



2023 State of the Artisanal and Small-Scale Mining Sector

DELVE

A GLOBAL PLATFORM FOR ARTISANAL & SMALL SCALE MINING DATA



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Acronyms

4-Cs	Cut, Carat, Color and Clarity	CSO	Civil Society Organization
4IR	Fourth Industrial Revolution	DA	The Philippines Department of Agriculture
AIDS	Acquired Immunodeficiency Syndrome	DC	District councils
AFAMC	Association of Women Artisanal Miners of Carnot	DMRE	South Africa's Department of Mineral Resources and Energy
AFAMCA	Association of Women Artisanal Miners of the Central African Republic	DRC	Democratic Republic of Congo
AFESMICA	Association of Women in the Central African Mining Sector	EGPS	Extractive Global Programmatic Support
AGC	Artisanal Gold Council	EPA	Environmental Protection Agency
AGI	Africa Gender Index	EPRM	European Partnership for Responsible Minerals
AMDC	African Minerals Development Centre	FCT	Federal Capital Territory
AMV	African Mining Vision	FWO	Research Foundation Flanders
ARM	The Alliance for Responsible Mining	ICBF	The Instituto Colombiano de Bienestar Familiar
ART	Antiretroviral therapy	ICMM	The International Council on Mining and Metals
ASGM	Artisanal and small-scale gold mining	IGF	The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
ASM	Artisanal and small-scale mining	IHI	Ifakara Health Institute
ASOMUSELUPAZ	The Association of Women Mineral Selectors and Peacebuilders	ILO	International Labour Organization
AWOME	African Women in Mining Empowerment Trust	IQ	Intelligence Quotient
AZWIM	Association of Zambian Women in Mining	ISMR	Illuminating Small-Scale Mining in Rwanda
BECDOR	Bureau d'expertise et de contrôle du diamant et de l'or	G4M	Girls for Mining Club
CEDAW	The Convention on the Elimination of All Forms of Discrimination Against Women	GBV	Gender-based violence [includes sexual violence]
CEGEMI	Centre d'Expertise en Gestion Minière	GHS	Ghana Health Service
CIETI	The Inter-Institutional Committee for the Prevention and Eradication of Child Labor	HIV	Human Immunodeficiency Virus
CG	Compassionate Gold	HTS	HIV testing services
CL	Child Labor	KPCS	Kimberly Process Certification Scheme
CLHIV	Children living with HIV	LGU	Local Government Unit
CRAFT Code	Code of Risk-mitigation for ASM engaging in Formal Trade	MDD	Madre de Dios
		MiniCom	Ghana's Minerals Commission
		MMG	Central African Republic's Ministry of Mines and Geology
		MMSD	Nigeria's Minister of Mines and Steel Development

MOHCDEGEC	Tanzania's Ministry of Health, Community Development, Gender, Elderly and Children	USAID AMPR	USAID Artisanal Mining and Property Rights
MPRDA	Mineral and Petroleum Resources Development Act, 2002	VLIR-UOS	Flemish Interuniversity Council
NGO	Non-governmental Organization	WIAMO	Rwanda Women In/And Mining Organization
OECD	Organisation for Economic Co-operation and Development	WIASM	Women in Artisanal Scale Mining
OHCHR	Office of the United Nations High Commissioner for Human Rights	WHO	World Health Organization
OHS	Occupational health and safety	WIM	Women in Mining
OSIWA	Open Society Initiative for West Africa	WIMIN	Women in Mining in Nigeria
OUWC	Other Unacceptable Working Conditions	WIMTI	Women In Mining Training Institute
OVC	Orphans and vulnerable children	WoME	Women on Mining and Extractives
PDA	Peace Diamond Alliance	WRC	Ghana's Water Resources Commission
PEPFAR	The U.S. President's Emergency Plan for AIDS Relief		
PPE	Personal protective equipment		
RED SOCIAL	Instituto Redes de Desarrollo Social		
RMB	Rwanda Mines, Petroleum and Gas Board		
SDG	Sustainable Development Goal		
SENA	Servicio Nacional de Aprendizaje		
SMDF	Solid Minerals Development Fund		
SN	The Pilares Solidarity Network		
SRH	Sexual and Reproductive Health		
STD	Sexually Transmitted Disease		
STEM	Science, Technology, Engineering and Mathematics		
STI	Sexually Transmitted Infection		
SIRITI	System for the Identification, Registration and Characterization of Child Labor and its Worst Forms		
TAMOWA	Tanzanian Women Miners Association		
VSLA's	Village Savings and Loans Associations		
UC	University of Cartagena		
UN	United Nations		
USAID	United States Agency for International Development		



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EXECUTIVE SUMMARY

Global outlook on Artisanal and Small-Scale Mining and SDG 5 Gender Equality

Since the Sustainable Development Goals (SDGs) were adopted in 2015, SDG 5 “Achieve Gender Equality and Empower all Women and Girls” (SDG 5 Gender Equality) was showing improvement. Girls’ access to education increased, women’s representation in parliament grew, and child marriage has decreased.¹ However, since the global COVID-19 pandemic in 2020 the world has witnessed increases in violence, child marriage, and women and girls in caregiver roles. Since the end of the pandemic, the annual Sustainable Development Goals Report has painted a worrisome picture warning that the “world is not on track to achieve SDG 5 Gender Equality by 2030” (UNECA, 2023).

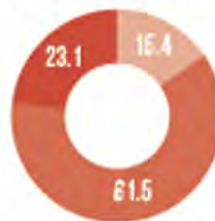
5 GENDER EQUALITY



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

THE WORLD IS 
NOT ON TRACK TO ACHIEVE
GENDER EQUALITY BY 2030

OUT OF GOAL 5 INDICATORS:



- ON TRACK
- AT A MODERATE DISTANCE
- FAR OR VERY FAR OFF TRACK

AT THE CURRENT RATE, IT WILL TAKE



300 YEARS
TO END CHILD MARRIAGE



286 YEARS TO CLOSE GAPS
IN LEGAL PROTECTION AND
REMOVE DISCRIMINATORY LAWS



140 YEARS TO ACHIEVE
EQUAL REPRESENTATION IN
LEADERSHIP IN THE WORKPLACE

Since 2015, the annual SDG Report has also repeated *ad infinitum* the same consistent message: the equality and empowerment of women and girls will not be possible until their rights are secured in legal frameworks. Various reports outline how “assuring women’s rights through legal frameworks is a first step in addressing discrimination against them”(UNECA, 2016), that “empowering women requires addressing structural issues such as unfair social norms and attitudes as well as developing progressive legal frameworks that promote equality between women and men” (UNECA, 2018), and “discriminatory laws and legal gaps continue to prevent women from enjoying their human rights” (UNECA, 2021). The pace of gender-related legal reforms is also slowing with economies in 2022 adopting the fewest gender-related reforms in more than two decades (World Bank 2023a). The World Bank’s forthcoming Gender Strategy 2024–2030 recognizes the urgent imperative to accelerate gender equality for a sustainable, resilient, and inclusive future (World Bank 2023b).

The 2023 State of the Artisanal and Small-Scale Mining (ASM) Sector report takes up this call to action to examine whether and how legal frameworks inhibit or promote women’s equality and empowerment in ASM, along with analyzing several other key barriers to women’s participation and empowerment in the sector including social protections and access to occupational health and safety (OHS).

The report finds that while considerable work remains to get back on track to achieve SDG 5 by 2030, gains are being made through women-focused initiatives advancing the development of the ASM sector. Successful initiatives have addressed the legal and structural barriers to female participation in ASM, included women in their design and implementation, and developed women’s capacities in law, mining, and business. However, significant progress is needed to make ASM legal frameworks gender inclusive, advance women’s social protections at work and home, and account for gendered differences in ASM occupational health and safety.

The contributions of ASM to SDG 5

ASM is a vital contributor to our global economy and way of life. It supplies notable volumes of minerals to global industries from jewelry, construction, agriculture, information technology, manufacturing, automotive, and defense. Women play a critical role in this sector, with an estimated 13.4 million women working in ASM worldwide, comprising 30% of the global 44.67 million ASM workforce.² However, the lack of sex-disaggregated data on women’s participation in ASM could make this figure far higher.

