)	Y	N
Bicycle	Y (both M and W)	N	N
Children	Y (both M and W)	Y (both M and W)	N
Bed	Y (both M and W)	Y (both M and W)	N
Granary	Y (both M and W)	Y (both M and W)	N

Source: Authors.

access, control, and ownership), asking different participants to summarize the major findings and conclusions from each (filling in gaps as necessary) with an emphasis on key gender issues that arose. For each issue, ask and discuss what the findings mean in terms of inequalities and rights and their possible impacts on development at the household and community levels. Ensure that the issue of child labor and child rights is discussed as well.

**Step 3:** As each issue and development outcome arises, ask what additional recommendations participants can make and add them to the growing list on the wall of recommendations. Ensure that each specifies who should do what (e.g., local health officer instead of local government; and ministry of mines instead of central government).

**Step 4:** Summarize the key points from all four tools. If there is time, ask each participant to share

## Gender and ASM Tools

### Module 5: Participatory Focus Groups

one thing he or she will do differently in the future based on what has been learned. Ask for any additional comments, conclusions, or final remarks.

**Step 5:** Thank everyone for their effort and contribution. Close the event.

#### Practical considerations for all tools

- Focus groups are led by a facilitator who introduces the topic, asks specific questions, and tries to maintain focus on the discussion objectives. A good facilitator will encourage agreement on the rules of engagement during the focus group, promote trust, and ensure a positive environment and effective participation. Cultural sensitivity, impartiality, confidentiality, and a capacity to address power imbalances are critical facilitation principles.
- A good facilitator will understand that some people may be uncomfortable speaking in this setting. He or she will try to encourage participation of all group members (in some cases, the use of smaller break-out groups may help) and will try to ensure that discussion is not dominated by a few vocal participants. Some strategies for dealing with difficult situations are presented in box 3.5.1.
- Ensure that responses are captured on flip-charts and that the responses of participants are explicitly and accurately transcribed by your local research assistant. Discuss with him or her beforehand the importance of capturing not just key points, but quotations and statements verbatim.
- Because women and men can often learn from and appreciate each other's constraints and opportunities through shared learning while using these methods, it is proposed that these

#### Box 3.5.1 Dealing with difficult situations

Many challenges can be encountered when facilitating focus groups. The following strategies will help you deal with some of these.

- **Break-away conversations.** Say: "I'm sorry, would you mind rejoining the group, as this is really interesting?"
- **Digressions.** Say: "That's interesting, what do the rest of you think about..." (back to the topic).
- **Silences.** Remain silent. Someone will speak as people begin to feel uncomfortable. If no one does, restate the question in a different way.
- **Dominance.** Stop making eye contact with the dominant participant. You can say, "Thank you for your contribution. Can we get some opinions from the rest of you?" or "What do the rest of you think of that?"
- **Intentional disruptions.** Develop with the group an agreement on how participants should behave (e.g., respect others' opinions).
- **Defensiveness.** Make sure that everyone has come of his or her own free will. Avoid upsetting questions or save them until the end when people are more relaxed.

Make a conscious effort to ensure that the views of both women and men are captured in focus groups. Using a range of techniques (large groups, small groups, partnered activities) can help in adapting to different constraints faced by individuals.

focus groups be run in mixed groups. Although the majority of participants should constitute women and men miners (50:50), in order to strengthen linkages among stakeholders, it is useful to mobilize participants representing a



A male gypsum miner. *J. Hinton*

- variety of stakeholder groups (miners, buyers, local formal and informal leaders, social welfare officers, police, health officers, active NGO/CBO representatives).
- You may need to run these sessions separately with women and men, particularly if women have difficulty being vocal in a mixed forum. While the shared learning aspect is very useful and running activities in small groups reduces the risk of singling out women for expressing certain views, you may need to balance this with the need to draw out women's and vulnerable persons' voices in a safer forum.
- Ideally, no more than 20 participants should be engaged in the focus groups, although the emphasis on small group work provides some flexibility in this respect. In certain circumstances, women may be exceptionally constrained from voicing their opinions, and completely separate group work may be warranted.
- Focus groups can be conducted in local venues (churches, town halls, schools) near to mine sites or near women's and men's homes. Although they can be run at the mine site, because you want to maintain attention on the



## Gender and ASM Tools

### Module 5:

### Participatory Focus Groups

task at hand, they are often more effective a short distance away from the worksite.

- Focus groups should be as closely located to where people live and work as possible, as many women and vulnerable persons will face difficulty traveling farther from home.
- Given daily responsibilities, the time and impacts of sustained participation of men and especially of women must be considered.

Review the agenda and these issues on the first morning. You may need to spread out the discussions over several mornings or afternoons.

- During mobilization of participants, notify women that they can bring infants and small children, if necessary, and include their needs (snacks, juice) in your budget.
- Schedule time for breaks and lunch. Participants should be comfortable and relaxed throughout.



## Gender and ASM Tools

### Module 6: Surveys



**S**urveys are lists or questionnaires comprised of mostly closed-ended questions (i.e., participant selects from a list of existing responses) that are asked to, typically, a randomly selected sample of participants. Although the closed-ended questions, often quantitative in nature, are the foundation for the survey, there should also be room in the survey for participants to express qualitative information as well. And at the end of the survey, participants should be asked, “Is there anything else you would like to add?” or “Can you think of anything else that would be interesting for us to know?”

#### Survey types

More than one type of survey may be undertaken in the same study area. Useful surveys for the purposes of profiling ASM may include the following:

- **Household surveys.** One or all members of a household are surveyed to obtain information about household demographics and economics; these can also address other key issues.
- **Village surveys.** Usually a list of questions meant to characterize the baseline profiling study site, village surveys are especially useful for baseline studies as they should cover a wide range of topics related to the five types of capital. Participant selection may be on the basis of an affiliated group or category that is well equipped to provide information about a certain topic.

#### Practical considerations

Key issues to consider in conducting sample surveys include the following:

- It is generally better to develop a questionnaire after qualitative research has been conducted, particularly in regions where little is known about the topic or population.
- Surveys should be pretested prior to use to ensure they are clear and inoffensive.
- Surveys should be able to be completed within 30–60 minutes.
- The number of people to be surveyed (sample size; see appendix B) will depend on the population in the profiling community, the allowable error, and resources (time, money, staff) available to execute the survey.

#### Miners survey

The miners survey (appendix C) consists of mostly structured questions, but unstructured elements can be added to any of the questions as the need arises. The questions take the following formats:

- Dichotomous (yes/no, agree/disagree, true/false)
- Level of measurement, including multi-option variable—that is, multiple choice (more than one answer from the selections offered)—and single-option variable/one answer—for example, expressing a range from 0–5 of agreement or disagreement with a statement

The questionnaire consists of 80 questions; it should be possible to complete the survey within 60 minutes. In areas with low levels of literacy, it is important to use the local language, and to have local field assistants available for survey implementation.

The areas covered are biased toward the mining operation since the target respondents are miners. The questionnaire has been structured to align with the Sustainable Livelihoods Approach as well as gender analysis methodologies (Dowling 2008). The following areas are covered from the perspective of miners in ASM:

- Biographical information
- Roles and responsibilities—what women and men do, where, and when, in their productive, reproductive, and community roles
- Assets and resources—what assets women and men have access to to achieve their desired livelihood outcomes, and what constraints they face in accessing these assets
- Power and decision making—what decisions men and women participate in or control at the mining operation, household, community, and local and national government levels, and what constraints they face in this decision making
- Needs, priorities, and perspectives
- Social and cultural context—the economic, legal, cultural, and social structures and processes that affect the livelihood outcomes of men and women

The specific questions and possible responses for each question under these broad areas provide guidance for the researcher and can be adapted to suit local conditions.



Men frequently work in teams in gold mining. *J. Hinton*

## Gender and ASM Tools

### Module 7: Reporting Back and Validation



**D**isseminating results and verifying conclusions with participating stakeholders and the community at large is critical to ensuring the accuracy of findings from the Rapid Gender and ASM Assessment and ultimately exiting the project. Reporting back sessions also present an opportunity to obtain additional recommendations and agree on a way forward, ideally inclusive of time-bound specific responsibilities for various stakeholders. Measures for monitoring progress (and responsibilities for tracking change) should also be outlined.

#### Obtaining stakeholder input

The Implementation Roadmap suggests that at least three days should be allocated in budgets and timelines for reporting back, validation, and collection of feedback. This can be done with multiple stakeholders in a joint forum; however, in some locations, it should be considered that many women and those most marginalized often face difficulties in openly voicing their opinions in mixed or authority-laden contexts. Separate smaller focus groups may be warranted in these cases.

The following are suggested to obtain stakeholder feedback:

- **Meetings with central government, the private sector, and nongovernmental agencies and organizations.** Although organizations and individuals who directly contributed to the Rapid Gender and ASM Assessment should be the primary focus, additional agencies and institutions will likely be identified

in recommendations, and outreach will be necessary to secure commitments. If mining, exploration, or equipment companies have been involved in the work or are relevant in the ASM areas, include them in these meetings. A joint meeting bringing multiple stakeholders together can help coalesce necessary collaborations.

Some practitioners implementing rapid gender assessments may face constraints in terms of finances and time, particularly if central government is located a significant distance from target communities. In such cases, it is suggested that validation at the community level take precedence over face-to-face meetings with central agencies and institutions. Dissemination of draft reports, prefaced by letters outlining key roles and specific responsibilities, with follow-up communication and receipt of feedback by e-mail or telephone is still necessary, particularly when recommendations hinge on the action of specific central parties.

- **Reporting back mini-workshops.** It is recommended that at least two three- to four-hour workshops be held with key stakeholder representatives engaged in the assessment. One should be held separately with women and another with men and should represent key groups in the community (e.g., miners, buyers, community members).
- **Multistakeholder workshop.** Bringing local leaders and government technical officers (inclusive of social welfare, environmental, health, and other officers) together with

## Gender and ASM Tools

### Module 7: Reporting Back and Validation

community members can be a useful way to achieve consensus on critical findings and affirm commitments to recommended actions.

Reporting back workshops should be structured around a discussion and validation of findings; consolidation and agreement on conclusions; identification of related recommendations; and actions to be taken, by whom, and by when. It will likely be necessary to revisit concepts of practical versus strategic gender needs and to frame the sessions accordingly.

Depending on the scope of the policy or project that is informed by the assessment, a larger multi-stakeholder forum can make significant progress in terms of strengthening linkages among stakeholders, building mutual understanding, and securing commitments to action. If this is viable,

community participants should be self-identified during grassroots activities—ideally with an equal proportion of women and men. Considerable effort will be needed in order to structure and design the event to maximize its outcomes.

---

When reporting back to stakeholders, seek to impart the importance of gender mainstreaming in ASM to the mandates and objectives of different key groups while building ownership and encouraging commitments to action.

---

Once all feedback has been incorporated and reports finalized, results should be disseminated to participating stakeholders as well as to other key governmental and nongovernmental agencies and organizations.



Both women and men miners were active and vocal during this regional miners forum in Mongolia. *J. Hinton*

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward



**K**ey recommendations and priority action items identified while using the Toolkit should seek to address a central question: **What can be done to reduce vulnerability and improve livelihood outcomes through increased gender equity in ASM?**

In the past, ASM communities were essentially viewed as homogeneous, and their means of living was simply characterized as informal laborers. The recommendations should take into account that, although most women are typically more vulnerable than men, vulnerable groups can easily constitute men; and systemic gender inequalities—as they result in reduced well-being at the household, community, and national levels—are detrimental to men as well as women, youth, and children. The needs of women and men may be the same or different, and recommendations therefore often cut across genders.

The approaches used in the Toolkit seek to create an understanding of ASM and the ASM value chain through a gender lens. At the center of the approach is the recognition that ASM communities make a living from a basket of opportunities and that men and women may see, access, and use these opportunities differently resulting in differentiated benefits or risks. This recognition hopefully leads to an understanding of the factors that lie behind women's and men's choices of livelihood strategy, and to reinforce positive aspects (factors that promote choice and flexibility) and mitigate constraints or negative influences.

Men's and women's long-term outlook in ASM, their investments in assets for the future, and the positive or negative nature of choices made by them can lead to an understanding of what combination of activities seem to be working best, from the perspective of the different stages of the ASM value chain. Minerals are the main natural capital under consideration; therefore, it makes sense to put them at the core of the recommendations. However, this does not negate the fact that for livelihood outcomes to be achieved, other forms of natural capital will be required. For example, access to water and energy is vital. Recommendations should thus also be formulated about these as well as for the other livelihood assets (human, social, financial, and physical). The ASM value chain perspective allows a detailed analysis of what should be considered.

The core idea is to expand the choice and value for men and women of ASM as a livelihood strategy so that it provides men and women with opportunities for self-determination and the flexibility to adapt over time.

#### **Synthesizing recommendations**

The recommendations should be generated from information gathered through implementation of each of the rapid assessment tools. The following sources of information and opinions are covered:

- Key informants—these could be drawn from the miners, local community women, women leaders, local politicians, key officials, etc.

- Miners survey
- Household surveys
- Focus group discussions
- Secondary sources of data

The findings from data collection will have provided some idea of what women and men need to reach their full potential by addressing key vulnerabilities, taking advantage of vital assets and the structures and processes affecting them. This should lead to the identification of priority development needs and interests of women and men that result from their lives and how they live them. Recommendations should respond to priority practical and strategic gender needs, both of which are important to identify. In particular, it is critical to understand when practical changes in women’s and men’s lives will result in a change in their status. It is also important to know how meeting strategic gender needs will improve women’s and men’s lives at a practical level.

The recommendations should aim to explore two critical points:

- How access to, control over, and ownership of assets—the building blocks of livelihood activities—can be improved for women
- How to make the structures and processes that transform these into livelihood outcomes more responsive to women’s needs

Women’s access to different levels and combinations of assets is probably the main influence on their choice of livelihood strategies. As a labor-intensive livelihood, ASM requires, for example,

- some levels of skill (human capital),
- some start-up (financial) capital or good physical infrastructure for the transport of goods (physical capital),
- natural capital in terms of the availability of minerals as the basis of production, and
- access to a given group through social connections (social capital).

Those who are more endowed with resources are more likely to be able to make positive livelihood choices. The idea is to expand the range of livelihood options of women in order to maximize



Supporting and training young women to engage in value addition—in this case, gemstone cutting and polishing—in Sri Lanka’s and Brazil’s gemstone sectors have created substantial benefits. *J. Hinton*



## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

their achievement of positive livelihood outcomes, rather than forcing women into any given strategy because it is their only option.