Women perform multiple direct and indirect tasks along the ASM value chain: mining, sorting, crushing, grinding, sieving, washing and panning; and transporting ores, food sales, and other related services. Some of these tasks are visible, occurring at the mine face. But many female-concentrated ASM job categories happen away from view, such as retreating material in rivers downstream, processing gold with mercury in their homes, and preparing food for miners. Many of these tasks are never recognized, let alone documented, even when mine surveys do occur at sites, leaving the impression that mining remains a man’s world. Simply put: women are not being counted. The result is that without interventions that promote women’s participation, policies and practices to improve the well-being and standing of miners are gender blind—meaning they fail to acknowledge and accommodate gender differences that affect equal participation of men and women in ASM.

Some examples of gender-blind reforms and practices in ASM include: a lack of prioritizing women’s sanitation and hygiene infrastructure at mine sites, child care provisions, or lighting that could improve security and OHS; the introduction of mechanization and simple technologies that increase productivity but inadvertently take jobs away from women without re-deployment elsewhere; structures and processes to report malpractices at sites being governed by the very people who commit the abuses against women.

Not only does the lack of visibility of women exclude them from meaningful reforms to the sector, but it often leads to economic and physical discrimination. As a result of performing ancillary roles such as

washing, processing, and transporting ore, women in ASM are excluded from the highest-earning activities and do not derive the same economic benefits as men in ASM do.

Achieving SDG 5 in ASM: Recommendations and key findings

The 2023 State of the Sector report examines the intersection of ASM and SDG 5 and the steps that need to be taken to achieve gender equality. Drawing on a review of mining and legal frameworks in 21 countries and the collection of primary data, a first for the 2023 report, through a trio of surveys with over 1,900 participants from government, women in mining groups, and miners themselves,³ the 2023 report amplifies the visibility of women's contributions in ASM and provides quantitative and qualitative data to underpin its recommendations. The 2023 report effectively communicates the voices of women by including a substantial repre-

sentation of 67% female participants in the survey who shared their experiences with the legal and structural barriers. Fourteen case studies (representing 12 countries) contributed by 34 authors from 23 organizations illustrate practical examples to follow in order to advance SDG 5 in ASM. Women-led mining groups and networks were instrumental in the data collection of this report, and their organizational and influencing power should be capacitated and harnessed to help close the gender gap in ASM.

“As miners and as an association, we need support. Support from government agencies, municipalities, and the country as a whole, that supports the mining sector and gives more confidence to women, supports us in gender and human rights...They should strengthen us and help us grow, give us a hand, and help us move forward”

– DIVANEY VIVEROS (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

“Maman minyangala” at work, Democratic Republic of Congo



Credit: Sara Geenen

To best understand and analyze the challenge of achieving SDG 5 gender equality and women and girls empowerment in ASM, the 2023 State of the Sector report employed an analytical framework that identified three key barriers to women's participation and empowerment in the sector.

The report is structured in three chapters, with each providing findings from the research, illustrative case studies, and a key recommendation to advance women's participation in ASM:

- 1. Make mining laws and economic policies gender inclusive.**
- 2. Advance women's social protections at the mine and home.**
- 3. Account for gendered differences in occupational health and safety (OHS) efforts at mine sites.**

Please see the full report for supporting information informed by primary research for each of the key findings.

RECOMMENDATION 1: MAKE MINING LAWS AND ECONOMIC POLICIES GENDER INCLUSIVE

Like its global ambition, advancing SDG 5 in ASM must start from the position of legal recognition. Legislation can either support or impede gender equality and women's empowerment within wider society, which then impacts women's full and effective participation in ASM. The 1935 (No. 45) International Labour Organization Underground Work (Women) Convention⁴ formed the basis of discrimination against women in the mining industry writ large, making it illegal for women to work in underground mines. Despite more recent amendments in many national legislations and lack of enforcement in others, it still provided the basis for banning women from mining, including in ASM. The Convention is proposed for abrogation at the 112th session of the International Labour Conference in 2024, signaling an important step in protecting women's access to work in mining and providing a catalyst for further reforms.

The 2023 State of the Sector finds that most mining codes around the world are gender blind or gender neutral and do not contain stipulations to enhance women's participation in ASM. An in-depth legal analysis of the mining code and relevant laws (such as land and reproductive health rights) of 21 ASM countries across Latin America and the Caribbean, Africa, and East Asia and Pacific found that 14 mining codes (67%) and 17 (80%) property right laws are gender blind or neutral, leaving women behind in terms of access and control over resources. Seven countries are found to have included gender in their mining codes, with most being in Sub-Saharan Africa, while only three of the 21 countries have passed gender-sensitive land laws (Colombia, Tanzania, and Zambia). Governments pointed to capacity building and financial support as the most common forms of support needed to better consider the needs of women. Officials cite lack of funding as the greatest challenge to integrating gender considerations into efforts aimed at supporting the sector.

Legal frameworks guaranteeing the rights and fundamental freedoms of women in society and mining are not the only factor constraining women's full participation in ASM. Traditional beliefs and discriminatory customary practices can also constrain women in ASM from fully enjoying their rights, exercising economic autonomy, and making decisions independently.

But what is the impact of mining, land, and health rights legislative frameworks being gender blind and gender neutral, as well as customary practices limiting women's equality and full participation in ASM? Gender-blind approaches to formalize the sector overlook women in ASM as an important stakeholder group and fail to consider their unique gender-specific needs. Consequently, there is a lack of information and understanding of the on-the-ground needs of women in ASM.

Somewhat reassuringly, however, the 2023 State of the Sector finds that governments are increasingly recognizing the importance of women in ASM, with 67% of officials responding that they have undertaken programs that specifically empower women in ASM or have women-specific components.

Additionally, 83% of government officials stated they included women in the development of ASM formalization interventions. Though there is some way to go in understanding and capacity development on gender-inclusive policy and programming. Exploring the outcomes and impact of such interventions further could be a useful avenue in future work to better understand the gap between law, policy, and program interventions.

The report provides ways in which women's full participation in ASM can be promoted through five illustrative case studies from partner organizations on the ground in the Peru, South Africa, Nigeria, Sierra Leone, and Colombia.

KEY FINDINGS

- **The lack of gender-sensitive language in national laws is hindering gender equality in ASM.**
- **Governments are increasingly recognizing the importance of women in ASM.**
- **Capacity development and financial support are crucial areas that require immediate attention to enable government officials to advance gender equality in the ASM sector.**

RECOMMENDATION 2: ADVANCE WOMEN'S SOCIAL PROTECTIONS AT THE MINE AND HOME

Social protections are defined as the “set of policies and programs aimed at preventing and protecting all people against poverty, vulnerability and social exclusion, throughout their life.” (SPIAC-B, 2019). Focused on SDG target 5.4: “recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies ...,” social protections are a fundamental construct within national development strategies and support gender equality and women's and girl's empowerment. Placing an emphasis on vulnerable groups, social protections can be a catalyst for reducing gaps in inequality, promoting social inclusions, and eradicating poverty.

Within ASM, establishing and improving social protection mechanisms through policies and policy

reforms has the potential to drive growth that is more inclusive and fair. However, it is estimated by the International Labour Organization that 55% of the world's population does not have any social protection coverage while many others have only partial protection. This worryingly large gap in social safety nets is especially true for informal economic activity of which the majority of ASM falls, with 80–90% of ASM miners worldwide estimated to operate informally without the licenses and permits required by law and poor practices (World Bank, 2020).

The recommendation to advance women's social protections at work and home through ASM is therefore urgently needed. The report illustrates there is good progress in this regard and the sector is responding to these gaps in social protection through partnerships with governments and civil society organizations toward increasing access to social protection for artisanal and small-scale miners.