#### *Analyzing structures and processes to develop recommendations*

**Structures** are private and public, formal and informal organizations that set and implement policy and legislation, deliver services, purchase products, trade, and perform many other functions that affect women's and men's livelihoods. They exist at various levels within a country context, from local to national. Understanding these structures is important in outlining a course of action because they make processes function. The recommendations should do the following:

- Build structures that represent and redress gender inequalities in ASM and support empowerment of women in particular. For example, membership organizations or formal agreements between large-scale mining companies and miners, both of which should consider the practical and strategic gender needs and gender-differentiated opportunities and constraints to participation. Another example may include microfinance programs targeting women miners to access financing for appropriate, intermediate ASM technologies.
- Promote reform within existing policy-making and service-providing structures.
- Indicate possible support for the establishment or expansion of women's organizations.
- Support joint forums for decision making and action by women and men and increase the skills, knowledge, confidence, and acceptability of women's voices being heard.
- Assess the relationships between formal (e.g., government offices) and informal (e.g.,

traditional clans) structures to see how both can incorporate mechanisms to redress gender inequalities.

**Processes** determine the way in which structures and individuals operate and interact. The processes that need to be built or transformed for improving women's livelihoods in ASM include policies, legislation, institutions, culture, and power relations. Processes are important because they provide incentives or disincentives to women to make livelihood choices. The recommendations should address the following:

- Provide support to a more gender-responsive policy-making process in ASM.
- Deepen and strengthen contact between poor women and policy makers.
- Support participatory processes of policy formulation for women in ASM.
- Increase the accountability and transparency of decision making.
- Assist with the planning, drafting, and implementation of legislation for women in ASM.
- Promote the adoption of redistributive policies and the establishment of safety nets to benefit women directly.
- Promote fair and competitive markets for labor as well as commodities.
- Provide support to help local organizations adopt activities to benefit women in ASM.

Recommendations should be categorized in terms of practical and strategic gender needs.

**Practical gender needs** relate to daily existence and the (usually) immediate needs of women and men based on their common or different roles.

For example, providing small hammers to women involved in rock crushing and large sledgehammers to men involved in rock breaking may meet immediate needs for tools, but may not necessarily change social status or address gender inequalities.

**Strategic gender needs** can be identified by looking at women's position in society relative to that of men. Usually this means looking at needs to address women's subordination to men and changing the status quo. Examples of strategic gender needs that can address gender inequalities might be increased access to information and training for women, increased participation of women in decision-making bodies, and easily accessible ASM licensing procedures.

Some practical gender needs—such as (but not necessarily) increased income—can lead to changes in gender relations between women and men in society.

#### **Criteria for prioritizing recommendations and action items**

The following criteria can be applied when prioritizing the actions:

- The likelihood of the action's bringing immediate relief to the needs of the men and women in ASM
- The extent to which the action will affect both practical and strategic gender needs
- The action's being a possible key driver for change
- The level at which the recommended action will be implemented (national, provincial, or local)
- Stakeholder responsible for implementation of the recommended actions

It is useful to link recommendations with critical initiatives and activities in order to increase their relevance to stakeholders. Examples include citing relationships to, and how the findings and recommendations serve, national poverty reduction strategy goals and objectives, issues identified in *World Development Report 2012: Gender Equality and Development*, local development plans, mining policy objectives, and others.

#### **Obtaining stakeholder commitment to implementation**

The recommended priority actions will be implemented by appropriate stakeholders, depending on the nature of the recommendation. Stakeholders can be government departments and agencies (including, mining, health, education, public works, gender, and law enforcement), the judiciary, NGOs, CBOs, donors, civil society, large mining or exploration companies, other private sector companies, service providers, and research organizations, among others. The final report—inclusive of its recommendations—should be distributed to all relevant stakeholders.

Some areas to be considered when developing recommendations and actions items are presented in tables 3.8.1, 3.8.2, and 3.8.3. The items listed are not intended to be prescriptive but to give some insight into the sorts of strategies, mechanisms, and measures that may be suitable in different contexts. Further, while gender inequalities are typically more severe for women, in some cases, boys and men also face harsh inequalities (as was seen in the Mererani, Tanzania, case study; see section 4), and any recommendation framework should be adapted accordingly.

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

**Table 3.8.1** Possible gendered actions to increase access to and benefits from livelihood assets

Area	Action	By whom	PGN	SGN
<b>Natural capital</b>				
Access to mineral deposits and land	Conduct gender analysis of current policies and legislation, mainstream gender, and repeal laws excluding women from applying for prospecting and mining rights	Government		x
	Advocate for inappropriate policies/laws to be repealed	CBOs, civil society		x
	Raise awareness about benefits of women having equal access to mineral deposits			x
	Empower women to advocate for change	CBOs, civil society, LSM companies		x
Access to water, energy, etc.	Legislate for women's equal access	Governments		x
	Raise awareness about benefits of allowing women equal access	CBOs, civil society		x
	Empower women to advocate for change	CBOs, civil society, LSM companies		x
<b>Human capital</b>				
Skills, knowledge, and ability to prospect (ore extraction)	Run skills and technology transfer programs and ensure equitable participation by women through gender-sensitive programming	Government, CSPs, NGOs, donors, large mining and exploration companies	x	
	Implement government extension services, including providing geological information	Government		x
	Share information with LSM companies; give women a voice to participate fully	LSM and exploration companies	x	
Skills, knowledge, and ability to mine (ore extraction)	Run skills and technology transfer programs	Government, CSPs, NGOs, donors, LSM companies	x	x
	Implement government extension services	Government		x
Skills, knowledge, and ability to carry out mineral processing	Run skills and technology transfer programs	Government, CSPs, NGOs, donors, LSM companies	x	x
	Implement government extension services	Government		x
Skills, knowledge, and ability to produce finished/semifinished products	Run skills and technology transfer programs	Government, CSPs, NGOs, donors, LSM companies	x	x
	Implement gender-sensitive small and medium enterprise development programs for manufacture of finished/semifinished goods		x	x
	Partner with LSM for access to mineral inputs, e.g., gold for jewelry; incentive programs for LSM companies to cooperate with ASM in a gender-sensitive manner	LSM companies, government	x	x
Skills, knowledge, and ability to market finished/semifinished products	Run skills and technology transfer programs	Government, CSPs, NGOs, donors, LSM companies	x	x
<b>Financial capital</b>				
Funds for prospecting and exploration	Set up gender-sensitive programs for government-guaranteed loans with commercial financial institutions, microlending facilities, grants, etc.	Government, microfinance institutions, donors	x	
	Support women's equal access to finance through training, etc.	Government, NGOs	x	x
	Put in place legislation that ensures equal access to finance for women	Government		x

(continued)

**Table 3.8.1 Possible gendered actions to increase access to and benefits from livelihood assets**  
(continued)

Area	Action	By whom	PGN	SGN
Funds for capital and operating costs of the mining venture	Set up gender-sensitive programs for government-guaranteed loans with commercial financial institutions, microlending facilities, grants, etc.	Government, microfinance institutions, donors, LSM companies	x	x
	Ensure that equipment hire purchase schemes are implemented in a gender-equitable way	Government, CSPs, LSM companies	x	x
	Put in place legislation that ensures equal access to finance for women	Government		x
Funds for operating costs to market products	Set up gender-sensitive programs for government-guaranteed loans with commercial financial institutions, including microlending facilities	Government, microfinance institutions, donors	x	x
<b>Social capital</b>				
Network to access support	Training for women to self-organize	NGOs, CBOs, LSM companies	x	
	Awareness raising programs for different stakeholders about the need to have gender equity	Government, civil society, CBOs	x	x
	Support the formation of women's miners' associations	Civil society, government	x	x
<b>Physical capital</b>				
Infrastructure to facilitate prospecting and exploration	Advocate for equal access to infrastructure for women	Civil society, government		x
Infrastructure to transport ore, access energy, etc.	Advocate for equal access to infrastructure for women	Civil society, government, LSM companies		x
	Provide ergonomically appropriate equipment for women	Government, donors, CSPs, LSM companies	x	
Infrastructure for production facilities, access to water, energy, etc.	Central processing facilities where women are given equal access	Equipment designers, CSPs, LSM companies	x	
	Advocate for equal access to all infrastructure	Government, civil society		x
	Provide ergonomically appropriate equipment for women	Government, equipment designers	x	
Infrastructure for production, accessing inputs, water, energy, etc.	Promote manufacturing hubs where women are given equal opportunity	Government, donors, CSPs	x	x
	Advocate for equal access to all infrastructure	Government, CBOs		x
	Provide incentives for service providers to promote gender equity in access to equipment	Government, CSPs		x
Infrastructure for transporting products to market and communication (phone, fax, mail, Internet etc.)	Advocate for equal access to all infrastructure	Government, CBOs		x
Buildings for marketing products	Set up markets where ASM can sell its products		x	
Infrastructure maintenance	Support community participation in infrastructure maintenance		x	x

Source: Authors.

Note: CSP = commercial service provider; PGN = practical gender need; SGN = strategic gender need.

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

**Table 3.8.2** Possible gendered actions to increase access to and benefits from structures and processes

Area	Action	By whom	PGN	SGN	
<b>Structures</b>					
Government ministries	Increase the number of women in government structures dealing with ASM so the women feel their perspective is considered in development of policies and legislation	Government		x	
	Decentralize services so they are more accessible to ASM, particularly to women who may not want to be away from home for extended periods of time			x	
Government agencies and parastatals	Increase the number of women in government structures dealing with ASM so the women feel represented in these structures that are used to implement government policy and administer laws and regulations			x	
Law enforcement and judiciary (courts)	Transform law enforcement and the judiciary so that they become more accessible to and less intimidating for ASM, particularly for women			x	
	Increase the number of women in these structures, and have women liaison officers to deal with women who feel intimidated dealing with men			x	
NGOs, civil society, and community organizations	Transform community organizations so women are represented and their needs considered in their agendas		NGOs, civil society, CBOs		x
	Empower CBOs so they can facilitate gender-sensitive effective contact, participation, and service provision with other structures			x	x
Miners' associations	Support the formation of women's associations in ASM so they can correctly identify the needs of women in ASM and advocate for change to ensure equitable benefit from mining			x	x
	Transform existing miners' associations to include women's representation	x		x	
Research institutions	Transform research institutions dealing with ASM by increasing the number of women in the structures, making the research agendas and resource allocation take into account the needs of women	Government, research institutions		x	
Service provider	Transform the structures of service providers so service provision is gender sensitive and addresses women's needs	Service providers		x	
Mining companies and other private sector organizations	Transform the structures of mining companies that deal with ASM communities so they are sensitive to women's needs; this may entail employing women or men who have received gender training in these positions or engaging in gender-responsive activities to formalize ASM in working in their areas	Mining companies, private sector organizations		x	
Trade unions	Transform trade union structures so the needs of ASM and women miners are considered and become their agenda	Trade unions		x	

(continued)

**Table 3.8.2** Possible gendered actions to increase access to and benefits from structures and processes (continued)

Area	Action	By whom	PGN	SGN
Chambers of mines and other industry chambers	Transform the structures of chambers of mines and other industry associations that interface with ASM (e.g., forestry, fisheries, tourism) so they put ASM on their agendas and the structuring is sensitive to the voices of women, particularly in consultation processes	Chambers of mines and other industry chambers		x
Traditional authorities	Transform traditional authorities so the voices of women are heard, particularly relating to ASM community issues	Government, traditional authorities		x
Customary courts	Transform traditional authorities so women are not intimidated by structures and get equitable treatment	Government, customary courts, traditional authorities		x
Financial institutions	Transform the structures of financial institutions so women feel comfortable requesting finance when they need it	Government, financial institutions		x
<b>Formal processes</b>				
Policies	Develop policies that take into account women's needs	Government		x
	Ensure the participation of both women and men in reviewing and developing policies that affect ASM	Government, NGOs, CBOs, civil society	x	x
Legislation	Develop laws and regulations that enable women to benefit equitably from ASM	Government		x
	Advocate for participation of women in the process of reviewing legislation	Civil society, CBOs, NGOs		x
	Review policies and legislation	Government, civil society, NGOs		x
Programs	Develop programs (e.g., small and medium enterprise development support, investment/finance, access to geological information, market access, technology and skills transfer) that incorporate the needs of both women and men	Government, NGOs, financial institutions, service providers	x	x
	Ensure that women are represented in the adjudication teams that decide who participates on programs	Government, NGOs, financial institutions	x	
<b>Informal processes</b>				
Cultures	Develop gender-sensitive participatory processes for the development or adaptation of laws and programs	Government, NGOs, financial institutions		x
	Support the transformation of power relations so there is gender equity	Government, NGOs, civil society, CBOs		x
Norms, rules of the game	Support changes in norms that exclude women's ability to achieve sustainable livelihoods	Government, NGOs, financial institutions		x
	Advocate for participation in the review of traditional, indigenous, and community rights	Civil society, CBOs, NGOs		x
	Review traditional, indigenous, and community rights	Government, civil society, NGOs		x
	Conduct awareness-raising programs of the legal/social rights linked to ASM and mining and minerals in general	Government, civil society, CBOs, NGOs		x

Source: Authors.

Note: PGN = practical gender need; SGN = strategic gender need.

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

**Table 3.8.3** Possible gendered actions to mitigate risks, vulnerabilities, and impacts and increase benefits

Area	Action	By whom	PGN	SGN
Lack of skills	Develop programs for training and skills development whose structures address the needs of both men and women	Government, NGOs	x	
Health & safety	Adapt or develop laws and/or regulations for ensuring the health and safety of miners, taking into consideration the special needs of women, including working conditions, sanitation, etc.	Government		x
	Implement programs for ensuring the health and safety of miners, including working conditions and sanitation; these should include training that is gender sensitive and facilitate provision of gender-appropriate health and safety equipment, etc.	Government, small mining companies/associations, LSM companies	x	
Biophysical environment	Adapt or develop laws and/or regulations that are appropriate for ASM and take into account the needs and strengths of women for compliance to environmental protection	Government, NGOs		x
	Implement programs for awareness of environmental protection (including training for miners) and take into account the needs and strengths of women	Government, NGOs, LSM companies	x	
Poor wages	Adapt or develop laws and/or regulations and enforcement systems that safeguard against exploitation of labor in ASM and ensure that women are compensated equally for their labor	Government	x	x
Limited access to inputs	1. Develop programs that ensure equitable access to inputs for ASM (e.g., finance, markets, equipment, and other service); 2. Provide incentives for service providers to ensure gender equity in service provision	Government, NGOs, microfinance institutions, LSM companies		x
Inappropriate technology	Develop and transfer appropriate technologies, taking into account the gender needs of women, including ergonomics	Government, NGOs, research institutions, service providers, LSM companies	x	
Illegal workings	Develop appropriate laws and regulations to encourage formalization of ASM as appropriate	Government, NGOs		x
	Raise awareness about the need/processes of formalization		x	
Child labor	1. Develop laws that guard against human rights abuses; 2. Develop structures for enforcing these laws, e.g., through the communities; 3. Provide incentives and disincentives for using child labor and ensure women's participation in the processes as primary caregivers	Government, NGOs, CBOs		x
	Implement programs for mitigating the impacts of child labor abuses, e.g., rehabilitating children who have been in exploitative situations, including girls		x	
Indentured labor	1. Develop laws that guard against human rights abuses; 2. Provide incentives and disincentives for using indentured labor, focusing on women as the most vulnerable part of communities	Government, NGOs		x

(continued)

**Table 3.8.3** Possible gendered actions to mitigate risks, vulnerabilities, and impacts and increase benefits (continued)

Area	Action	By whom	PGN	SGN
Switching livelihoods vis-à-vis food security	Develop programs that encourage maintaining or attaining food security in ASM communities, taking into account the strengths of women as primary caregivers	Government, NGOs, CBOs	x	
Unstable communities	Develop policies and programs that discourage the development of unstable ASM communities (e.g., rush situations) and mitigate their impacts		x	x
	Implement programs to develop sustainable communities	Government, NGOs/CBOs, small mining companies/associations, LSM companies		x
Sexual discrimination and harassment	Develop policies and laws that discourage sexual discrimination and harassment in ASM communities and mitigate their impacts	Government		x
	Implement programs to mitigate the impacts of sexual discrimination and harassment	Government, NGOs, CBOs	x	
Alternative livelihoods	Provide support for the development of alternative livelihoods to provide future sources of income beyond mining and remove miners' unsustainable operations (poverty traps)			
	Implement alternative livelihood programs		x	
Illegal buying and selling	Develop appropriate legislation for buying and selling of mineral commodities	Government		x
	Provide appropriate structures and incentives for miners to use legal marketing channels	Government, donors, NGOs, service providers		x
Fluctuating commodity prices	Develop fiscal instruments for price stabilization for ASM, e.g., buying centers offering stabilized prices for such commodities as gold	Government, NGOs, CBOs		x
	Develop alternative livelihood programs to cushion the impact of external shocks	Government, donors, NGOs, CBOs	x	
	Set up buying centers		x	

Source: Authors.