According to government officials, Women in Mining (WIM) groups, and miners, formalization interventions are leading to perceived increases in women's participation in ASM, mining license applications, and improvements in perception of women miners. However, the share of domestic work women are expected to undertake has not significantly decreased. This quantifies the “double burden” that women carry (combination of domestic and work duties) and is a significant reason why women work fewer hours in ASM than men do. On average, women working in the ASM value chain performed 26% (five hours per week) more domestic work than men. Additionally, gender-based violence (GBV) that disproportionately affects women is not being actively monitored by governments at ASM sites, meaning data-driven and evidence-based policies and initiatives to address GBV in ASM communities cannot be robustly developed and implemented.

A second powerful finding, and a recurring theme throughout the report, is the importance of gender-specific ASM networks and associations to improve women's visibility in ASM and advance gender equality, and the importance of stakeholders working together to achieve beneficial outcomes for women. WIM groups' participation in formalization initiatives resulted in a reported increase

in the number of women in leadership positions, decrease in discrimination, reduction in GBV, and increase in women's access to land/mine ownership. Empowering, legitimizing, and professionalizing these gender-specific professional groups is critical to advancing gender equality in ASM.

In countries where there are no nationwide interventions that include women in ASM, the 2023 report finds that WIM groups and NGOs remain critical in facilitating multistakeholder engagement. Along with the trainings, workshops, and community meetings these groups provide, TV, radio, newspapers, and social media were all reported as being important to spread awareness of government and nongovernment programs and opportunities to grow social protections.

While well-structured policy is important to improve social protections for women in ASM, it takes concrete actions to enable these policies. The report presents six case studies from organizations working in Colombia, Mongolia, the Central African Republic, Ghana, Tanzania, and the Philippines illustrating methods being used to bring about meaningful changes in the lives of artisanal and small-scale miners.

KEY FINDINGS

- **Women are being included by government in ASM development initiatives, increasing women's participation and improving perceptions of them in ASM.**
- **ASM support initiatives need to consider how to reduce disparities in domestic work performed by women versus men.**
- **Gender-specific ASM networks and associations are critical to improving women's visibility in ASM and advancing gender equality.**
- **Governments lack a reporting mechanism to monitor GBV in ASM communities.**

RECOMMENDATION 3: ACCOUNT FOR GENDERED DIFFERENCES IN OCCUPATIONAL HEALTH AND SAFETY EFFORTS AT MINE SITES

Engaging in ASM bears the risk of numerous occupational health and safety (OHS) hazards. The gendered division of labor, anatomical and biological differences, employment patterns, cultural beliefs, societal roles, expectations, and responsibilities contribute to gender-specific patterns of OHS hazards and risks and result in differentiated, and sometimes higher, risks of negative OHS impacts in ASM. The 2023 report explored gendered inequality of OHS in ASM according to four categories: i) physical and biomechanical, ii) chemical, iii) psychosocial, and iv) environmental.

The 2023 State of the Sector highlights how women's lower earnings in periphery roles with repetitive manual tasks such as rock breaking and ore grinding, and lack of access to capital means they face specific biomechanical impacts and cannot afford personal protective equipment or improved mining and processing technologies.

In many countries, women are excluded from gold extraction activities due to cultural beliefs and presumed regard for their perceived safety. Instead, women are confined to processing activities conducting mercury amalgamation and vaporization. Women and children are disproportionately impacted by occupational mercury use as the powerful chemical neurotoxin can be transferred to young and unborn children through breastfeeding and the placenta causing adverse birth outcomes, spontaneous abortions, low birth weights, and preterm births.

Psychosocially (the influence of social and physical factors on an individual's mind or behavior), the level of physical activity in ASM can result in extreme fatigue and chronic pain not only because of the arduous work but also due to the additional domestic demands placed on women, resulting in abuse of drugs and alcohol as a coping mechanism. Hunger and malnutrition, with women traditionally being the food providers at home and mine sites, can have additional psychosocial impacts.

The negative environmental impacts of ASM activities that result in agricultural land degradation

and destruction are found to disproportionately affect women because they often rely on farming for income and to supplement the household diet. With women most often being responsible for food provision in the home, when the quality, quantity and nutritional value of food is reduced, it is often women who go without to feed their families first.

The report calls for interventions to account for gendered differences in OHS within ASM to ensure gender equality and women’s full participation in the sector. The differentiated OHS impacts of ASM are further evidenced by the 2023 State of the Sector Survey findings that show the negative environmental impacts of ASM are increasing and disproportionately impacting women as reported by over one-third of miners participating in the Mine Site Questionnaire.

Miners often lack access to health care near the ASM sites where they work, cutting off access to maternal and sexual health and reproductive care. And worryingly, women in ASM are disproportionately 11 times more likely to be in early marriage (under the age of 18) than men, which can limit their freedoms and at times be a form of modern slavery.

Gender-responsive ASM policy and interventions can address the various OHS challenges faced by women. Legislation that enhances women’s access to and ownership of land could empower women in ASM to participate in the sector actively and meaningfully without fear and risk of GBV. Gender equality

can be promoted through interventions that enable women to advance from hazardous lower-earning peripheral jobs, which has constrained them from participating in decision making, to higher-paid decision making roles. By elevating the position of women in ASM, approaches aimed at fostering gender equality can disrupt the gendered social norms and cultural barriers that result in pervasive gender discrimination and GBV in ASM communities and the wider society.

To better understand the ways in which ASM produces gendered effects on women’s well-being, three case studies from the Democratic Republic of Congo (DRC), Ghana, and Rwanda demonstrate the wide array of OHS risks and mining-related health impacts, as well as the various interventions and multi-stakeholder approaches needed to improve women’s OHS in ASM and address the differential risks women face.

KEY FINDINGS

- **Women in ASM are being exposed to an increasing number of negative environmental impacts.**
- **There is limited availability of maternal health and sexual health and reproductive care near mine sites and mining communities.**
- **Girls are at a disproportionately higher risk of child marriage in ASM communities than boys.**

Gender and governance workshop with the women of the ASOMUSELUPAZ association



Credit: Alliance for Responsible Mining

Conclusion

The obstacles confronting women in ASM span legal, social, and economic domains. These difficulties are exacerbated by the persisting gender-blindness within mining laws, resulting in discrimination against women miners and hindering their access to resources, education, and economic advancement, placing their safety and well-being at risk. Without action and reforms, women will remain unable to realize the full economic and social benefits afforded by a well-developed ASM sector. The

2023 State of the ASM Sector report summarizes the following key recommendations to improve SDG 5 outcomes in ASM.

The role of professional mining groups like Women in Mining in advancing these actions and achieving reforms cannot be understated. Governments must continue to empower, legitimize, and professionalize these gender-specific groups in order to improve women’s visibility in ASM and advance gender equality.