Note: PGN = practical gender need; SGN = strategic gender need.

### Training needs assessment

The need for capacity building is a commonly identified recommendation from the Gender and ASM Assessment, particularly if follow-up activities seek to formalize and professionalize ASM (box 3.8.1). While your observations and discussions undertaken during the Gender and ASM Assessment can inform your training needs

assessment, ideally a separate initiative to determine these needs should be undertaken.

A training needs assessment can help ensure that any training is gender responsive and addresses practical and strategic gender needs.



## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

#### Box 3.8.1 Gender and the professionalization of ASM

Formalization and professionalization of ASM is commonly regarded as critical to realizing development potential and increasing its contribution to sustainable livelihoods development. However, in most cases, the participation of and benefits to women from ASM decline sharply as the degree of formality, organization, and mechanization increases. Many interventions and programs have sought to promote formalization, but few have effectively mainstreamed gender. Of note, the 2012 *World Development Report* (World Bank 2011) concludes that income growth and new technologies can actually have adverse effects on gender equality.

No gender and ASM assessment should go without development of recommendations to formalize the activity in a gender-responsive and equitable manner. Important questions to consider while conducting the final analysis and developing recommendations and action items include the following:

- What sort of activities or interventions are needed to organize, formalize, and professionalize ASM? In addition to standard requirements for formalization, this often will be linked to formalization of relationships between ASM and LSM or exploration companies.
- How might these efforts affect gender imbalances positively and negatively? Consider the country context, laws and licensing procedures (distance, personal autonomy, language literacy, etc.), effects on work burdens, revenue sharing, control of benefits, professionalization of activities (including introduction of intermediate technologies, written reporting and basic business systems, and formal labor/worker systems), access to formal financing (e.g., microfinance) and who controls it, and power imbalances in the household.
- How can these approaches take gender into account to redress inequalities given the reality of women's and men's lives in ASM communities? Consider the barriers and opportunities and both the practical and strategic gender needs of women and men identified during your assessment.

#### Basic concepts

The goal of teaching adults is to take advantage of their current knowledge, skills, and attitudes, and teach them something new. Consistent with adult learning principles (box 3.8.2), training must be immediately relevant to all trainees, build on their current knowledge, and present something new that they want to and should know.

Adult learning is about positively changing behavior and practices in response to training needs. The interactive, participatory methods outlined in the Toolkit can and should, in themselves, provide valuable learning opportunities for stakeholders. A basic training needs assessment has additionally been integrated within the rapid assessment tools

in order to lay the groundwork for subsequent capacity development of women and men miners, community members, and formal and informal local leaders.

Basic steps in a training needs assessment are outlined below. An emphasis on responsiveness to strategic gender needs should underpin the analysis of rapid assessment findings so as to address the most critical training gaps.

#### ***Incorporating a basic needs assessment in the gender dimensions of the ASM Toolkit***

What do women and men already know or are able to do? What skills and knowledge do they want and need to improve? Are there core attitudes and beliefs challenging positive change?

**Box 3.8.2 Overview of adult learning**

Adult learning is interactive, participatory, learner-centered, and based on the following principles:

- Adults generally assimilate only what they find useful.
- Adults want to be able to apply their new knowledge and skills.

Key concepts in adult learning follow:

- Adults are motivated to learn and learn best when the topic is of immediate value.
- Adults need to know why they are learning something. How learning affects them directly should be discussed early.
- Adult learners need to feel safe, relaxed, and physically comfortable.
- Adults learn best in an active, participatory environment.
- Adults have a lot of experience and appreciate being asked to share it.
- Adults are self-directed. They know what they want to learn.
- Adults learn in an environment of mutual respect between trainers and learners.
- Individual differences among adult learners require flexibility in terms of the style and pace of training.

**Capacity building** is the process of enhancing knowledge, skills, and attitudes. **Knowledge** is the mastery of content. **Skills** are abilities to carry out tasks at a defined level of competence. **Attitudes** are values and beliefs that affect the probability of behavioral change.

Understanding the gender dimension of training needs, inclusive of differential constraints and opportunities to participation and use of benefits, is crucial for ensuring that training supports transformative change in terms of gender relations.

What do findings suggest in terms of practical and strategic gender needs? Basic measures to answer these questions can be integrated into the Toolkit through the following actions:

- Talk to women and men stakeholders about the issues that are important to them and what training they feel they need. For training to be relevant, it is equally critical to identify the skills, knowledge, and attitudes people already possess. This research can be integrated into interviews, focus groups, and site visits.
- Review secondary data on the communities and country in which you are working.
- Statistical data can provide insight into gender gaps, while qualitative reports (baseline studies, academic research) can aid in identifying strategic training needs.
- Miners and household surveys can include specific questions related to people's current knowledge and skills and self-identified needs. Analysis of survey results also provides insight into gender gaps—for example, related to income, health, or access to information, among many others.
- Site visits and observations within communities of interest can be extremely useful in quickly

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

identifying practical gender needs (e.g., related to mining methods, safety issues, division of labor, water access and management, and the presence of microfinance institutions and commercial banks). How do these and other issues differ by gender and given the gender division of labor?

Although in-depth training needs assessment should be undertaken for larger training campaigns, a basic assessment can be undertaken by integrating the aforementioned measures and analyzing Rapid Gender and ASM Assessment findings according to the following.

**Step 1: Identify practical and strategic gender needs.** This is the foundation for recommendations derived from the use of the Toolkit. Although practical gender needs can immediately respond to existing problems associated with gender roles and responsibilities, strategic gender needs are more effective in challenging inequities in power, autonomy, and control. An example of training that responds to practical needs may relate to teaching women engaged in gold processing about using screens and sieves to achieve a consistent grain size to increase recoveries and incomes. Responsiveness to strategic needs may include developing numeracy and basic business skills to aid in access to financing.

**Step 2: Understand what women and men want and need to know.** With an emphasis on practical and strategic gender needs, information should be grouped according to knowledge, skills, and attitudes for different roles and by gender. Transformative change in terms of gender relations may require training in issues within the reproductive or domestic sphere as much as within the commercial or community

spheres of life. This training should be as specific as possible—thus, rather than identifying a need to build skills in geology, skills in how to identify typical ore-bearing minerals should be targeted; or knowledge about mining laws may require skills in how to follow procedures to get a mining license.

**Step 3: Understand women’s and men’s current knowledge and skills.** By characterizing the gender division of labor, how women and men are accessing and using their assets and resources as well as processes and procedures being followed, substantial insight can be derived from the Rapid Gender and ASM Assessment. Framed on the needs identified in Step 2, information on current knowledge and skills should be listed by knowledge-skills-attitudes categories.

**Step 4: Identify training needs.** Compare what people need to know (about, how to do, why something is important) and what they already know, and then determine gaps between them. These gaps are your training needs:

#### What People Already Know

#### – What They Need to Know

#### Training Need

When you look at the gaps, rank them according to whether the gaps are large (a large training need) or small. A tool like the one shown in table 3.8.4 is useful in this regard.

**Step 5: Validate training needs.** It is extremely useful during validation of rapid assessment findings to stakeholders to also verify critical training needs.

**Table 3.8.4** Sample training needs assessment

Role: _____							
Undertaken by (circle one): Primarily Men   Primarily Women   Both							
Training need	Gap					Knowledge, skill, attitude	Suitable training methods
	Very large	Large	Medium	Small	Very small		

Ultimately, the training topics selected and how sessions are designed and implemented should depend on the training needs, their significance, and how large gaps are. Note that training techniques used depend on whether knowledge, skills, or attitude building is a primary objective.

**Next steps**

The Gender and ASM Assessment undoubtedly yielded a wide range of useful findings and conclusions as well as specific recommendations and action items needed to facilitate transformative changes on the ground.

Measures that can be undertaken during and at the conclusion of the assessment to support implementation of critical actions include the following:

- Bring different stakeholders together during the research process (e.g., consultative meetings, grassroots participatory focus groups) in order to help establish linkages, support collaboration among different actors, and increase buy-in.
- Formalize commitments during the final reporting back and validation phase and/or budget

for a formal multistakeholder event to support such strategic planning once the report is concluded.

- Disseminate the report widely to key actors and change agents (government ministries, central and local governments, CSOs and NGOs, large mining companies, microfinance institutions, donor projects supporting small and medium enterprise development or formalization of ASM, etc.) with a cover letter highlighting the importance of the findings and how their roles in implementation have been deemed critical to supporting positive change . Make it clear how the study findings and recommendations (if implemented) would serve specific goals and objectives of the organization.
- Seek support in implementing a second phase of the assessment that would involve

---

Recommendations and action items will undoubtedly speak directly to the priorities and mandates of a range of key actors and change agents.

---

## Gender and ASM Tools

### Module 8:

### Charting a Course of Action—The Way Forward

implementation of the critical actions identified, inclusive of building the necessary coordination arrangements with key partners.

Successful formalization and professionalization of ASM and realization of its full development potential rely strongly on whether gender inequalities are concurrently addressed via gender-responsive

formulation of policies, programs, and projects. However, in most countries, practice has not kept pace with gains in equality of rights granted to women. Turning the much-needed findings and recommendations of the assessment into action should therefore be included as a final component of the assessment work plan in order to make genuine progress toward gender equality in ASM.



Although some women engage in gemstone trading in Brazil, this role is still largely dominated by men. *J. Hinton*



# The Toolkit in Practice



# The Toolkit in Practice

## 4.1 Conducting the Pilot Studies

Steps 1–3: Determining objectives, reviewing the framework, developing a study plan, and selecting study sites

Step 4: Secondary data collection

Step 5: Key informant interviews

Step 6: ASM site visits

Step 7: Participatory focus groups

Step 8: In-depth interviews

Step 9: Sample surveys

## 4.2 Key Findings of the Pilot Studies

Natural and physical capital

Human capital

Financial capital

Social capital

## 4.3 Recommendations of the Pilot Studies

## 4.4 Reporting Back to Stakeholders, Results Achieved, and Time Needed

Step 11: Reporting back to stakeholders

Step 12: Responding to capacity gaps

Step 13: Using the assessments

## 4.5 Recommendations and Lessons Learned for Toolkit Implementation

Toolkit design

Toolkit implementation: preparation and interviews

Toolkit implementation: prioritizing and focusing the pilot study recommendations

Results on the ground





**T**his section provides a synthesis of the work undertaken and the main findings and recommendations of applying the Toolkit in four pilot studies of artisanal and small-scale mining. The section also provides recommendations for implementation of the Toolkit, including lessons learned from the pilot sites, focusing on

- the design of the Toolkit, including how recommendations might be organized; and
- implementation and use of the Toolkit.

The Toolkit was applied in four different countries: Lao PDR, Mozambique, Tanzania, and Uganda. In the first three, the Toolkit methodology was applied in a dedicated study, in which international and national consultants partnered over a series of two field visits. The case study presented here for Uganda is based on work undertaken as part of a World Bank–supported sustainable management of mineral resources project, written retroactively in keeping with the Gender and ASM Framework.

This section compares the implementation of the Toolkit methodology across the case study countries, discussing outcomes as well as differences in implementation and lessons learned in each country. It is organized as follows:

- **4.1** outlines how Steps 1–9 of the Toolkit’s Implementation Roadmap (table 2.2) were applied in the pilot study countries; this information is summarized in table 4.1

- **4.2** presents the key findings of the pilot studies, with a summary in table 4.2
- **4.3** presents a synthesis of the recommendations presented in the pilot studies; this is summarized in tables 4.3–4.5
- **4.4** explores what is required for application of the Toolkit and considers optimal conditions for its application
- **4.5** presents recommendations for next steps with the Toolkit, including suggestions for future implementation

### 4.1 Conducting the Pilot Studies

Work on the pilot studies is discussed in accordance with Steps 1–9; see table 4.1 for a summary.

#### **Steps 1–3: Determining objectives, reviewing the framework, developing a study plan, and selecting study sites**

The objectives of the case studies were twofold. First, the studies aimed to better understand the positive and negative gender dimensions of ASM in order to decrease negative impacts and amplify positive impacts of ASM for women. Second, the case studies aimed to test the Toolkit’s rapid assessment methodology. This methodology was initially elaborated by three international consultants, in collaboration with the World Bank task team. The case studies, through two site visits to each country, provided the opportunity to finalize and refine the methodology through field experience.

**Table 4.1 Gender and ASM Framework: Implementation Roadmap Steps 1–9 as applied to the case studies**

Step		Key questions and actions
<b>Design and planning</b>		
1	Determine gender assessment objectives	Across all four case studies, the objective of the study was to better understand the positive and negative gender dimensions of ASM in order to decrease negative impacts and amplify positive impacts of ASM for women. Each case study was also used to refine the assessment methodology.
2	Review the Gender and ASM Framework	In Lao PDR, Mozambique, and Tanzania, case study methodologies were determined symbiotically with the definition of the assessment methodology. In Uganda, the case study was written retroactively largely in keeping with the Gender and ASM Framework.
3	Develop implementation plan, schedule, budget	The implementation plans, schedules, and budgets of the Lao PDR, Mozambique, and Tanzania studies were outlined generally in coordination among the international consultants, with specific details determined in collaboration with the local consultants. The Uganda study was prepared based on work on ASM in a World Bank–supported sustainable management of mineral resources project and organized along the lines of the Toolkit approach.
<b>Data collection</b>		
4	Understand the national and local contexts	Each of the studies gathered secondary data and addressed the national and local contexts.
5	Conduct key informant interviews	In all four studies, interviews were held with relevant national and provincial government officials, village chiefs, and elders. In Mozambique and Tanzania, where men predominated, a larger number of interviews were held with men.
6	Conduct ASM site visits	Site visits were conducted in all four studies, and the visits were used to identify issues and to identify, inform, and mobilize community representatives and participants for subsequent focus groups. In Lao PDR, Mozambique, and Tanzania, at least two site visits were undertaken for each community.
7	Conduct participatory focus groups	Participatory focus groups were undertaken in all four countries, and the results of the focus groups are embedded in the discussion of issues in the reports. Each study used daily activity clocks and seasonal calendars to identify different ways in which men and women spend their days—women involved in ASM typically have longer work days (estimated at three hours longer in Lao PDR, and up to seven hours longer in Tanzania) and handled a broader set of responsibilities than men. The Lao PDR report also indicated that men agree that women have longer work days, but that men still underestimated the amount of time spent by women.
8	Conduct in-depth interviews	There are no interviews reported in the Mozambique, Tanzania, and Uganda reports, although the first two provide brief profiles of women miners. The Lao PDR report notes that during later visits, following the focus groups, follow-up interviews were undertaken with individuals at their homes, but gives no specific details of the interviews. Key information and in-depth interviews were conducted in each of the case studies.
9	Conduct sample surveys	Miners surveys were compiled for the Mozambique and Tanzania studies, but there was limited time for implementation. Some additional key survey information was identified outside of the scope of the main study. In Tanzania, for instance, miners expressed a strong need for training in geology and mining/processing methods. The Mozambique survey provided a broad-based assessment regarding gender differences in roles, responsibilities, and decision-making powers. The Lao PDR and Mozambique reports include social network maps for women and for men; these indicate that women have much stronger social networks around household activities, while men have much stronger social networks around employment-related activities—which also enhances men’s control over ASM.

Source: Authors.

## The Toolkit in Practice

In **Lao PDR**, two sites were selected: Ban Nahi (population 324) and Ban Moua Khay (population 1,275). In both locations, most ASM is river-based (panning and surface digging) tin mining. These areas have a long history of informal, unlicensed, community ASM; however, in 1994, a concession area was granted to the Lao-Korea Tin Mining Company, which included the area where ASM takes place. The company permits ASM miners to undertake their activities but requires that they sell their tin production to the company.

In **Mozambique**, the study was conducted in the Manica Province, near the Zimbabwean border. The area has a population of roughly 1.4 million, and the study focuses on the following communities: the Nhamachato Village, where approximately 75 percent of the community households are involved in ASM (of which 30 percent are women) and about 70 percent of their income is thought to come from mining; the Manjacate-Fenda community, which has about 5,000 people involved in ASM activities (approximately 5 percent of the diggings belong to women); the Mazanda area, where there is an illegal mining site involving 100–300 men (no women miners); Tchinhagory (location of the Brundi and Vengo sites), where ASM is a secondary livelihood to livestock; and two ASM sites about 350 kilometers from Manica town in Sussundenga District—namely Bandiri, where women operate their own ASM area, and Tsetsera, where ASM is a seasonal activity. Mining activities at these areas primarily involve surface gold mining. The activities are categorized in the study as formal, semi-industrial ASM; formal ASM (registered miners in designated areas); informal ASM (unregistered miners with permission from the landowner); and illegal ASM (unregistered miners without landowner permission).

In **Tanzania**, the site selected for the pilot study was the town of Mererani and surrounding areas in northern Tanzania. This area is close to the Ugandan border, and the ASM activities involve underground gemstone (tanzanite). The Mererani population includes both traditional Maasai residents, largely engaged in livestock and small-holder farming and tanzanite trading, as well as migrants to the area who have arrived mostly over the past two decades to pursue opportunities in mining. For both groups, opportunities for wealth in either small-holder farming or small-scale mining are limited. Only a few people have become wealthy from particularly rich mining finds, or, among some Maasai, from upgrading to commercial-scale agriculture. In terms of the gender division of labor among the miners (most of whom are not Maasai), men do most of the digging and mining, while women work at washing and hand picking gemstones from mine tailings and in selling tanzanite.

Unlike the other three studies which were prepared on the basis of site-specific work, the **Uganda** study is characterized as a countrywide ASM analysis for a range of commodities, including tin, cassiterite, gold, construction minerals, clay, and salt. It used data from work conducted at 17 sites across Uganda, with more in-depth work at five sites in five regions.

### Step 4: Secondary data collection

Each of the studies included secondary data collection to provide background information and context, particularly in terms of the importance of ASM and the legal rights of women, and regarding land and property ownership.

### Importance of ASM

In Tanzania, ASM has become an important livelihood. Recent estimates state that as many as

1 million Tanzanians may be involved in ASM—approximately 25 percent of whom are women—and that direct and secondary employment from ASM may exceed 7 million Tanzanians, or 31.5 percent of the country’s working-age population. In Mozambique, ASM is recognized as an emerging and potentially important source of rural employment and income, but the scale is uncertain, with estimates ranging from as high as 500,000 employed in ASM according to a 1999 report, to 10,000–15,000 according to a 2003 report. The difference in part may represent unrecorded, informal ASM activities. In Lao PDR, women reportedly account for somewhere between 50 and 80 percent of the overall workforce and about two-thirds of the ASM workforce. Women are engaged in all aspects of ASM, including digging and ore

washing/panning. But no estimate is given of the overall size of ASM employment. In Uganda, ASM provides employment for about 200,000 workers (almost half of whom are women) and indirectly benefits about 10 percent of the population (or about 4 million people).

**Women’s rights**

Each study provides information on legislation regarding women’s right to own land. In both Mozambique and Tanzania, women have the legal right to own and inherit land, but in practice face deeply rooted cultural barriers. This is one of the key factors that prevent women from being able to take on the roles of ASM mine owner and operator. These informal taboos also result in women being largely excluded from mining and digging;



A woman gold miner. J. Hinton

## The Toolkit in Practice

in Mozambique, there are examples of women-only mining sites and illegal sites where women have their own mining areas. In both Lao PDR and Uganda, women are able to own land and face little cultural opposition. Nonetheless, these women faced other systemic barriers to participation in the sector: low literacy rates and general discrimination in the employment market mean that women are often employed in low-paying formal work. In the informal markets—including ASM mining—women’s incomes are lower than in formal markets. These situations in the labor market are reflected in women’s socioeconomic positions, in that women are able to own land and assets but have little decision-making power or control.

### Step 5: Key informant interviews

Each of the studies included interviews with key local and national officials; in most cases, in keeping with national trends, these officials were men, reflecting a lack of women’s representation in national offices. At the local level, gender equity was easier to obtain in key informant interviews.

### Step 6: ASM site visits

The country case studies in Lao PDR, Mozambique, and Tanzania included at least two site visits to conduct focus groups, interviews, on-site research, and implementation of the methodology. In these countries, site visits were undertaken by a pair of national and international consultants working together.

While the work in Lao PDR, Mozambique, and Tanzania followed similar methodologies to test implementation of the Toolkit, the countries/communities differed and so required specific adaptations.

### Step 7: Participatory focus groups

Participatory focus groups were undertaken in all four countries, covering a range of different topics in each session.

In Lao PDR, interviews and community consultations were used to

[inform] participants about the purposes of the research, paying particular attention to gender roles in ASM and to ensure that the community understands the aims, objectives and the nature of the research. [Conduct] community dialogue and discussion on general ASM in the community, to learn their current views and future perspectives on ASM. [Make] specific enquiries on ASM livelihoods for the community, addressing two-way flow of information. [Initiate] discussions on the benefits from and difficulties of livelihoods in ASM, and the future perspectives in continuing ASM (with greater focus on women and children in ASM). [Understand] women’s practical and strategic gender needs to improve livelihoods and their perspective on ASM (Kuntala and Insouvanh 2010, p. 17).

Each of the country case studies used daily activity clocks and seasonal calendars to gain a better understanding of women’s work within and outside the home, including ASM. Across all studies, these tools seemed to confirm that women involved in ASM typically have longer work days and a broader set of responsibilities than men. The Lao PDR report identifies the differences in views between men and women: men agree that women have longer days, but estimate the difference as much less than the three hours estimated by the women. Some men consider part of the difference to be due to women’s not using their time efficiently.



Miners in Ban Moua Khay, Lao PDR, participate in a focus group. *C. Insouvanh*

Resource mapping was employed to identify community assets that could be the basis for livelihood strategies, looking at the different capital groups (natural, human, financial, social, and physical). The Lao PDR report also includes an analysis of access to, use of, and (as applicable) ownership of human, financial, social, physical, and natural capital separated by gender for three levels of income (well off, medium off, and worse off). In Mozambique, researchers used social mapping to identify social networks for women and for men, and to analyze vulnerabilities associated with ASM. The results of the focus groups are embedded in the discussion of issues in each report.

### **Step 8: In-depth interviews**

Key information and in-depth interviews were conducted in each of the case studies.

### **Step 9: Sample surveys**

Although a miners survey was developed in connection with the Toolkit, it was not employed during this pilot phase because of time constraints. A focus group workshop was held in Mozambique, during which a modified miners survey was

undertaken; a follow-up feedback workshop was also held. The survey covered biographical information and addressed gender differences in roles and responsibilities at the mine, in the community, and at the national level; and included an assessment of access to assets and resources from a gender perspective. It further assessed levels of participation in decision making, the gender perspective of miners' needs, priorities, and views on service delivery, and the social and cultural context particularly regarding the structures and processes that affect the miners, from a gender perspective.

## **4.2 Key Findings of the Pilot Studies**

The findings of the four pilot studies are presented below regarding the impacts of ASM on women and gender inequalities in terms of the various types of capital. Natural and physical capital are presented together because of their many overlaps; human capital is separated into the labor market and the home domain because of the large number of impacts identified. Table 4.2 summarizes the findings of the four pilot studies.

### **Natural and physical capital**

**Land and water** are two of the most important aspects of natural capital. While water pollution and land degradation are two of the most common ways for ASM to affect natural capital, only in Lao PDR was significant degradation of land and water supply reported. Participants reported gender dimensions to the impacts of this degradation given women's primary responsibility for water collection and rice farming.<sup>1</sup>

<sup>1</sup> The Lao PDR report notes that gender inequality regarding natural capital in the country is further increased because of a lack of water supply and sanitation services. Women must fetch water from natural water sources such as ponds, springs or the river). Even makeshift toilets are not available in all

## The Toolkit in Practice

In both Tanzania and Lao PDR, participants identified gender inequality in access to water in ASM areas. The Mererani area in Tanzania is arid, and the collection of water for domestic use is heavily time intensive; this task falls primarily to women. Women and girls reported spending up to six hours transporting water. Because of their role as water carriers, women are more susceptible to water-borne diseases than are men.

### Land and property rights

The **roles of ASM license holder, mine operator, and owner** provide the highest ASM earnings, and incur the least health and safety risks.<sup>2</sup> In all four countries, these roles are disproportionately filled by men, with women facing significant cultural exclusion.

In all four countries, women are legally entitled to own land and property, but in Mozambique, Tanzania, and Uganda, they face substantial cultural obstacles in doing so. Access to land and mineral deposits in these three countries is largely controlled by men. The result is that women are effectively excluded from any ownership or control over ASM activities, and thus from these higher income roles. In Tanzania and Uganda, women also face significant barriers to owning other assets as well. The Tanzania study report notes,

---

houses; most poor families use the bush for defecation adding to health risks. Water sources are now farther away, and women's livelihoods—especially those of poorer women—are harmed by the loss of rice farming land and the declining land fertility owing to the decay in the river system and the inundation of silt which has reduced the soil's fertility (Kuntala and Insouvanh 2010).

<sup>2</sup> The Tanzania report indicates that 40 percent of a gemstone find goes to the sponsor, 30 percent to the claim owner, and 20 percent to the compressor owner; only 10 percent goes to the diggers.

Even women who have gained from prominence and some economic success are strongly reliant on men to acquire assets (e.g., buy land, obtain a bank account) and manage their own businesses (e.g., the need for a *shemeji* or “brother in law” to provide protection and play management roles) (Hinton and Wagner 2010, p. ii).

In Tanzania, gender inequality regarding land and property rights is worsened in that inheritance laws are silent as to whether women can inherit land; this means that widows are generally unable to maintain title to land previously owned by a now-deceased husband. Instead, the dead man's property generally goes to a male relative. In Lao PDR, women have stronger property rights, but rural men and women can be disadvantaged by a lack of land tenure.

### ASM permits and registration

The pilot studies indicate that ASM earnings tend to be higher where ASM activities are formalized. However, in Lao PDR and Uganda, where women make up half or more of the ASM workforce, formalized ASM is largely undertaken by men, while women tend to work mostly in the informal, riskier ASM, often in more remote areas where incomes are lower.