Recommendation	Description
<p>Make mining legal frameworks gender inclusive</p>	<p>It is imperative to proactively promote and bolster gender equality within mining laws. This requires a comprehensive reevaluation and amendment of gender-blind or gender-neutral mining codes and national mining policies to ensure the acknowledgment and safeguarding of women miners’ rights. Specifically, the forthcoming abrogation of the ILO Underground Work (Women) Convention 1935 (No. 45), which bars female employment in underground mine work, provides a clear catalyst for dialogue and reforms to be built upon. Furthermore, reinforcing legal frameworks that shield women from discrimination and detrimental practices is vital for fostering a more inclusive and equitable environment.</p> <p>In the sphere of land rights and resource access, a fundamental transformation of both statutory land ownership systems and customary tenure arrangements is essential. This transformation enables women to transition from peripheral roles in the ASM value chain to ownership, thereby guaranteeing they receive the same economic benefits as their male counterparts. Ownership enables women to access capital and credit to grow their operations, buy equipment and invest in technology, to generate higher value from mining, and lead the decision making regarding operational and financial management for the benefit of both women and men.</p>
<p>Advance women’s social protections at the mine and home</p>	<p>Advancing social protections for women in ASM provides a critical mechanism to support gender equality and women’s empowerment in ASM. Women in ASM are faced by a multitude of socioeconomic challenges beginning from childhood—young girls face barriers in accessing education; in adolescence, many are forced to leave school early and some are at risk of early pregnancies; and then in adulthood, women are faced with unequal treatment and precarious and unsafe working conditions, including sexual and gender-based violence (SGBV) at mines and at home. Governments and civil society organizations must partner to develop programs and interventions that facilitate greater access for women to educational and livelihood training programs to realize decent work, financial literacy programs that can build economic resilience and independence, and comprehensive sexual and reproductive health support, including access to education, contraceptives, medication, and unrestricted abortion services.</p> <p>Tackling SGBV in ASM through social protection measures is imperative. Robust legal frameworks and specific mine site measures to safeguard the safety and well-being of women are fundamental to their inclusion in ASM, while the deeply ingrained culture of masculinity in mining and ASM also needs tackling through awareness campaigns and education.</p>
<p>Account for gendered differences in occupational health and safety efforts at mine sites</p>	<p>Gender inequalities in occupational health and safety (OHS) result in women being differentially and more greatly exposed to risks in ASM. The differences are due to socio-cultural beliefs that may prevent women’s full and direct participation in mining activities and confine them to certain roles such as breaking rocks, carrying heavy loads on heads, panning and mercury use in gold amalgamation. These roles have heightened risks of repetitive and muscular skeletal injuries and exposure to chemical toxins, especially for pregnant and breastfeeding women. Mine site organization, infrastructure, and personal protective equipment (PPE) designed with men in mind also adversely impact women in ASM. A lack of separate changing and washing facilities, no childcare options, and poorly fitting PPE can prevent women’s equal participation and endanger their lives and that of their children they may have to bring to the mine. To address these issues and achieve gender equality in ASM, an in-depth understanding of the specific risks and needs women in ASM face is needed with which to design ASM sites and PPE that account for gendered differences, train and sensitize miners, government, and development partners to enable women’s equal and safe participation in all roles.</p>

The 2023 State of the Sector Survey underscores that overcoming the barriers faced by women in ASM demands a comprehensive approach, from revising gender-blind mining laws to challenging cultural and societal norms. Governments need to bolster their capacity to design, implement, and monitor gender-sensitive policies and interventions and fund programs aimed at empowering women in ASM. It is critical to prioritize gender equality in the ASM sector and collaboratively create an environment where women can fully participate, flourish, and enjoy their rights without discrimination or hindrance.

END NOTES

- 1 See annual summaries of progress and data on SDG 5 on the UNECA website: https://sdgs.un.org/goals/goal5#progress_and_info
- 2 According to latest estimates in Delve platform (August 2023): <https://delvedatabase.org/> See the 2023 report introduction for more information about the different estimates of women working in ASM of 18–50%.
- 3 The survey includes three questionnaires with 1,935 participants from 22 countries, including government officials (Government Questionnaire, 54% women), leaders of Women in Mining (WIM) groups (WIM

Questionnaire, 100% women), and artisanal and small-scale miners (Mine Site Questionnaire, 79% women). A total of 16 local partner organizations undertook the data collection, 11 of which were women in mining groups. The 14 case studies cover 12 countries: two on Latin America and the Caribbean, eight on Africa, and two on East Asia and Pacific.

- 4 It states, “no female, whatever her age, shall be employed on underground work in any mine.”

CASE STUDIES: A SUMMARY

The three report chapters and their recommendations are accompanied by 14 case studies, contributed by 23 organizations that are directly working to advance SDG 5 in ASM. The case studies cover 12 countries and provide innovative, practical, and replicable examples to advance women's full participation in ASM and sustainable development programming.

Chapter 1 and the recommendation to “make mining laws and economic policies gender inclusive” is accompanied by five case studies. They show the need for legal frameworks and formalization initiatives to include women in their creation and implementation to realize gender equality in ASM.

The first case study on Madre Dios, Peru, by the Instituto Redes de Desarrollo Social (RED SOCIAL) highlights the prominence and leadership role of women as legally recognized miners. Madre Dios has the highest level of female participation in ASM in the country. Women constitute 30% of the legal concession holders and also 30% of the 9,520 people involved with the formalization process. The high levels of women miners in Madre Dios can be attributed to the conducive geological structure, increased learning opportunities, the use of clean technologies, and women in leadership positions due to existing interventions and practices that include women in the creation of regulations. Madre Dios provides an understanding of the cause and effect of higher levels of female participation in ASM activities.

Next, a case study on ASM in South Africa by Imbokodo Mining Services, the National Association of Artisanal Miners, and Women in Artisanal Scale Mining (WIASM) improves under-

standing of the gendered aspects of formalization programs. The case study provides some much-needed insight into how women are impacted by formalization initiatives, including unintended consequences, that in this case included increased gender discrimination and marginalization of some women involved in the intervention. Through gender-disaggregated data tracking (a recommendation of the 2020 State of the Sector report), the longitudinal study charts the experience of 159 women involved in the landmark intervention. The South African experience provides an understanding of the unique gender dynamics of ASM formalization that lays the groundwork from which gender sensitive policy frameworks can be created.

The third case study by Women in Mining in Nigeria (WIMIN) explores the advancement of gender equity through the lens of education and capacity building in Nigeria. To counter the significant gender gap in Nigeria's mining sector, WIMIN, in collaboration with the Ford Foundation and Open Society Initiative for West Africa (OSIWA), established the Women in Mining Training Institute (WIMTI) to provide women in the sector with continuous training and capacity development. In an effort to address gender inequality at the source, they also launched the Girls for Mining (G4M) Club, an intervention aimed at girls in school. Through

coaching and mentorship, it encourages them to pursue science, technology, engineering and mathematics (STEM)-related courses and exposes them to opportunities in mining. These largely online forums demonstrate the opportunity to leverage digital technologies to address gender inequality and capacity building in ASM.

Sierra Leone’s 2018 Artisanal Mining Policy designed to promote formalization is discussed in the fourth case study by Cemrats Group.

Although the national mining laws and regulations offer some protection for women, there have been no specific directives toward safeguarding women in the sector and the initiatives that may see women protected and empowered. The case study clearly highlights how important gender-inclusive mining legal frameworks are to the full participation of women in ASM. Adjacent policies and regulations have played a role in increasing women’s security and progress in the industry, with a new Gender Equality Act in 2023 that aims to increase women’s participation at the leadership and decision making level through gender targets and safeguarding mechanisms, but specific mining legislation is also needed. The case study ends with a call to action for the government to spur the formation of women cooperatives as a means to help catalyze financing and improve their standing within the ASM sector. Notwithstanding the impetus for greater social protection, women will continue to face significant challenges, particularly in financial equity and security, if improved legislation and policy is not matched with concomitant on the ground activities.

The fifth and final case study in Chapter 1 details the partnership between the Alliance for Responsible Mining (ARM) and the Association of Women Mineral Selectors and Peacebuilders (ASOMUSELUPAZ) in the municipality of Suarez, Cauca, Colombia. Women account for more than 50% of ASM workers in Colombia, yet they face a range of gender-based barriers and inequalities, earning less than men for the same roles, exposed to gender-based violence, and often excluded from mining associations and cooperatives—leaving them unable to access formal markets. To overcome this, ARM supported a group of women miners to organize and become formally recog-

nized as a miner collective, leading to the creation of ASOMUSELUPAZ. Through becoming legally recognized as a group, ASOMUSELUPAZ increased their legitimacy with state entities, creating collective identity to represent them and participate in public dialogues they were previously shut out of thereby improving the participation, representation, and visibility of women miners.

Chapter 2 and the second report recommendation to “advance women’s social protections at the mine and work” is accompanied by six case studies.

The case studies reveal the interconnectivity between the sustainable development of the ASM sector and realization of social protection systems. The collective examples also offer insight into ways in which social protection systems must be designed and implemented—with gender inclusion and equity as integral parts, to stimulate socio-economic growth and well-being.

The sixth case study in the report by the international NGO Pact focuses on the Pilares Solidarity Network in Bolivar, Colombia, demonstrating the power of collective social protection approaches to address child labor and unacceptable working conditions in ASM.

Beginning as an association of 12 civil society organizations, growing to 36, the collective approach by the network has created common objectives to better represent the community and legitimacy with local government. In turn, this has resulted in the network having greater influence on local government as well as a more collaborative approach—working together on shared social challenges across ASM, agriculture, and fishing livelihoods to promote the creation and adoption of comprehensive public policy social protection measures on child labor. The network has also supported its members through diagnostic tools and awareness-raising to empower them to identify and implement social protection measures in their municipalities. The case study demonstrates the importance of local actors including communities, civil society, and government to identify and implement social protection measures within ASM and related communities for a holistic and powerful collective approach.

The Artisanal Gold Council and planetGOLD Mongolia provide the seventh report case study on Mongolia.

The case study shares findings from an assessment on artisanal miner's access to social services covering four key aspects of social protection i) social insurance, ii) social welfare, iii) health insurance, and iv) health care services. The assessment finds, despite the vulnerability and differentiated needs of artisanal miners, there is no specific or targeted social protection program for them, and miners are left out of existing social welfare and employment support programs as they are not considered target groups within these programs. Social protection programs that exist for businesses in Mongolia have not been tailored to ASM as they do not account for dynamics of seasonality, irregularity, migration, mobility, and high levels of personnel turnover. Inconsistent ASM formalization policy framework and non-allocation of new ASM land over the last three years has also meant many artisanal miners are jobless and failed to pay social health insurance contributions that serve as one of the most important bases for social protection in Mongolia. The result is end-of-life poverty for both female and male miners, disability, and early deaths for miners and in ASM communities.

Village-level savings and loans associations (VSLAs) for artisanal mining communities in the Central Africa Republic are a social protection example shared by USAID and Tetra Tech in the eighth case study.

With no microfinance services available for women in the remote southwestern part of the Central African Republic, women miners were being left behind in the broader governance shift to professionalization, commercialization, and strengthening of Kimberley Process Certification Scheme (KPCS) chain of custody in the diamond mining sector. As part of the Artisanal Mining and Property Rights project, VSLAs were therefore established to enhance women's social inclusion and provide much-needed financing to do so. The 14 VSLAs saved enough money to offer a 5% interest rate, significantly lower than the 15% rate from traditional microfinance institutions, providing finance to their members for investments and insurance in case of emergencies. Crucially, women were engaged from the outset of the project design through Participatory Rural Appraisal assessments

and development of a Gender Action Plan, ensuring their voice and agency are heard and protected.

The ninth case study by Solidaridad also focuses on access to finance through a pilot project with women goldminers in Ghana.

Following a review of women working in artisanal and small-scale gold mining (ASGM) a key barrier to their equal participation was found to be a lack access to finance and performing low-paid jobs, reflecting their wider marginalized position in their communities, and hindering their economic and social development. To address this inequality, the project aimed to improve the financial and social position of women through a range of activities including establishing VSLAs, external funding for business support, engagement of women, men, and key stakeholders on the role of women in households and businesses, and training in responsible mining, group dynamics, and leadership skills. The Solidaridad case study provides a benchmark for how to support women in exercising their economic rights and financial inclusion, thereby enhancing their social protection safety nets.

The 10th case study by the international NGO Pact and Ifakara Health Institute (IHI) provides examples of social protection measures to remove children from mining in Tanzania.

As part of the five-year (2016–2021) USAID Kizazi Kipya project, the case study highlights the numerous risks and vulnerabilities that children in mining face such as dangerous working conditions, susceptibility to HIV, violence, limited education opportunities, and difficulty accessing essential social services. To address these challenges, the project was designed with a focus on children's health, safety, education, and livelihoods, considering gender and age. The intervention employed a gender-sensitive case management approach, which tailored support to each child's specific needs. Professional social workers played a crucial role in dealing with complex cases, including high rates of violence. They identified abuse cases and provided parenting interventions to improve skills and reduce harsh punishment. Regular visits by social workers led to a reduction in abuse frequency among children who disclosed experiencing it, emphasizing the importance of ongoing support and intervention.

The project also implemented strategies to support children engaged in mining by focusing on school enrollment, progression, and alternative livelihood options. The endline assessment showed that over half of the children involved in mining at the beginning of the project had left mining activities. This progress is essential to supporting parents and caregivers and providing safer livelihood opportunities for children in ASM communities.

The 11th and final case study in Chapter 2 under the recommendation to “advance women’s social protections at the mine and work” is by BAN Toxics, an NGO in the Philippines. Focused on the Compassionate Gold program to engage with ASGM communities and promote gender inclusion, the NGO conducted a gender assessment to identify key issues that women experience and potential mitigating actions. Through community awareness-raising and lobbying with local government, BAN Toxics operationalized their findings and empowered women in ASGM through targeted initiatives. Government agencies provided women in mining groups with livelihood starter kits and financial assistance, skills and business training, and seedlings and farming equipment to create alternative livelihood opportunities. These activities legitimized the role women play in the ASGM value chain and also gave them the opportunity to pursue alternative livelihoods based on their skills and talents increasing and diversifying their economic resilience and social protection from economic shocks.

Chapter 3 features three case studies that demonstrate the need to ‘account for gendered differences in occupational health and safety efforts at mine sites’. These differences include socio-cultural factors such as perceptions around women working in ASM that can confine them to what might be considered ‘safer’ but lower-paid roles such as breaking rocks and panning as well as ensuring that organizational structures, infrastructure, and safety equipment at mines are suited to women’s physiological and biological needs and caregiving responsibilities.

Summarizing the findings of in-depth research with women miners in the Democratic Republic

of Congo (DRC), the 12th case study titled “The Women Who Age Too Fast” by five academic institutions in DRC and Belgium highlights key gendered occupational health and safety (OHS) issues affecting women in ASM. These issues include early aging, fatigue, sleep disturbances, respiratory disease, a loss of libido, and poor eating habits. With far-reaching consequences on the physical and mental health, work, and home lives of women engaged in ASM, the authors argue that a multi-stakeholder and holistic understanding of the lives of women miners is needed to address the acute, specific, and differentiated OHS challenges women miners face. This includes a consideration of the women’s’ socioeconomic needs, the socio-cultural environment, and the environmental dimension. The intervention in Kamituga took a multi-pronged approach: the women miners were provided with sensitization on the specific OHS risks they face; targeted training was provided to health staff and technical government services; and a comic strip was circulated to educate the broader community about gender discrimination in mining.

The 13th case study by Women in Mining Ghana (WIM Ghana) outlines a collective approach to improving the OHS of women in ASM. The Tinga Project is a collaboration between WIM Ghana, and The Social Investment Consultancy Africa (TSIC), with support from the World Bank’s Extractive Global Programmatic Support (EGPS) Emergency Response for Artisanal Mining Communities Impacted by COVID-19. During the project, a range of OHS risks were identified among women miners including limited access to health care facilities, potable drinking water, poor general knowledge of mining-related health issues, mercury dangers, and no use of personal protective equipment (PPE). Relatedly, mercury intoxication, respiratory diseases, and poor nutrition were all recorded among women miners and their communities. To help address these systemic health issues, government departments, universities, and NGOs worked with the women miners to develop a training curriculum that focused on their self-defined needs and gaps in OHS knowledge. The training methods included body mapping exercises and role playing and used local dialects during teaching. This approach allowed the project to educate

the women miners on both OHS and responsible mining techniques, accounting for their differentiated impacts and needs.

The final and 14th case study of the report by Pact and Rwanda Women In/And Mining Organization (WIAMO) looks at the gendered impacts of poor lighting on the OHS and participation of women in Rwanda's ASM sector. Through in-depth research by the Illuminating Small-Scale Mining in Rwanda (ISMR) project, implemented alongside the Rwanda Mines Petroleum and Gas Board (RMB), it was found that women are disproportionately negatively affected by poor lighting conditions in mining areas, creating a gender wage and safety gap. Poorly lit tunnels that require crouching and use of poor-quality handheld torches limits women's full and equal participation in ASM due to increased vulnerability to sexual and gender-based violence and perceptions of their personal safety working underground. Additionally, women interviewed during the research expressed fear of commuting to and from the mines in darkness, which restricts their options for shifts and job opportunities. The study found that in the over 40 mines surveyed, only two women were engaged in underground mining. Improving lighting in small-scale mines is an important part of formalizing ASM

activities globally, and key to ensuring the full participation of women in ASM. To address these development challenges, ISMR is now working with private sector partners to introduce quality affordable head torches, financing models, and solar power for recharging. ISMR aims to ensure more resilient, sustainable, and responsible mining communities and promote the green energy transition, while, crucially, improving OHS and enabling women to fully participate in the ASM sector.