In Mozambique, Tanzania, and Uganda, even though ASM workers can register themselves or obtain permits to become part of the formal ASM system, the procedures are such that in practice women are generally unable to do so. A recurring gender equality issue in Mozambique is that women do not have the identification cards and documentation required to obtain an ASM mining permit. In Uganda, women's ability to travel is often restricted by their husbands and families, with the result that few are able to travel to the distant locations where government mining

**Table 4.2 Key findings and conclusions regarding gender inequality in the case study countries**

ASM-specific cause of gender inequality	More general cause of gender inequality
<b>Natural and physical capital</b>	
<p>Women are largely excluded from the highest paying ASM roles of owner or operator because of the following:</p> <ul style="list-style-type: none"> <li>▪ There are many cultural obstacles to women exerting ownership rights over land and property in all four countries, even though legally they are entitled to do so; they rely on men to acquire assets.</li> <li>▪ Men effectively control access to land and mineral deposits in Tanzania and Mozambique and prevent women from access to ASM sites.</li> <li>▪ In Tanzania, inheritance laws are silent on whether women can inherit land, which means that widows are generally unable to maintain title to land owned by a now-deceased husband.</li> <li>▪ In Mozambique and Uganda, women are prevented from becoming involved in formalized ASM (where earnings are generally higher) due to practical difficulties in obtaining ASM licenses or registration cards related to documentation requirements and location of government offices.</li> </ul>	<p>Water shortages cause a major burden for women and girls, who must go long distances to collect water; their water-carrying activities make them more exposed than men to water-borne diseases that can cause serious health issues. Women also suffer disproportionately from water shortages because they hold primary responsibility for farming domestic crops.</p>
<b>Human capital: labor market</b>	
<ul style="list-style-type: none"> <li>▪ Women are excluded by men from mining and digging at almost all ASM sites in Tanzania and Mozambique.</li> <li>▪ Women work in ASM because of poverty and a lack of alternative income opportunities, even though ASM is arduous and often dangerous.</li> <li>▪ In Lao PDR and Uganda, women are able to take on the full range of ASM activities, but earn less than men. Moreover, they face greater ASM safety and health risks and vulnerabilities because they tend to be limited to lower income, informal ASM in more remote areas, while men have most involvement with high-income, more formalized ASM. Where ASM extension services are available, men seem more likely and able to access them than women.</li> <li>▪ In Lao PDR, few women in ASM are able to obtain commercial employment in the tin mining companies. Those who do are generally limited to the lowest paying, unskilled jobs.</li> <li>▪ Women involved in riverbed tin mining in Lao PDR and water-based salt mining in Uganda face very substantial health issues because of having to work waist deep in water.</li> <li>▪ In Tanzania and Uganda, women have considerable involvement in sex work around ASM mining camps, with all the risks involved.</li> <li>▪ Most gold processing is done at home by women using mercury, which has very significant health risks for women and children exposed to mercury vapors.</li> <li>▪ Women ASM miners selling tanzanite and other gemstones in Tanzania and gold in Mozambique often feel cheated by illegal (and often male) buyers.</li> <li>▪ In Lao PDR, women ASM tin miners must sell their tin to local mining companies (which own the land). Illiterate and poor, these women have little control over the tin price and the assessment of percentage of tin content.</li> </ul>	<p>A lack of literacy, along with overall cultural norms regarding the employment of women, are key underlying causes of poorer employment prospects for women than men.</p>

(continued)



## The Toolkit in Practice

**Table 4.2** Key findings and conclusions regarding gender inequality in the case study countries  
(continued)

ASM-specific cause of gender inequality	More general cause of gender inequality
<b>Human capital: home domain</b>	
<ul style="list-style-type: none"> <li>Women ASM workers have a double work burden of productive work in ASM and reproductive role work at home, which means that women have a much longer work day than men; this can cause health and other vulnerabilities.</li> <li>Growing or gathering foodstuffs creates a triple work burden for many women in ASM.</li> <li>The involvement of children in ASM, especially in Lao PDR and Uganda—usually due to the need for income for severely impoverished families, which are often headed by single women—creates an added burden for women ASM workers in their roles as mothers and homemakers.</li> </ul>	<p>Women do not have control or decision-making power over most family assets. Even where women have access to family assets, these tend to be more household assets such as kitchen utensils whereas men have use of potentially productive assets such as motor bikes.</p>
<b>Financial capital</b>	
<ul style="list-style-type: none"> <li>A lack of access to finance and credit is one of the leading reasons why women ASM miners are unable to obtain efficient technology and equipment and improve their ASM efficiency and incomes.</li> <li>In Lao PDR, a large number of women ASM miners are in debt just to obtain enough food for their families but have no access to credit, which could enable them to stabilize their situation and improve their living conditions.</li> </ul>	<p>Women have great difficulty in being able to obtain credit from local financial institutions on their own in all four countries. Customs may require male approval or countersigning. Illiteracy is one of the many constraints.</p>
<b>Social capital</b>	
<ul style="list-style-type: none"> <li>The social networks in the productive areas—and, in particular, around mining claims—are much stronger for men than women, with the result that men have control over ASM activities through leaders of miners' associations, government mining officials, and local traditional authorities, all of whom are men.</li> </ul>	<p>While women may be included in land and village committees, in practice their views are not considered, and they have little involvement in community decision making or control over community resources. In all four countries, the double work burden is an obstacle to women's representation among the more powerful members of the community.</p>

Source: Authors.

offices are to obtain ASM registration papers even if they want to.

The Lao PDR report also notes the isolation of ASM mining communities due to a lack of transport infrastructure and a lack of physical capital for both clean water supply and sanitation—all of which increase the gender inequality for women in ASM communities.

### Human capital

The studies indicate that human capital is the most important of the capital assets as far as

gender inequality is concerned. The authors identify issues in two main areas: (1) women's productive roles in the labor market, where there are many gender inequalities; and (2) the double burden for women who work in the ASM sector as well as within the home.<sup>3</sup>

### The labor market

Across the case studies, women do not face legal barriers to engagement in ASM, but differences

<sup>3</sup> The home, or reproductive, role includes many domestic and household responsibilities, including bearing and nurturing children and taking care of family members.

in cultural acceptance of women's roles in ASM contribute to variations in women's employment in the sector. In Tanzania, 10 percent of the ASM workforce are women; in Mozambique, 15 percent; in Uganda, about 50 percent; and in Lao PDR, 60–80 percent.

In Mozambique and Tanzania, there is **wide-spread gender inequality** in terms of engagement in the ASM labor market. At almost all ASM mining sites in these countries, only men are engaged as miners or diggers. In Tanzania, mining is largely underground, with harsh mining camp living conditions that are particularly unfavorable for women. Reports cite that women's lack of engagement is as much from discrimination as from women choosing to avoid the harsh conditions.

In Lao PDR, Mozambique, and Tanzania, men's and women's daily activity clocks and seasonal calendars demonstrate their differing perceptions of their work days and responsibilities, in terms of formal and informal work inside and outside the home. In Lao PDR, for instance, women see themselves as having a **longer work day** than men, although this perception is not always shared by the men. The Lao PDR report analyzes the types of work men and women are engaged in and notes gender inequality in that the women's ASM work pays the least but has the greatest safety and health risks and vulnerabilities.

In Mozambique, ASM mining in the study area is mostly surface mining. While arduous, it does not involve significant inherent safety risks. An important gold find was made by a woman at Tsetsera in Mozambique; as a result, at this site women have largely equal status with men. There are also reported to be a small number of women

mine owners and operators in other areas in Mozambique with **up to 5 percent of the diggings belonging to women**. A positive note is that women are included in one or two mining associations in Mozambique, and women ASM miners have had the most impact where they have formed their own group within the association.

In Uganda, women are able to take on the full range of ASM activities, but tend to be **involved in informal ASM in more remote areas** with lower income potential. Although women account for about 50 percent of ASM workers, their participation in more organized, higher paying ASM work is only about 10 percent. There are some ASM extension services and training available in the country, but these services are typically only available to men.

In Lao PDR, women engage in the full range of ASM mining activities, but **typically earn less than men**, and face greater safety and health risks and vulnerabilities. Men generally undertake most of the higher paid underground small-scale mining; women and children are typically engaged in more traditional, informal, and lower paying open pit ASM work. Women also frequently lack access to efficient technology and tools, which limits their efficiency and earning ability.

Some of the ASM miners in Lao PDR have been able to obtain employment with nearby **commercial tin mining** companies. While women are present in large numbers in the informal tin mining sector, men predominate in these higher paying formal sector jobs. The formal jobs with the tin companies often require rotating schedules, or night shifts which are impractical for women because of familial responsibilities and security

## The Toolkit in Practice

challenges. Where women are employed in these formal jobs, they are typically offered the lowest paid, lowest status, unskilled office-based jobs, such as sweepers, where they earn less than from ASM.

While women are often involved as **sellers of gold and gemstones** (such as in Lao PDR, Mozambique, and Tanzania), women reported often feeling disadvantaged in their dealing with individual buyers—often men, often working outside of the legal system—or through more systemic discrimination. In Mozambique, women suggested gender-neutral responses that might help reduce this gender bias, such as a government gold-buying service for ASM production, and availability of gold processing facilities where women and men would have equal access.

In Lao PDR, ASM tin miners must sell the tin they produce to local mining companies (which own the land). High rates of illiteracy and poverty mean that women have little control over assessments of tin content percentage and the prices at which the tin is purchased.

In Mozambique, women are also involved in small goods **trading**, in particular the sale of food and beverages (including alcohol) at the mine sites. In contrast, the sale of clothes, equipment, and electronics is generally performed by men. In Tanzania and Uganda, women are reported to have considerable involvement in sex work around ASM mining camps; there was less reporting of this in the Mozambique and Lao PDR case studies.

**Children** are often involved in various aspects of ASM across all four case studies. In Lao PDR, “children are involved in very large numbers in the collection of tin ore, washing and processing in local

ponds. . . Children are also often found to scavenge the tailings of the tin processing factory” (Kuntala and Insouvanh 2010, p. v). These additional risks and responsibilities for children in ASM communities were reported to create an added burden for women in their roles as mothers and homemakers; this perception was reported across all four studies. Particularly in woman-headed households, poverty can be a particularly strong driver for child labor, initiating a cycle of child labor and vulnerability.

ASM mining and processing involve **health and safety** risks for both men and women, but women face several specific risks. Practices such as river-bed tin mining in Lao PDR and water-based salt mining in Uganda require miners to work waist-deep in water. This poses substantial health risks for women. In Uganda, for instance, sitting in the salt water is not only physically harmful, but results in social stigma because of myths that this type of salt mining leads to infertility, making the women less desirable for marriage—and perhaps leading to prostitution. In Mozambique and Tanzania, women are significantly involved in mineral and gemstone processing, which can be associated



These child miners work on weekends and holidays to save money for school fees. *J. Hinton*



The risks of chronic saltwater immersion are severe for this woman salt miner in Uganda. *J. Hinton*

with significant health risks. Because women often perform their tasks inside the home, this can put them and their families at increased risk of exposure to mercury vapors.

### **The home domain**

Daily activity clocks across all the pilot studies indicate that the majority of women involved in ASM face a **double burden** of both productive work in ASM and reproductive role work at home. In Lao PDR, “As a result of their excessive burdens of livelihood responsibilities, women suffer from a number of vulnerabilities. A direct result of excessive work is tiredness; many women complained of fatigue and other physical ailments” (Kuntala and Insouvanh 2010, pp. iv–v). In Tanzania, “gender inequalities in the burden of work are substantial. Women work at least 7 hours more per day than men and have little time for relaxation or social networking needed to improve their health and socio-economic status” (Hinton and Wagner, p. 61). And in Mozambique, a woman’s work day is typically three hours longer than a man’s, and women spend 67 percent of their time on their home activities, compared to men’s 17 percent of their time on reproductive activities.

Women’s responsibility for gathering foodstuffs from the forest, as well as for growing crops for food, may be perceived as a triple burden, as in Lao PDR. The women in the surveyed communities in Lao PDR are involved in ASM, forage for food, and—as wives, daughters, and mothers—are directly responsible for the provision of family subsistence, the performance of family chores, and for looking after children and the elderly.

### **Financial capital**

In all four countries, women reported difficulty in being able to obtain **credit** from local financial institutions on their own. In Lao PDR, this lack of credit is cited as one of the key reasons women in ASM lack efficient technology and tools, and are not able to purchase more efficient equipment, even when these items are available in the community. Furthermore, “a large number of women in ASM are in debt to secure food for their families. Provision of credit could allow them to navigate through family crises more efficiently and improve their quality of life” (Kuntala and Insouvanh 2010, p. viii).

Illiteracy and a lack of technical knowledge are two constraints to women’s access to financial capital. In Mozambique, village savings groups are mentioned as positive factors, but there is no information on the role of women.

### **Social capital**

#### **Voice and role**

Women in Mozambique, Tanzania, and Uganda are included in land and village committees, but study participants complained that **women’s views are rarely considered** and that women have very little substantive involvement in community decision making.

## The Toolkit in Practice

### Social mapping

In Mozambique, **women's networks tend to be strongest in the family, health, and education domains**; men's networks are strongest in the productive areas, which include male-dominated networks around mining claims and government officers who oversee ASM. "Men appear to emphasize resources linked to productive roles [e.g., mining] as opposed to women's emphasis on resources linked to reproductive roles [i.e., home and food production]" (Mutemeri and Samba 2010, p. 48). In Mozambique, the social network map for women includes

government, health and education providers, and commercial service providers like creditors, shop and transport owners, and "poupançao" savings clubs. These reflect the importance of the reproductive roles for women. On the other hand the social network map of men reflects the dominance [of] their mining productive role; they include FFM [Fundo de Fomento Mineiro—Mineral Development Fund], Directorate of Mines, and leaders of miners' associations, cadastre and local traditional authorities (Mutemeri and Samba 2010, p. 47).

### Representation

In Lao PDR, the double work burden is reported to be an obstacle to the representation of women in community decision-making structures. The Mozambique report noted that women are disadvantaged because they do not have effective representation; they have access to, but not control over, resources and have extensive reproductive roles along with productive roles.

### 4.3 Recommendations of the Pilot Studies

The four reports provide a broad, comprehensive set of recommendations to improve conditions

for men and women in and around ASM communities, and provide different options for how to structure recommendations.

The **Lao PDR report** recommendations are organized by combining functions involved (e.g., environmental safeguards) and the implementing party (e.g., tin company). The recommendations cover policy and institutional strengthening, social and economic development, social and environmental safeguards, gender action plan, and health and safety awareness programs; as well as legal, social and economic development, social and environmental safeguards, community economic development, community social/livelihood development, and community environmental health and safety recommendations for the tin company.

The **Mozambique report** provides recommendations organized by capital type (primarily for shorter term actions) and strategic theme (for longer term actions). These strategic recommendations address improving organizational structures and functions, improving formal and informal processes, and reducing gender-related risks and vulnerabilities.

The **Tanzania report** directs recommendations toward the Ministry of Energy and Mines, zonal mining officers, regional mining officers, central and local government, the Mererani Township, NGOs, and ASM miners.

The **Uganda report** recommendations are organized primarily by who will implement them. Recommendations target individuals, households, and community-level groups including ASM miners, local government, central government, the Department of Geological Survey, and the Ministry of Energy and Minerals Development.

While the recommendations may be organized slightly differently across the reports, there are many similarities in terms of their focus. The recommendations concentrate on the following four themes, which primarily target government:

- **Actions to improve conditions for women in general in ASM communities**—for instance, ensuring full property rights for both spouses and having the names of both spouses on property deeds in order to prevent a woman’s being disinherited on the death of her husband
- **Actions to improve socioeconomic development for ASM workers and communities in general (both men and women)**—such as reviewing and ensuring that ASM is adequately addressed in mining laws and regulations so ASM activities can be formalized
- **Actions to improve conditions specifically for women working in and around ASM**—for instance, ensuring that ASM extension services are equally accessible to men and women
- **Actions regarding training and capacity building for women**—to be undertaken by government and vocational training institutes

Three other types of recommendations appear somewhat less frequently across the reports:

- Actions by government and financial institutions to improve access to financial capital for men and women in ASM
- Actions by government and LSM companies to improve the interaction of LSM and ASM
- Actions by other parties including ASM miners and ASM communities

Tables 4.3, 4.4, and 4.5 synthesize the recommendations, presenting, respectively, recommended

actions for women, for ASM, and for women ASM workers and miners. For several recommendations, a progression can be identified across the three tables: for example, in the case of legislation, from increasing the visibility of women in legislation in general (table 4.3), to reviewing and ensuring that ASM is adequately addressed in mining laws and regulations (table 4.4), to preparing gender-sensitive ASM-related laws and regulations (table 4.5).

The recommendations are presented by capital type to enable cross-referencing to the gender equalities in table 4.2. Recommendations that relate to access to land for ASM mining (including institutional arrangements for ASM permitting, registration, and oversight) are included in the **physical capital** section, along with the interaction between ASM and LSM. The **human capital** section addresses both labor market and home domain issues, and includes training and capacity building for women and women’s organizations in ASM communities. The **financial capital** section refers to savings and finance; and the **social capital** section refers to the role, voice, well-being and organization of women in ASM communities including women ASM miners and workers.

#### 4.4 Reporting Back to Stakeholders, Results Achieved, and Time Needed

One of the inherent challenges of developing and implementing research methodologies is what feedback will be provided to stakeholders during and after report preparation and what follow-up will be made to implement the recommendations of the report. Steps 11–13 of the Implementation Roadmap address synthesis of initial results and reporting back to stakeholders, identifying and responding to capacity gaps, and following up with participants and key decision makers to

**Table 4.3** Examples of recommendations to improve conditions for women in ASM countries and communities

Objective	Actor	Action
<b>Natural and physical capital</b>		
Improve conditions for women in general	National government	<ul style="list-style-type: none"> <li>▪ Increase visibility of women in legislation in general</li> <li>▪ Ensure full legal property rights and inclusion in property titles for both spouses</li> </ul>
Improve overall mining sector conditions for women	Mining ministry	<ul style="list-style-type: none"> <li>▪ Undertake a gender-based mining policy and legal analysis and involve women in preparing and reviewing the analysis</li> <li>▪ Ensure that mining policy and legislation give due recognition to giving women equal rights and opportunities as men in the mining sector</li> <li>▪ Provide gender-sensitive training to government mining staff</li> <li>▪ Review hiring and staffing practices for women mining officials and increase hiring of women</li> </ul>
Improve impacts of LSM on women	Mining ministry	<ul style="list-style-type: none"> <li>▪ Require LSM companies to provide information to and consult with women</li> <li>▪ Monitor the operations of LSM companies in ASM areas and ensure compliance with environmental regulations, social requirements, and community agreements</li> <li>▪ Require gender analysis in LSM environmental and social impact studies</li> <li>▪ Require LSM companies' benefit-sharing agreements to be gender sensitive</li> <li>▪ Sensitize LSM companies with regard to gender laws and provisions</li> <li>▪ Ensure that women are fully involved in any LSM company-community negotiations</li> </ul>
<b>Human capital</b>		
Improve conditions for women in general	National government, CSOs	<p>Provide more services for women in ASM communities:</p> <ul style="list-style-type: none"> <li>▪ Challenge and change cultural rules and taboos by providing gender-awareness training to men at the community, provincial, and national levels (including local and provincial government offices)</li> <li>▪ Sensitize all relevant groups on gender-related human rights and advocate for equal rights for women</li> <li>▪ Encourage CBOs/NGOs to be more gender sensitive</li> </ul>
General training and capacity building for women	Government, local vocational training institutes	<p>Provide women in ASM communities with training:</p> <ul style="list-style-type: none"> <li>▪ For functional adult literacy</li> <li>▪ Regarding maternal health and family planning</li> <li>▪ For alternative livelihoods to ASM including training in ASM products, where suitable, for jewelry manufacturing and training in other basic livelihoods such as food growing</li> <li>▪ Local vocational training institutes should encourage women to enroll in training courses</li> </ul>
<b>Financial capital</b>		
Improve conditions for women in general	Government, local financial organizations	<ul style="list-style-type: none"> <li>▪ Support and facilitate women's small savings groups and women's savings schemes</li> <li>▪ Provide village-based banking and credit facilities, possibly with government guarantees</li> <li>▪ Support start-up funding for alternative livelihoods</li> <li>▪ Provide financial literacy training</li> </ul>
<b>Social capital</b>		
Improve conditions for women in general	Government	<ul style="list-style-type: none"> <li>▪ Provide awareness programs regarding gender sensitivity and gender discrimination</li> <li>▪ Facilitate a greater role for women and more decision making regarding community committees and land-related committees</li> <li>▪ Provide gender-sensitive capacity building and budget support for women's organizations</li> <li>▪ Work with communities to encourage children to be in school and not working in ASM</li> <li>▪ Provide equal education opportunities for boys and girls</li> <li>▪ Introduce gender sensitivity into school curricula</li> <li>▪ Introduce gender-sensitive households award linked to women's day</li> <li>▪ Provide support for victims of sexual violence</li> <li>▪ Make police in ASM communities more gender sensitive</li> </ul>

Source: Authors.

**Table 4.4** Examples of recommendations to improve conditions for ASM communities at large

Objective	Actor	Action
<b>Natural and physical capital</b>		
Improve conditions for ASM communities in general	Department of roads	<ul style="list-style-type: none"> <li>Provide maintenance to keep roads to main ASM sites passable all year</li> </ul>
	ASM community	<ul style="list-style-type: none"> <li>Participate in infrastructure maintenance</li> </ul>
Improve conditions for all ASM workers	Mining ministry	<ul style="list-style-type: none"> <li>Review and ensure that ASM is adequately addressed in mining laws and regulations</li> <li>Set up an adequately staffed and funded ASM department or office and decentralize the administration of ASM with local offices in locations convenient to main ASM sites</li> </ul>
	ASM department	<ul style="list-style-type: none"> <li>Issue ASM registration cards and permits, including for use of explosives, and license ASM buyers</li> <li>Monitor ASM buying and reduce illegal buying activities</li> <li>Where needed, provide guidelines and procedures for pricing and measuring ASM output sold to LSM companies</li> </ul>
Improve impacts of LSM on ASM	ASM department	<ul style="list-style-type: none"> <li>Ensure that ASM miners with long-standing customary activities are protected from being forced away from their traditional sites by LSM</li> <li>Provide improved communications and dispute resolution process between ASM and LSM</li> </ul>
<b>Human capital</b>		
Improve conditions for all ASM workers	ASM department	<ul style="list-style-type: none"> <li>Establish a communications system with ASM miners and workers</li> <li>Provide geological information to ASM miners to locate good ASM sites or deposits</li> <li>Fund additional geological work to assist ASM miners</li> </ul>
Training and capacity building for all ASM workers	Government, local vocational training institutes	<p>Provide ASM workers with ASM-related extension services, advice, and training on effects including occupational health and safety, efficiency, environmental protection, and market access and product valuation:</p> <ul style="list-style-type: none"> <li>Local government to provide seminars on HIV/AIDS awareness, etc.</li> <li>Local government to provide training on domestic and community conflict resolution</li> <li>Government to promote jewelry manufacturing hubs using ASM products</li> </ul>
Improve impacts of LSM on ASM	Mining ministry	<ul style="list-style-type: none"> <li>Review and where needed harmonize ASM, LSM, and land ownership laws</li> </ul>
<b>Financial capital</b>		
Improve conditions for all ASM workers	Government	<ul style="list-style-type: none"> <li>Enable ASM miners to get mining titles to facilitate obtaining loans</li> </ul>
	Government, local financial organizations	<ul style="list-style-type: none"> <li>Provide ASM miners with information about credit opportunities and links to possible investors</li> </ul>
<b>Social capital</b>		
Improve conditions for ASM communities in general	ASM miners	<ul style="list-style-type: none"> <li>Set up committees to work with others (government and NGOs) on social issues such as problems with youth</li> </ul>
	Local police organization	<ul style="list-style-type: none"> <li>Work with community to encourage community self-policing</li> </ul>
	Local health department	<ul style="list-style-type: none"> <li>Establish health dispensaries in mining camps</li> </ul>

Source: Authors.



**Table 4.5** Examples of recommendations to improve conditions for women ASM miners and workers

Objective	Actor	Action
<b>Natural and physical capital</b>		
Improve conditions for women ASM miners and workers	Mining ministry	<ul style="list-style-type: none"> <li>Prepare a gender-sensitive ASM mining policy accompanied by gender-sensitive ASM-related laws and regulations</li> </ul>
	ASM department	<ul style="list-style-type: none"> <li>Set up local ASM offices in locations convenient to main ASM sites so that they are readily accessible to women ASM workers</li> <li>Review ASM licensing and/or registration procedures and revise as needed so they are less intimidating to women and easier for women ASM workers to obtain ASM permits or registration cards</li> <li>Ensure ASM staff have received training on gender laws and gender-sensitive training</li> <li>Prepare a baseline ASM gender study and database to be updated on a regular basis</li> <li>Prepare an ASM gender action plan</li> <li>Gender sensitize ASM work programs and ensure that they are adequately funded</li> </ul>
	Research institutions	<ul style="list-style-type: none"> <li>Undertake research on ASM gender issues</li> </ul>
<b>Human capital</b>		
Improve conditions for women ASM miners and workers	ASM department	<ul style="list-style-type: none"> <li>Provide a government buying office for ASM where requested by women ASM miners</li> <li>Develop a gemstone cutting and polishing center where requested by women ASM workers</li> </ul>
	Local ASM department mining offices	<ul style="list-style-type: none"> <li>Work to reduce cultural barriers at ASM mining sites so that women are allowed on sites as ASM miners and workers</li> </ul>
General training and capacity building for women	Government, local vocational training institutes	<ul style="list-style-type: none"> <li>Provide vocational training to women ASM miners including ASM-related technical, occupational health and safety, environmental protection, organization, management, and marketing training so they can improve their productivity and earning; improve their safety and health; and be better equipped to become ASM operators and owners</li> </ul>
	Local ASM department of mining	<ul style="list-style-type: none"> <li>Provide women ASM miners with market access training and encourage and facilitate women ASM miners to form selling cooperatives for their ASM production</li> </ul>
<b>Financial capital</b>		
Improve conditions for women ASM miners and workers	Government	<ul style="list-style-type: none"> <li>Enable women ASM miners to get mining titles to facilitate their obtaining loans</li> </ul>
	Government, local financial organizations	<ul style="list-style-type: none"> <li>Provide women ASM miners with information about credit opportunities</li> <li>Help women ASM miners find financial partners</li> <li>Ensure that equipment leasing schemes are equally accessible by women and men</li> </ul>
<b>Social capital</b>		
Improve conditions for women ASM miners and workers	National, provincial, and local government; CSOs	<ul style="list-style-type: none"> <li>Encourage and provide support to women ASM workers to form women's ASM mining associations and assist with training and capacity building</li> <li>Encourage existing mining associations to fully include women</li> </ul>

Source: Authors.

support gender-responsive action. These steps are summarized below.

### **Step 11: Reporting back to stakeholders**

Fieldwork for the Lao PDR, Mozambique, and Tanzania studies was undertaken throughout 2010. In each country, multiple field visits provided an opportunity to report back to the communities involved on initial findings. In Mozambique, preliminary results were presented to participants at feedback workshops in Manica and Maputo prior to finalization of the report. The Lao PDR report was updated and issued in November 2010, and the results were disseminated in two workshops: a community workshop at the ASM sites; and a workshop in the capital city of Vientiane with government officials, stakeholders, and key local and international experts and donors. In Tanzania, results were key inputs to, and were disseminated at, an international workshop on women in mining, held in Dar es Salaam in June 2010. The draft Uganda report was issued in February 2011. The original work on which the report is based included considerable feedback to stakeholders.

### **Step 12: Responding to capacity gaps**

The reports all include recommendations regarding training and undertaking training needs assessment, although no training workshops were funded under the study.

### **Step 13: Using the assessments**

The elaboration and application of the Toolkit and the framework in these four countries not only helped generate information on the gender dimensions of ASM in each country, but also helped advance the Toolkit as a whole. In future applications of the Toolkit, the objective of Step 13

will be integration of the findings of the assessment into policy, programs, and monitoring and evaluation.

## **4.5 Recommendations and Lessons Learned for Toolkit Implementation**

Following are several recommendations for practitioners in implementing the Toolkit.

### **Toolkit design**

#### ***Actions to be considered ex ante***

Tables 4.3, 4.4, and 4.5 present numerous possible gendered actions to improve women's access to and control over livelihood assets; to improve structures and processes; and to mitigate risks, vulnerabilities and impacts. Not all of these actions are required, and a more selective approach can be used to let participants identify priority action areas. To the extent that they seem important to study participants, some general issues may include control and ownership of resources and their benefits; mining rights and land rights; livelihood assets; structures and processes; and risks, vulnerabilities, and impacts. In selecting focus areas, the priorities of respondents—particularly women respondents—should be a key criteria.

#### ***Miners survey***

The miners survey may be selectively shortened as necessary, and should be translated into local languages. However, the household and miners surveys require both time and financial resources and are best used when an in-depth, rather than rapid assessment, is being undertaken, and only when the necessary time and financial resources are available. Where necessary, questions may be reduced to focus on key impacts of ASM for women miners and women in ASM communities.

## The Toolkit in Practice

Additional questions suggested from the country case studies may include the following:

- Whether women want to do strenuous mining work
- Cultural taboos on women's doing mining work
- More detailed production estimates
- The legal status of miners and their operations
- What taxes artisanal miners pay
- The impact of women's income on the household
- The health impacts of ASM on women

### Toolkit implementation: preparation and interviews

#### *Preparation/time for fieldwork*

The pilot studies note that sufficient time for preparing and carrying out the fieldwork should be allowed.

- Preparatory activities should be undertaken to identify the communities to be approached, with the support and involvement of national and local government officials but also with strong and well-respected local counterparts.
- Working with a local counterpart with good knowledge of the sector and the issues under consideration is essential for the success of the study.
- Participants in the interviews and surveys must be notified well in advance, and the notification must outline the essence of the interviews/surveys so respondents are better prepared.
- Working with local counterparts (e.g., development officers) to administer surveys can be useful, although they should not be exclusively relied upon.

- Using separate focus groups with women and men will most likely yield greater insight, although some shared discovery is also useful.
- Allocating a proportion of spaces in focus groups and interviews for on-site mobilization will help ensure that the diversity of the community is captured.
- For a multisite assessment, tools should be reviewed in detail and considered when selecting field sites, planning, and budgeting. More detailed assessment may be warranted for specific sites.

#### *Improving the use of the questionnaire by sequencing*

The Mozambique report offers the following description of how the survey was conducted:

The survey was conducted in two parts. The first part was done during the first country visit and used the first draft of the questionnaire. The questionnaire was administered by the international consultant, with the support of the local consultant who was being trained. In some instances it was necessary to use translators when administering the questionnaire. Feedback from the first country visit allowed for the refining of the questionnaire before it was administered in the second field trip. The national consultant administered the questionnaire during the second trip, with the assistance of a field assistant (Mutemeri and Samba 2010, pp. 15–16).

Questions of **selecting interviewees** are relevant in any implementation of the Toolkit; these are also addressed in the Mozambique report:

During the first country visit most of the interviews were determined by the facilitators within government. However, during the second country visit the consultants were better able



Tin miners rest during a break at a somewhat mechanized panning site in Pathen Valley, Lao PDR. *K. Lahiri-Dutt*

to independently identify stakeholders, beyond those initially identified by the government facilitators. In terms of lessons learned, this highlighted the need for a scoping visit before the information gathering exercise commenced (Mutemeri and Samba 2010, p. 12).

The report notes that even during this second attempt, administration of the questionnaire had to be adapted to deal with constraints faced in the field, including

- Finding enough women respondents who are directly involved [in ASM mining]
- Getting the trust of women respondents
- The long time it took to administer the questionnaire
- Language barrier between consultant administering the survey and the respondents (Mutemeri and Samba 2010, p. 16).