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Credit: Virtu Gem

INTRODUCTION: ARTISANAL AND SMALL-SCALE MINING AND SUSTAINABLE DEVELOPMENT GOAL 5—GENDER EQUALITY

ASM AND SDG 5: THE DEVELOPMENT CHALLENGE

Sustainable Development Goal 5 “Achieve Gender Equality and Empower all Women and Girls” (SDG 5 Gender Equality) is a fundamental human right and precondition for a “peaceful, prosperous and sustainable” world.¹ The United Nations explains that providing women with “equal access to education, health care, decent work, and representation in political and economic decision making processes will fuel sustainable economies and benefit societies and humanity at large.”² This statement is also true in artisanal and small-scale mining (ASM)—where women’s equal access to full participation and representation in decision making processes will lead to more sustainable and beneficial mining operations for miners, their communities, and wider society.

Similarly, the five targets of SDG 5 and the development challenges they aim to address have a strong overlap with the experience of women in ASM (Figure 1). Women in ASM suffer discrimination by laws and social norms that prevent their rights, roles, and access to resources. There are documented accounts in the literature of higher rates of sexual and gender-based violence (GBV), and child, early, and forced marriages in some ASM communities. While women in ASM also undertake unpaid caregiving responsibilities sometimes simultaneously while mining—with no affordable childcare

and a need to earn a living to support their families, the sight of women carrying ore on their heads and babies on their backs is not uncommon. This overlap between SDG 5 and ASM therefore creates a framework for analysis as well as the opportunity for action to show how improving gender equality for women in ASM also helps attain the SDGs—the globally recognized and shared framework for sustainable development. The creation of a sustainable ASM sector through an appropriate legislative framework, access to information, capital, equipment, capacity building, and greater representation

FIGURE 1. Mapping SDG 5 Gender Equality targets to artisanal and small-scale mining

SDG 5 Target	Gender Issues in ASM
Target 5.1: End all forms of discrimination against all women and girls everywhere	Women in ASM experience discrimination at an institutional level through prejudicial and gender-blind legislation and also at a societal level, where traditional beliefs shape gender norms and restrict women’s rights, roles, and access to resources.
Target 5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	Women working and living in communities around ASM have reported experiencing high rates of interpersonal and sexual violence. ³
Target 5.3: Eliminate all harmful practices, such as child, early and forced marriage, and female genital mutilation	Child, early and forced marriage occur in exchange for access to resources in ASM areas, sometimes known as gold marriages or sapphire marriages. ⁴
Target 5.4: Recognize and value unpaid care and domestic work through the provision of public services, infrastructure, and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Women undertake caregiving and domestic activities simultaneously while mining and processing contributing to their invisibility, such as taking turns to look after children by groups of women at mine sites, carrying babies on backs while transporting ore, and processing minerals at home between household tasks.
Target 5.5: Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life.	Legal systems, traditional beliefs, and social norms impede women in ASM from fully participating in leadership structures and decision making.
Target 5.a: Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws	Most mining codes, land use, and property rights frameworks are gender blind and customary laws are primarily patriarchal in structure, which limits women from having access to or controlling natural resources and consequently accessing formal financial services.
Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	Due to the “invisibility” of women in ASM, they often do not benefit equally from government support or development interventions that are not gender mainstreamed or do not have a gender-specific component. Many women also lack the collateral and capacity to access financial services to invest in new technologies and equipment to graduate up the value chain.
Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	To a great extent, frameworks and strategies for the sustainable development of the ASM sector are gender blind and women are left out of policy discussions and decision making, which has resulted in their needs not being met.

and involvement in decision making processes is central to the sustainable development of the ASM sector and is in direct alignment with SDG 5.

For these reasons, the 2023 State of the Sector report focuses on the intersection of ASM and SDG 5. The SDG 5 targets and indicators act as a conceptual framework for understanding the gendered impacts of ASM development and the involvement (or lack thereof) of women in the development process.

(In)visibility crisis: Women in ASM are not being counted

Women make up a significant portion of the global ASM workforce. It is estimated that women account for between 18% (World Bank, 2020a, p.91),⁵ 30% (Delve, 2023),⁶ and 50% (IGF, 2018) of the 44.67 million people who work in ASM across 80 countries. This large range in estimates can be explained by several factors. First, is the overwhelming lack of sex-disaggregated labor data. As highlighted in the 2020 State of the Sector report: simply put, women in ASM are not being counted (Perks, 2020; Perks and Shultz, 2020). Second, is that women's labor is highly variable depending on the mineral, country, and seasonal dynamics. In some contexts, the proportion of women engaged in ASM far exceeds men. In Guinea, approximately 75% of the ASM participants are women, and in Tanzania's ASM sector most gemstones are mined by women (IGF, 2018; Craig and Antonocci, 2014). While in Indonesia up until the late 1980s, women and men's participation in gold panning had traditionally been equal, however, increased mechanization disadvantaged women, and men came to dominate ASM of gold (Witni and Paul, 2020).

Despite the poor data, women are involved in almost every stage of the mining value chain. Their contributions are largely overshadowed by the act of extraction such as digging, which is almost exclusively undertaken by men. As such, women's work has been relegated to the periphery both literally and metaphorically—even though they often perform strenuous and sometimes dangerous manual tasks such as sorting, crushing, gridding,

milling, washing, sieving, sluicing, sieving, panning, concentrating gold (which often requires the use of mercury or other toxic chemicals), and transporting. Women also provide cleaning services and sell food and other goods on site (Jenkins, 2014; IGF, 2018). This “visibility crisis” as outlined in the 2020 State of the Sector report, is felt the most by women in ASM because of how and by whom “miners” are defined in data collection (Hinton, 2011; Perks, 2020). Though broader definitions of ASM do include “mineral extraction and processing” (Hilson and McQuilken, 2014), there is not universal alignment in household surveys on whether activities such as pounding rock, washing material, or carrying sacks of ore constitute “mining”. Nor is there universal alignment in what percentage of time engaged in such extraction processing activities is needed to determine whether a person is considered or consider themselves as a “miner” in a survey answer.

In Akwatia town, the location of Ghana's artisanal diamond mining industry, women receive what is left only after the men have extracted the best stones. They wait all day on the periphery of mine sites “renting” sieves to men in return for already-panned “black sands,” which they receive at the end of the day and take home to sieve again between household work to extract the smallest diamonds (McQuilken and Hilson, 2018). In Myanmar, where women are excluded from mine sites due to cultural perceptions including their safety, men exclusively dig the gold concentrates that are then transported to domestic areas for women to do the panning, mercury amalgamation, and burning, producing sponge gold for sale. But by relegating women to the periphery of ASM sites for their supposed safety, women—and their children if pregnant and/or breastfeeding—are unknowingly placed in the greatest danger of mercury poisoning with its associated disastrous long-term health impacts (McFarlane and Villalobos, 2019). These periphery tasks, as well as being invisible, are typically the lowest paid in the ASM value chain, with women earning on average 75% less than men (Lahiri-Dutt, 2018; Eshun, 2016). As a result, women have historically not only been overlooked for their work but have also not earned the same as men from their labor.

So, what is the impact of this invisibility? Despite constituting a significant portion of the ASM labor force and meaningfully contributing to the productivity of the sector, there is a serious lack of recognition of the value of women in ASM. Operating under the cloak of invisibility, women have been left out of policy discussions, national legislation, development interventions, and research agendas (Hinton, 2011). Being overlooked on such a large scale has resulted in an acute gender data gap—large swaths of the data on women’s participation in ASM are two decades old and there are huge variations in the data that exists (Perks and Schulz, 2020; World Bank, 2020a). The 2023 State of the Sector report fills some of these gaps and contributes to a greater understanding of the intersection of ASM and gender through the lens of SDG 5 Gender Equality.