These issues are of course highly relevant to situations like those of Mozambique and Tanzania, where women are severely restricted in their ASM roles and activities. They may be less crucial in situations similar to those in Lao PDR, where women constitute the majority of ASM workers and miners.

The Mozambique report also makes the very important point that, given their importance to women, **child and youth workers** (both male and female) should be included along with local women.

#### **Toolkit implementation: prioritizing and focusing the pilot study recommendations**

The Toolkit can be used to gather a comprehensive data set on gender and ASM, and to generate broad recommendations. In implementing the Toolkit in a context of trying to drive change in policy and programming, it may be useful to

## The Toolkit in Practice

focus on a few key recommendations, particularly those that may build support and catalyze positive change for improving the gender dimensions of ASM. Depending on the base of support and the target of the recommendations, a broader or narrower set of recommendations may be proposed. Without a firm and agreed-upon program of technical support from one or more international financing institution donors, it may be difficult for the government, where it is the target, to respond to or adopt all recommendations, if too many, or too overly ambitious, suggestions are proposed.

Two criteria are recommended for prioritizing recommendations. The first is that focus groups be used to determine priority actions from the perspective of women ASM miners and workers. The second is to then prioritize recommendations according to affordability and ease of implementation—that is, to identify the “low-hanging fruit.” To ensure implementation, it is important that recommendations be realistic and clear with regard to who should do what.

In addition to making targeted recommendations, implementers should endeavor to ensure that policy makers, donors, companies, and CSOs are engaged as early as possible, so they fully appreciate the value and relevance of suggestions, and in gaining their commitment to recommendations and outcomes. In some communities where improved attention to women’s needs and rights may threaten male dominance or control, it may be particularly important to have male leaders or officials involved early.

### Results on the ground

#### *Dissemination of findings*

The preliminary findings should be translated into the local language (if necessary) before dissemination, and disseminated broadly. Sufficient time and resources should be allocated for reporting back and discussing findings widely within the community. Implementers should be sensitive to the possibility that communities or community members may suffer from “research fatigue.” Questions may also be considered irrelevant. While the Toolkit may be implemented with the goal of catalyzing action, every effort should be made to ensure that there will be demonstrable impacts following participation in the exercise for those communities that participate.

#### *Improving engagement with community men*

One of the most important aspects of achieving results on the ground is the extent to which men at all levels and in all roles—from ASM miners to tribal chiefs to senior mining ministry officials—support or oppose the recommendations of the pilot studies. Careful attention should be paid to how the men in the community and mining ministry officials react to initiatives focusing primarily on women, and to actions that may reduce the control and power men have over women in the community and the country. In this regard, it may be very important to separate and prioritize actions in terms of those that may be easily achievable in the short term versus those that may require many years of persistent effort.



# Resources



# Resources

**Appendix A: Relevant Partner and Stakeholder Initiatives**

**Appendix B: Tips for Sample Surveys**

**Appendix C: Miners Survey**

**References**



## Resources

### Appendix A

#### Relevant Partner and Stakeholder Initiatives



To capitalize on the potential benefits of ASM and to mitigate potential risks, a growing body of stakeholders has been working to better understand and support ASM's sustainable and equitable development. These initiatives include the following:

- **Mining, Minerals and Sustainable Development (MMSD).** <http://www.iiied.org/sustainable-markets/key-issues/business-and-sustainable-development/mining-minerals-and-sustainable-development>
- **Global Mercury Project.** <http://www.globalmercuryproject.org/>
- **Communities and Small-Scale Mining (CASM).** [www.artisanalmining.org](http://www.artisanalmining.org)
- **Diamond Development Initiative (DDI).** <http://www.ddiglobal.org/>
- **Compendium of Best Practices in Small-Scale Mining in Africa (United Nations Economic Commission for Africa).** [http://www.uneca.org/sdd/Compendium%20on\\_best\\_practices\\_in\\_%20smallsacle%20.pdf](http://www.uneca.org/sdd/Compendium%20on_best_practices_in_%20smallsacle%20.pdf)
- **Kimberley Process Certification Scheme.** <http://www.kimberleyprocess.com/>
- **International Conference on the Great Lakes Region (ICGLR).** <http://www.icglr.org/>
- **WWF and Estelle Levin Ltd initiatives on ASM in Protected and Critical Ecosystems (ASM-PACE).** <http://asm-pace.org/>; contact: [khund@panda.org](mailto:khund@panda.org) or [estelle@estellelevin.com](mailto:estelle@estellelevin.com)



## Resources

### Appendix B

### Tips for Sample Surveys



5

### Sampling

Sampling involves the identification of a portion of a study population

- about which information can be inferred for the whole population, or
- that provides insight into a certain segment of the population (e.g., women miners) or issue.

There are a number of ways to sample a population, but random sampling can yield the most reliable results for sample-based surveys.

### Random Sampling

When any individual, group, household, or other unit (**sampling unit**) has an equal chance of being selected for participation, sampling is said to be random. A representative sample of a population is surveyed from which estimates of the status of an entire group can be made.

There are many types of random sampling. When a sample population consists of all households in a village or town, a **simple random sample** can be selected by surveying the  $n$ th household on every street. When certain groups of interest exist (e.g., age groups, income groups, occupational groups), a random sample can be stratified—that is, subdivided. A **stratified random sample** of an ASM community may involve a division based on occupation (e.g., mining, farming, fishing). From each of these groups, a random sample can be selected. The sample may be further stratified, for instance, on the basis of gender (male and female miners, male and female farmers, etc.).

Stratified random sampling is very useful, but lists of community residents may not be available, particularly on the basis of occupation.

A **sampling frame** is a specific list of units in a community of interest from which specific sampling units can be selected (e.g., farms, households, mine sites). Sampling frames are most commonly based on areas (maps) or lists (such as lists of employees, households, or residents). List frames may be more difficult to use if up-to-date census information is not available for your area of interest.

Area frames involve identification of area boundaries and their relative sizes, with units divided into well-defined area segments. Usually, the probability of selecting any segment is proportional to its area. If a map of a target community is available, it can be broken into a grid, where a certain number of households are surveyed in every grid block. This approach may be effective in capturing the diversity of different neighborhoods in a village; however, it may not necessarily enable comparisons across livelihoods.

### Sample Size

Generally, the more people you sample, the more accurate your results. However, massive data collection isn't always practical or necessary in order to capture the information desired. The resources (time, money, staff) available to the effort strongly influence how many people to include in the sample. The degree of precision or accuracy needed is also a factor.

In **qualitative research** (e.g., interviews and focus groups), data are usually collected until **saturation** is reached—that is, when you ask the same question in interview after interview, no new information is provided, making it redundant to continue the exercise.

In **quantitative research** (e.g., sample surveys), to achieve a statistically significant sample—one that is sufficient to generalize results across a population—the sample size depends on the accuracy desired and the size of the population. Generally, most surveys are conducted so that you are 95 percent certain that the results are off by no more than 5 percentage points. Based on this level of accuracy, the suggested necessary sample size for a given population is shown in box B.1.

Frequently, the resources may not exist to attain this level of confidence in the results. Depending on your objectives, a lower level of confidence (i.e., fewer surveys given) may be sufficient.

Sample surveys undertaken in a rapid assessment will **not** seek to replicate the representativeness of comprehensive household surveys (5,000–10,000 households) but will try to provide insight into the key factors influencing livelihood choices—in particular, the influence of ASM—and a baseline characterization of assets and vulnerabilities of women and men in the ASM communities. This understanding may be obtained with

a smaller sample size than that required for other surveys.

**Box B.1 Accuracy of surveys and sample size**

Most people use a 95 percent confidence level with a margin of error of 5 percentage points, which means that they are 95 percent confident that the actual (or population) value equals the sample value plus or minus 5 percentage points. Level of accuracy is directly proportional to sample size. Based on this degree of accuracy, the following sample sizes are suggested.

Population	Sample size	Population	Sample size
10	10	300	169
15	14	400	196
20	19	500	217
25	24	600	234
30	28	700	248
40	36	800	260
50	44	900	269
60	52	1,000	278
70	59	2,000	322
80	66	3,000	341
90	73	4,000	351
100	80	5,000	357
150	108	50,000	381
200	132	1,000,000	384
250	152		

Source: Authors.

## Resources

### Appendix C

### Miners Survey



5

#### BIOGRAPHICAL INFORMATION

1	Sex	Male	Female		
2	Age (years)				
3	Marital status	Single	Married	Divorced	Widowed
4	Ethnic group				
5	Indigene or not	Yes	No		
6	Level of education (number of years of schooling)				
	None	Primary	Secondary	Tertiary (college)	
7	Occupation				
8	How much do you earn?	Per day	Per month	Per year	
9	Are you the head of the household?		Yes	No	
10	Are you the breadwinner?		Yes	No	

#### ROLES AND RESPONSIBILITIES (multiple choice)

11	Role in the mining operation	Owner	Worker	Buyer	Other (specify)
12	Do you have a valid mining license?	Yes	No, expired	No, never had	Other (specify)
13	Nature of work	Miner (digger)	Processor	Carrier of ore	Carrier of water, firewood
14	Mining method	Open pit	Underground	Use of explosives	
15	What commodity is being mined?				
16	Type of deposit	Hard rock	Alluvial	Eluvial	
17	Equipment used for mining	Hand tools (e.g., shovel, pick)		Mechanized (e.g., excavator)	Pumps
18	Processing method	Crushing	Washing	Panning	Chemical (specify)
19	Equipment used for processing				
	Hand tools (e.g., panning dish)	Own-crafted tools (e.g., shaker box)		Bought mechanized tools (e.g., shaking table)	
20	When do you work?				
	Which hours in the day	Which days in a week	Weeks per month	Which months in the year	
21	How many years have you been in mining?				
22	How many people work at the mining operation?	Men	Women	Don't know	
23	How many men work in the following categories?	Miner (digger)	Processor	Buyer	Other (specify)
24	How many women work in the following categories?	Miner (digger)	Processor	Buyer	Other (specify)

- 25 How far is the mine from your home (km)?
- 26 What domestic work do you also do?  
Household                  Family care                  Elder care                  Growing crops and livestock
- 27 When do you do domestic work?  
Which hours in the day                  Which days in a week                  Weeks per month                  Which months in the year
- 28 What community participation do you also do?  
Political representation/decision making                  Infrastructure maintenance                  Association activities                  Other (specify)
- 29 When do you do community participation work?  
Which hours in the day                  Which days in a week                  Weeks per month                  Which months in the year
- 30 What is the source of energy to power mining equipment?  
Electricity                  Diesel                  Firewood                  Other (specify)
- 31 What is the main source of energy in the home?  
Electricity                  Diesel                  Firewood                  Manual labor                  Other (specify)
- 32 Where do you sell your products?                  Licensed buyer                  Unlicensed buyer                  Other (specify)
- 33 How do you transport your raw materials and inputs?  
Own car                  Hired car                  Manual labor                  Other (specify)
- 34 What technology/equipment would improve the way you work?
- 35 What training would improve the way you work?

**ASSETS AND RESOURCES** (multiple choice)

- 36 What natural capital assets do you have access to?  
Mineral deposits                  Water                  Forests                  Land                  Other (specify)
- 37 What human capital assets do you have access to?                  Skills                  Ability                  Other (specify)
- 38 What productive capital assets do you have access to?                  Equipment                  Technology                  Other (specify)
- 39 What social capital assets do you have access to?                  Formal association                  Informal network                  Other (specify)
- 40 What financial capital assets do you have access to?  
Credit                  Savings in cash                  Savings in livestock, harvests                  Other (specify)
- 41 What physical capital assets do you have access to?  
Roads                  Telephone                  Electricity                  Buildings                  Other (specify)
- 42 What constraints do you face in accessing assets?
- 43 Do you feel excluded from accessing assets because:  
Of the community group you belong to                  You are a woman/man                  Other (specify)
- 44 Which of the following capacity and ability issues constrain your access to assets?  
Skills                  Financial                  Technology                  Information                  Other (specify)
- 45 What constraints do you face in accessing markets?  
Illegal trade                  Poor prices                  Fluctuating prices                  Distance                  Sex                  Other (specify)

## Resources

### Appendix C

### Miners Survey

- 46 What constraints do you face in accessing services?  
 Poor infrastructure                      No extension services                      Sex                      Other (specify)
- 47 What information do you lack in accessing assets?  
 Mineral deposits                      Markets (illegal trade, poor prices)                      Laws and regulations                      Other (specify)

#### POWER AND DECISION MAKING (multiple choice)

- 48 What decision making do you participate in at the mining operation?  
 None    Access to mineral deposit    Production    Selling    Sourcing inputs    Waste disposal    Other (specify)
- 49 What decision making do you usually control at the mining operation?  
 None    Access to mineral deposit    Production    Selling    Sourcing inputs    Waste disposal    Other (specify)
- 50 What constraints do you face in decision making at the mining operation?  
 None            Exclusion            Disrespect            Conflict            Other (specify)
- 51 What decision making do you usually participate in in the household?  
 None    Household expenditure    Income-generating activities    Family care    Sourcing water and energy  
 Trading-up decision                      Other (specify)
- 52 What decision making do you usually control in the household?  
 None    Household expenditure    Income-generating activities    Family care    Sourcing water and energy  
 Trading-up decision                      Other (specify)
- 53 What constraints do you face in decision making in the household?  
 None            No voice            No control            Other (specify)
- 54 What decision making do you usually participate in at the community level?  
 None    Selecting political representation    Consultation in review and development of community initiatives    Other (specify)
- 55 What decision making do you usually control at the community level?  
 None    Selecting political representation    Consultation in review and development of community initiatives    Other (specify)
- 56 What constraints do you face in decision making at the community level?  
 None    Inadequate consultation    Intimidation    Lack of platform to voice opinions    Other (specify)
- 57 What decision making do you participate in at the local government level?  
 None            Consultation in review and development policy, by-laws, programs    Other (specify)
- 58 What decision making do you usually control at the local government level?  
 None            Application for surface rights                      Other (specify)
- 59 What constraints do you face in decision making at the local level?  
 None            Exclusion            No consultation            Inadequate consultation    Other (specify)
- 60 What decision making do you participate in at the national government level?  
 None            Consultation in review and development policy, laws, regulations, programs    Other (specify)
- 61 What decision making do you usually control at the national government level?  
 None            Application for mining rights                      Reporting is required by law    Other (specify)
- 62 What constraints do you face in decision making at the national government level?  
 None            Exclusion            No consultation            Inadequate consultation    Other (specify)

**MINERS' NEEDS, PRIORITIES, AND PERSPECTIVES ON SERVICE DELIVERY** (multiple choice)

- 63 What are miners' practical gender needs?
- |  |                          |
|--|--------------------------|
| Training to improve skills                             | Improved income from ASM |
| Equipment and technology for ASM                       | Health and safety in ASM |
| Information and services to optimize benefits from ASM | Alternative livelihoods  |
| Other (specify)  |                          |
- 64 What are miners' strategic gender needs?
- Equitable access to assets
  - Dealing with migration due to ASM
  - Equitable access to capacity-building programs
  - Participation in review and development of policies, laws, programs
  - Capacity for collective organization
  - Formalization of ASM
  - Other (specify)
- 65 How can men's and women's access to mineral deposits and services (production and marketing) be improved?
- |   |                           |
|---|---------------------------|
| Decentralization of mining administration offices | Adaptation of regulations |
| Provision of information                          | Access to finance         |
| Other (specify)                                   |                           |
- 66 Are there women miners' associations?                      Yes                      No
- 67 Would a women's association facilitate their needs being met?                      0    1    2    3    4    5

**SOCIAL/CULTURAL CONTEXT** (multiple choice)

- 68 Which structures (social, cultural, economic, institutional, and legal) that affect ASM must be transformed to improve the livelihood outcomes of women and men?
- Government departments, agencies, and parastatals
  - Law enforcement and judiciary (courts)
  - Traditional authorities and customary courts
  - NGOs, civil society, and community organizations
  - Miners' associations
  - Research institutions and service providers, including financial institutions
  - Other (specify)
- 69 How can the structures that affect ASM be transformed?
- |  |                  |
|--|------------------|
| Increase number of women in structures | Decentralization |
| Improve their accountability           | Other (specify)  |
- 70 How can the formal processes (policies, legislation, programs) that affect ASM be transformed?
- Increase participation in the review of policies, laws, and programs
  - Development of new policies, laws, and programs
  - Awareness raising
  - Other (specify)



## Resources

### Appendix C

### Miners Survey

- 71 How can the informal processes (cultures, norms, and values) that affect ASM be transformed?  
 Supporting change in norms, values, and cultures  
 Review traditional, indigenous, and community rights  
 Awareness of legal and social rights  
 Other (specify)
- 72 Do you feel you understand the laws that affect rights to access mineral deposits?  
 0 1 2 3 4 5
- 73 Should the laws be changed to improve the access of men and women in ASM to mineral deposits? Yes No
- 74 Is it possible to review and change the customary laws that hinder the participation of women in ASM?  
 0 1 2 3 4 5
- 75 Do environmental impacts of ASM affect women more than men? 0 1 2 3 4 5
- 76 Are there enough women in the government structures that influence ASM? 0 1 2 3 4 5
- 77 Are the mining administration offices close enough for you? 0 1 2 3 4 5
- 78 Is it easy for you to comply with the mining law? 0 1 2 3 4 5
- 79 Are you comfortable dealing with law enforcement agents and courts? 0 1 2 3 4 5
- 80 Any other comments?





- Akabzaa, T., and A. Darimani. 2001. "Impact of Mining Sector Investment in Ghana: A Study of the Tarkwa Mining Region." Report prepared for SAPRI.
- ANU (Australian National University) and World Bank. 2008. "Workshop Summary Report: Gender, Mining and Sustainable Livelihoods." <http://empoweringcommunities.anu.edu.au/workshop.php>; accessed February 7, 2012.
- Amutabi, M., and M. Lutta-Mukhebi. 2001. "Gender and Mining in Kenya: The Case of the Mukibira Mines in the Vihiga District." *Jenda: A Journal of Culture and African Women's Studies* 1 (2): 1–23.
- Babu, F. 2004. "India: Sand Mining in Tamil Nadu." In *Proceedings of the III International Women & Mining Conference*, ed. K. Bhanumathi, N. Kalpa, et al. Visakhapatnam, India, October 1–9.
- Caballero, E. 2006. "Traditional Small-Scale Miners: Women Miners of the Philippines." In *Women Miners in Developing Countries: Pit Women and Others*, ed. K. Lahiri-Dutt and M. MacIntyre, 145–62. Oxon, UK: Ashgate.
- Chakravorty, S. L. 2001. "Artisanal and Small-Scale Mining in India." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- DFID (Department for International Development). 1999. Sustainable Livelihoods Guidance Sheets.
- Dowling, S. 2008. "Gender Analysis: An Introductory Guide." Resource Management in Asia Pacific Program, Australian National University. <http://empoweringcommunities.anu.edu.au/workshop.php>; accessed February 7, 2012.
- Dreschler, B. 2001. "Small-Scale Mining and Sustainable Development within the SADC Region." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- Eftimie, A. K. Heller, and J. Strongman. 2009a. "Mainstreaming Gender into Extractive Industries Projects: Guidance Note for Task Team Leaders." World Bank.
- . 2009b. "Mining for Equity: The Gender Dimensions of the Extractive Industries." World Bank.
- Ellis, F., and G. Bahigwa. 2003. "Livelihoods and Rural Poverty Reduction in Uganda." *World Development* 31: 997–1013.
- Gueye, D. 2001. "Small-Scale Mining in Burkina Faso." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- Hayes, K. 2007. "Women and Artisanal Mining in the Democratic Republic of the Congo." Pact Factfiles.
- Heemskerck, M. 2000. "Gender and Gold Mining: The Case of the Maroons of Suriname." Women and International Development Working Paper 269.
- . 2003a. "Microeconomics of ASM Workshop." Presentation at Communities and Small-Scale Mining (CASM) Annual General Meeting, Elmina, Ghana, September 8–10.
- . 2003b. "Self-Employment and Poverty Alleviation: Women's Work in Artisanal Gold Mines." *Human Organization* 62 (1): 62–73.
- Hentschel, T., F. Hruschka, M. Priester. 2002. "Global Report on Artisanal and Small Scale Mining." Mining, Minerals and Sustainable Development Project.
- Hilson, G. 2001. "A Contextual Review of the Ghanaian Small-Scale Mining Industry." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- Hinton, J., M. Veiga, and C. Beinhoff. 2003. "Women and Artisanal Mining: Gender Roles and the Road Ahead." In *Socio-economic Impacts of Artisanal and Small-scale Mining in Developing Countries*, ed. G. Hilson, ch. 11. Rotterdam: Balkema.

- Hinton, J. 2006. *Communities and Small-Scale Mining: An Integrated Review for Development Planning*. Washington, DC: Communities and Small-Scale Mining Initiative.
- . 2009. "National Strategy for the Advancement of Artisanal and Small Scale Mining in Uganda." Report to Ministry of Energy and Mineral Development.
- . 2010a. "National Guidance Strategy for the Promotion of Gender Equity in Mining." Report to Ministry of Energy and Mineral Development.
- . 2010b. "Recommendations for Class C Mining Regulations and Their Implementation and Future Amendments to the Mining and Minerals Act in Liberia." Report to USAID Governance and Economic Management Project.
- . 2011a. "Gender Differentiated Impacts and Benefits of Artisanal Mining: Engendering Pathways out of Poverty. A Case Study in Katwe Kabatooro Town Council, Uganda." Ph.D. dissertation. University of British Columbia.
- . 2011b. "Towards Responsible ASM: Recommendations for the Support to Artisanal Mining Project (SAM Project)." Report to Swiss Development and Cooperation Agency.
- Hinton, J., B. E. Hinton, and M. M. Veiga. 2005. "Women in Artisanal and Small Scale Mining in Africa." In *Women Miners in Developing Countries*, ed. K. Lahiri-Dutt and M. MacIntyre, ch. 10. Oxon, UK: Ashgate.
- Hinton, J., E. Levin, and S. Snook. Forthcoming. "Legal and Fiscal Regimes for Artisanal Diamond Mining: Support for Formalization of Artisanal Diamond Mining in Central African Republic." In *Geological Resources and Good Governance in Central Africa*, ed. J. Runge and J. Shikwati. Routledge.
- Hinton, J., and S. Wagner. 2010. "Gender and Artisanal & Small Scale Mining (ASM): A Case Study in Merirani, Tanzania." Tanzania draft pilot study report. World Bank.
- ILO (International Labour Organization). n.d. "About Child Labour." <http://www.ilo.org/ipec/facts/lang-en/index.htm>; accessed February 7, 2012.
- Jennings, N. 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 Organization, Geneva.
- Jerez, D. B. 2001. "Regional/National Study on Small-Scale and Artisanal Mining in Bolivia." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- Kabeer, N. 2008. "Mainstreaming Gender and Social Protection in the Informal Economy." New Delhi: Routledge.
- Katz, A. 2010. "Gold Rush in Nigeria Kills Children as Miners Belatedly Discover Lead Dust." *Bloomberg*, December 20. <http://www.bloomberg.com/news/2010-12-21/gold-rush-in-nigeria-kills-children-as-miners-belatedly-discover-lead-dust.html>; accessed February 8, 2012.
- Keita, S. 2001. "The Contribution of Sadiola Gold Mining Project to Poverty Reduction and the Development of Local Mining Communities." Paper presented at Mining, Minerals and Sustainable Development Project, London, November 19–20.
- King, N., and C. Horrocks. 2010. *Interviews in Qualitative Research*. Thousand Oaks: Sage.
- Krishnaraj, M., and A. Shah 2004. "State of the Indian Farmer: A Millennium Study. Volume 25: Women in Agriculture." New Delhi: Government of India.
- Kuramoto, J. 2001. "Artisanal and Informal Mining in Peru." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iiied.org/mmsd/>; accessed February 8, 2012.
- Kvale, S. 1996. *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks: Sage.
- Labonne, B. 1998. "Of Gold and Women." *DESA News* 2 (1).
- Lahiri-Dutt, K. 2007. "Roles and Status of Women in Extractive Industries in India: Making a Place for a Gender-Sensitive Mining Development." *Social Change* 37 (4): 37–64.

## Resources

### References

- . 2008. "Digging to Survive: Women's Livelihoods in South Asia's Small Mines and Quarries." *South Asian Survey* 15 (2): 217–44.
- Lahiri-Dutt, K., and C. Insouvanh. 2010. "Gender in Artisanal Tin Mining in Lao PDR: A Case Study in Ban Moua Khay and Ban Nahi, Khammuane Province." Lao People's Democratic Republic draft pilot study report. World Bank.
- Lawson, D., A. MacKay, and J. Okidi. 2005. "Poverty Persistence and Transitions in Uganda: A Combined Qualitative and Quantitative Analysis." Q-Squared Working Paper No. 3. Centre for International Studies.
- Levin, E. A., and L. Gberie. 2006. "Dealing for Development: A Study of Diamond Marketing in Sierra Leone." DDI report.
- Lujan, A. 2004. "Overview of Mining in Peru." In *Proceedings of the III International Women & Mining Conference*, ed. K. Bhanumathi, N. Kalpa, et al. Visakhapatnam, India, October 1–9.
- Moser, C., A. Norton, T. Conway, C. Ferguson, and P. Vizard. 2001. *To Claim Our Rights: Livelihood Security, Human Rights and Sustainable Development*. Overseas Development Institute.
- Murao, S., E. Daisa, K. Sera, V. B. Maglambayan, and S. Futatsugawa. 2002. "PIXE Measurement of Human Hairs from a Small-Scale Mining Site of the Philippines." *Nuclear Instruments and Methods in Physics Research B* 189: 168–73.
- Mutemeri, N. 2007a. "Artisanal and Small-Scale Mining Module." Mining & the Environment Course. University of the Witwatersrand.
- . 2007b. "Women in Artisanal Mining." Paper presented at Women in Mining Colloquium, University of the Witwatersrand.
- . 2009. Presentation at UMU Grassroots Diggers Workshop, Mabonto, Sierra Leone, June.
- Mutemeri, N., and M. Samba. 2010. "Gender and ASM: Mozambique Baseline Study of an ASM Community in Manica." Mozambique draft pilot study report. World Bank.
- Noetstaller, R., M. Heemskerck, F. Hruschka, and B. Drechsler. 2004. "Program for Improvements to the Profiling of Artisanal and Small-Scale Mining Activities in Africa and the Implementation of Baseline Surveys." Communities and Small-Scale Mining (CASM) Division. Washington, DC: World Bank.
- Onuh, B. 2002. "Salt Women of Keana." Newswatch. <http://www.newswatchngr.com/editorial/prime/2002/11112002/bob11110133914.htm>; accessed February 8, 2012.
- Patton, M. Q. 1990. *Qualitative Evaluation and Research Methods*, 2nd ed. Newbury Park, CA: Sage.
- Peterson, G. D., and M. Heemskerck. 2001. "Deforestation and Forest Regeneration Following Small-Scale Gold Mining in the Amazon: The Case of Suriname." *Environmental Conservation* 28 (2): 117–26.
- Potter, J., R. L. Smith, and A. M. Api. 2001. "An Assessment of the Release of Inorganic Cyanide from the Fragrance Materials Benzyl Cyanide, Geranyl Nitrile and Citronellyl Nitrile Applied Dermally to the Rat." *Food and Chemical Toxicology* 39: 147–51.
- Sahnaj, K. 2004. "India: Women Mine Workers in Uttarpradesh." In *Proceedings of the III International Women & Mining Conference*, ed. K. Bhanumathi, N. Kalpa, et al. Visakhapatnam, India, October 1–9.
- Susapu, B., and G. Crispin. 2001. "Country Study Report on Small-scale Mining in Papua New Guinea." Country study commissioned by Mining, Minerals and Sustainable Development Project (MMSD). <http://www.iied.org/mmsd/>; accessed February 8, 2012.
- USAID (U.S. Agency for International Development). 2000. "Mining for Gold in Siguiri: A Close Look at a High-Risk Population." Report on Guinea.
- Van Bramer, S. E. 1995. "What Is Plagiarism?" <http://science.widener.edu/svb/essay/plagiar.html>; accessed June 20, 2010.
- Veiga, M. M. 1997. "Introducing New Technologies for Abatement of Global Mercury Pollution in Latin America." Rio de Janeiro: UNIDO/UBC/CETEM. [http://www.facome.uqam.ca/pdf/veiga\\_01.pdf](http://www.facome.uqam.ca/pdf/veiga_01.pdf); accessed February 8, 2012.

- Veiga, M. M., and R. Baker. 2004. "Protocols for Environmental and Health Assessment of Mercury Released by Artisanal and Small-Scale Gold Miners." Vienna: United Nations Industrial Development Organization.
- Veiga, M. M., and J. J. Hinton. 2002. "Abandoned Artisanal Gold Mines in the Brazilian Amazon: A Legacy of Mercury Pollution." *Natural Resources Forum* 26:15–26.
- Wasserman, E. 1999. "Environment, Health and Gender in Latin America: Trends and Research Issues." *Latin American Research Issues, Environmental Research Section A* 80: 253–73.
- WMMF (World Mines Ministries Forum). 2000. "Mining Communities Workshop: Artisanal Mining." *Proceedings of the 1st WMMF*, Toronto, Canada, March 8–11.
- World Bank. 2001. *Engendering Development Through Gender Equality in Rights, Resources, and Voice*. New York: Oxford University Press.
- . 2011. *World Development Report 2012: Gender Equality and Development*. <http://go.worldbank.org/CQCTMSFI40>; accessed February 8, 2012.