To better understand this intersection of ASM and SDG 5 and frame the proceeding report chapters and case studies, it is necessary to briefly review how negative perspectives of ASM have evolved over time, and in turn, given their peripheral position within an already-marginalized sector, negatively impacted women in ASM.

Evolution of ASM and gender literature

THE FOCUS ON NEGATIVE IMPACTS AND DATA GAPS IN ASM ARE REPLICATED AND EXACERBATED FOR WOMEN

ASM was initially considered a “dirty, destructive and illegal” activity and the scant early scholarship on the sector echoed these sentiments (Noetstaller, 1995). Since ASM first attracted academic scholarship in the 1980s, over the past four decades the sector has remained marginalized on the periphery of international development agendas (Hilson and McQuilken, 2014), due in large part to the lack of complete, accurate and reliable data (World Bank, 2019). Instead, the negative environmental impacts (Meech, Viega and Tromans, 1998; Viega and Hinton, 2002; Chenje, 2002; Guenther, 2019); poor working conditions (World Bank, 2020; ILO, 1999); child labor (Hilson, 2012; Pact, 2016; Human Rights Watch, 2015); and the adverse health and safety effects (Bose-O’Reilly et al., 2008; WHO, 2016; van

Straten, 2000), have captured the greatest media and academic attention being well documented and constituting a large portion of the ASM knowledge base. As a result, the narrative surrounding ASM has tended to focus on its negative impacts rather than its positive development potential (De Haan et al., 2020).

This focus holds true when examining the literature on gender and ASM, where the negative impacts of ASM on women has been a primary focal point for academics, practitioners, and activists. Perks and Schulz (2020) point to four key reasons for the gender gap in ASM, namely discriminatory legislation; exclusionary social norms and discriminatory gender practices; inadequate education and training; and persistent GBV including sexual harassment. ASM scholarship affirms that, in many countries, gender inequality is systemic and is upheld by national laws that exclude women from land ownership and property rights; similarly, customary laws tend to reinforce male land ownership over women’s land rights (Meinzen-Dick et al., 1997; Lahiri-Dutt, 2008; Widman, 2014).

LEGAL FRAMEWORKS IGNORE WOMEN

As legal frameworks and policies for the mining sector have tended to miss and not make space for ASM (Hilson and McQuilken, 2014), so too have women been ignored from ASM legal frameworks—marginalized within an already marginalized sector. The novel analysis of 21 legal frameworks in Section 2 of this report finds 14 mining laws and 17 laws concerning property rights to be gender blind or gender neutral (Table 2). This review and prior desk research conducted by Lahiri-Dutt (2022) shows that some countries such as Bolivia, Ghana, Indonesia, and Papua New Guinea even have laws prohibiting women from working in particular roles in mining (specifically underground mining) stemming from international labor standards, namely the ILO Underground Work (Women) Convention, 1935 (No. 45), which was classified as outdated in 2018 but remains in effect in 68 countries around the world (ILO, 2021).

These legal restrictions confining women to the periphery of ASM also inform, and are informed

by, social norms restricting women's roles, employability and access; women are generally consigned to peripheral lower-earning roles on the mine site, which replicate gendered beliefs held by the wider society (Danielson and Hinton, 2020; Buss et al., 2019; Werthmann, 2019; Lawson and Lahiri-Dutt, 2020). On the more extreme end, traditional beliefs have been used to totally exclude women from mining. In Colombia, the Democratic Republic of Congo (DRC), Mexico, South Africa, and Zimbabwe, for example, it is believed that letting women onto a mine site could bring bad luck (Cholteeva, 2021). Low literacy rates, limited access to financial services, insufficient skills, inappropriate technologies, and inadequate access to geological information have also sidelined women in ASM and constrained them from fully participating in the sector (IGF, 2018; Eftimie et al., 2009). The prevalence of gender-based violence, sexual exploitation, and harassment in and around ASM mine sites is well documented in the literature, including that women living around ASM sites are more likely to experience sexual violence (Kelly, King-Close and Perks, 2014; Atim et al., 2020; Perks, et al., 2015, Rustad, Østby and Nordås, 2016; Fourati, Girard and Laurent-Lucchetti, 2021).

GENDER INCLUSION BECOMING AN INTERNATIONAL DEVELOPMENT FOCUS

In the mid-1990s, the discourse around ASM began to shift with policy makers highlighting the sector's potential to meaningfully contribute to development by driving economic growth and reducing poverty and unemployment. ASM was packaged as a "policy response to rural poverty alleviation" and garnered some attention in development circles (Perks, 2013). This culminated in the 1995 International Roundtable on Informal Mining held at the World Bank where experts and delegates discussed the state of ASM and pathways to improve the sector. They concluded that an integrated development approach would improve the environmental degradation, poor health and safety, and ineffective use of mineral resources, thereby enabling ASM to make a contribution to the national economy (Barry, 1996). In the years following the Roundtable, ASM was gradually included in the pro-poor agendas and interventions of donors, development orga-

nizations, multilateral organizations, and national governments (Hilson and McQuilken, 2014).

In parallel, gender inclusion also gained traction among international and state-level policy makers. Gender considerations and women's participation mandates were incorporated into international policy documents, due diligence frameworks, and national legislation (Buss and Rutherford, 2020). The 2009 African Mining Vision (AMV),⁷ for instance, explicitly mentions "progress toward gender equity and the empowerment of women" as one of its short-term goals; in reference to ASM formalization, it also highlights gender equality as a focus area. Similarly, the African Minerals Development Centre (AMDC), tasked with implementing the AMV in individual countries, incorporates gender into their national planning frameworks. Although, the Kimberly Process core documents do not include gender, the 2012 Washington Declaration Diagnostic Framework, which helps countries assess the artisanal diamond mining sector against the Kimberly Process Certification Scheme,⁸ seeks to promote gender equality and has included gender indicators across its policy subgoals (Washington Declaration, 2016). Donor agencies and NGOs operating in the natural resources sector developed their own frameworks for gender-inclusive programming in ASM. In 2012, the World Bank launched the first gender and ASM framework—The Gender Dimensions of Artisanal and Small-scale Mining—A Rapid Assessment Toolkit, which is a detailed ASM-specific assessment framework that identifies the situational gender dimensions and enables the researcher or program officer to make appropriate gender mainstreaming decisions (Eftimie et al., 2012). IMPACT's⁹ Gender Impact Assessment toolkit was also developed to integrate gender and human rights into mineral sector initiatives including those that support the sector's sustainable development (Côté, 2020). As part of the Minamata Convention's National Action Plans for artisanal and small-scale gold mining (ASGM), UNEP provided guidance for developing gender-responsive national planning and policy strategy documents (UNEP, 2021).

ASM scholarship also reflected this shift and authors turned their focus to ASM as a catalyst for economic development and poverty allevia-

tion and the opportunities and challenges women experience in ASM (Hinton et al., 2003; Stewart, Kibombo and Rankin, 2020; Amutabi and Lutta Mukhebi, 2001; Heemskerk, 2003; Lahiri-Dutt, 2006; Labonne, 1996; Ibrahim, Rutherford and Buss, 2020; Bashwira et al., 2013).

ASM DEVELOPMENT FRAMEWORKS MUST BE GENDER INCLUSIVE

Lately, the regulation of ASM through formalization—integrating ASM into the formal economy through legalization, taxation, financing, and technical improvement—has become the dominant narrative in ASM development (Buss et al., 2019). The renewed interest from policy makers in ASM development in recent years has been further buoyed by the need to secure production and supply of critical minerals for the green energy transition through ASM, such as cobalt, tin, tungsten, and tantalum, with the World Bank (2020b)—suggesting a 500% increase in the production of key minerals by 2050 may be needed to meet rising global demand.

Although efforts to support the sector’s development have been ongoing since the 1980s, with varying levels of success, this time, multilateral organizations and donor agencies have made their support for the sustainable development of the sector actionable through funding envelopes,¹⁰ technical assistance¹¹ programs, and livelihood interventions,¹² thereby bolstering national efforts (Hilson, 2017; Hilson and McQuilken, 2014). For most governments and donor agencies, the creation of legislation to define and regulate ASM has been the central focus of ASM development strategies (Echavarria, 2014; Mensah, 2021; IGF, 2018). Many scholars and practitioners argue that policy makers have been overly focused on legalization and that legislation alone cannot tackle the illegality and informality of the ASM sector (IMPACT, 2018; Barretto, 2011b). They argue for an expanded framework for sector development beyond the traditional understanding of formalization that is inclusive of programming that increases access to finance, credit, markets, equipment, capacity building, and training on mining techniques (Barretto, 2011; Marshall and Viegas, 2017; Eniowo et al., 2022). Some critics argue that traditional approaches to formal-

ization operationalizes a top-down restructuring of the sector, which based on current social and environmental norms can create the conditions for state or elite capture, accelerate environmental destruction, constrain poor or small actors, and further exclude marginalized groups, women in particular (Geenen, 2012; Putzel et al., 2015; Maconachie and Hilson, 2011; Alvarez-Berríos, L’Roe and Naughton-Treves, 2021).

Gender has not garnered much attention in the emerging body of literature on the empirical impacts of formalization on ASM communities. Women, and their experiences and perspectives, are largely absent from the conversation, and when women are mentioned it is often briefly or in relation to something else (Jenkins, 2014). Bashwira et al., 2014; Hilson et al., 2018; and Buss et al., 2019, form part of the limited scholarship that explicitly considers women. Even so, Hilson et al., (2018) contends that “overall, this paper has reinforced how little is known about informal ASM ‘spaces’ ... and, in particular, the women who populate them.” This trend is even more concerning when considering the broad and universal acceptance of formalization as the policy framework for the ASM sector. For these reasons, the 2023 State of the Sector report has chosen to fill the critical literature gap and expand beyond the narrow framing of formalization to focus on the intersection of gender and the sustainable development of the ASM sector.

Methodology

The 2023 State of the Sector report decreases the global data gap in ASM by contributing to the knowledge base on SDG 5 Gender Equality and sustainable development of the ASM sector. Following a review of the available literature on gender and ASM, the report undertakes a gender assessment of legal frameworks (relevant ASM laws, regulations, policies, and initiatives) of 21 countries to determine whether they are gender blind or gender neutral and inhibit or promote women’s participation in mining (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, Ghana, Guinea, Kenya, Malawi, Sierra Leone, South Africa, Tanzania, Zambia, Zimbabwe, Indonesia, Lao PDR, Mongolia, Papua New Guinea,

and the Philippines). These countries were chosen as they are geographically diverse, have significant ASM activity (>20,000 artisanal and small-scale miners) across multiple commodities, are at different stages of and taken different approaches to ASM development, and have varying levels of gender mainstreaming.

For the first time in its history, the 2023 State of the Sector report collects primary data with support from Delve data collection partners to systematically detail gender inequalities in ASM. This was accomplished by building on the gendered review of the literature and legal frameworks with the origins of the ASM data gap mapped in the 2019 report and the power of ASM to help achieve SDG 8 Decent Work outlined in the 2020 report. Developed by the Delve team, the 2023 Delve State of Sector Survey was launched in November 2022 comprising three questionnaires targeting three stakeholder groups: government officials (Government Questionnaire), leaders of Women in Mining (WIM) groups (WIM Questionnaire) and artisanal and small-scale miners (Mine Site Questionnaire (Table 1).

Each questionnaire was developed based on SDG 5 targets, gendered impacts, and data gaps mapped by the Delve team (Figure 1) as well as the specific roles of the stakeholder groups. The primary data collection was supported by Delve contributors, namely local experts and organizations within the Delve networks that are well connected and/or engaged directly with ASM in the country. These networks are an invaluable resource and demonstrate the power of Delve to bring stakeholders together to share data, improve understanding, and advance evidence-based policy making. Local partners—particularly women-led mining networks and associations—play a crucial role collecting data and closing the gender gap.

Table 1 summarizes the geographical coverage and gender disaggregation of the questionnaires and whether a legal analysis was also undertaken (Table 2). Countries were chosen to ensure all three geographical regions were represented and based on the practical ability to access stakeholders through the Delve network and the resources available for primary data collection and analyses.

The Government Questionnaire focused on data gaps relating to how or if gender is mainstreamed in national formalization processes.¹³ Officials from 12 countries (Bolivia, Ecuador, Peru, Kenya, Malawi, Tanzania, Zambia, Zimbabwe, Mongolia, Indonesia, Papua New Guinea, and the Philippines) responded. They provided information on planned and existing formalization efforts in their countries, if and how gender is mainstreamed, the status of SDG 5 integration, and the barriers to mainstreaming gender in ASM.

The leaders from 11 WIM groups in Ecuador, Ghana, Indonesia, Mozambique, Peru, Sierra Leone, Tanzania, Zambia, and Zimbabwe responded to the WIM Questionnaire. The WIM leaders provided information on their organizational capacity to advocate for women in ASM, the gendered impacts of formalization and the barriers to entry for women in ASM. Hearing directly from women in ASM helped fill data gaps relating to the gendered impacts of formalization and the role of WIM groups in improving gender equality in the ASM sector.

The Mine Site Questionnaire was conducted in Bolivia, Guyana, Mongolia, Sierra Leone, and Zimbabwe, and included questions regarding the direct impacts of formalization on women, wages, gender norms, and societal views on women in ASM and how women and men participate in the ASM value chain. These answers provided insight into the experience of miners relating to formalization and gender. A total of 1,907 participants (840 women and 1,067 men) from across the ASM value chain and working in 16 commodities (chrome, colored gemstones, copper, diamonds, fluor spar, gold, lead, limestone, mineral, lithium, sand, silver, stone aggregate, tantalum (coltan), tin (cassiterite), tungsten (wolframite) and zinc) participated in the Mine Site Questionnaire.

The survey data from all three questionnaires and subsequent creation of large multi-country data sets explored throughout the report contributes to plugging the ASM data gap and developing a more complete picture of the ASM sustainable development-gender nexus.

TABLE 1. Geographical coverage and gender disaggregation of the 2023 State of the Sector Report Survey and legal analysis

Country	Legal analysis	Government Questionnaire		Women in Mining Questionnaire		Mine Site Questionnaire	
		Participation	No. participants Total (women:men)	Participation	No. participants Total (women:men)	Participation	No. participants Total (women:men)
LATIN AMERICA AND THE CARIBBEAN							
Bolivia	✓	✓	1 (1:0)	X	-	✓	500 (270:230)
Brazil	✓	X	-	X	-	X	-
Colombia	✓	X	-	X	-	X	-
Ecuador	✓	✓	5* (3:2)	✓	1 (1:0)	X	-
Guyana	✓	X	-	X	-	✓	142 (143:285)
Peru	✓	✓	1 (1:0)	✓	1 (1:0)	X	-
Suriname	✓	X	-	X	-	X	-
AFRICA							
Ghana	✓	X	-	✓	1 (1:0)	X	-
Guinea	✓	X	-	X	-	X	-
Kenya	✓	✓	1 (0:1)	X	-	X	-
Malawi	✓	✓	1 (0:1)	X	-	X	-
Mozambique	X	X	-	✓	1 (1:0)	X	-
Sierra Leone	✓	X	-	✓	1 (1:0)	✓	507 (181:326)
South Africa	✓	X	-	X	-	X	-
Tanzania	✓	✓	1 (0:1)	✓	1 (1:0)	X	-
Zambia	✓	✓	1 (1:0)	✓	1 (1:0)	X	-
Zimbabwe	✓	✓	1 (0:1)	✓	2 (2:0)	✓	251 (135:116)
EAST ASIA AND PACIFIC							
Indonesia	✓	✓	1 (0:1)	✓	1 (1:0)	X	-
Laos PDR	✓	X	-	X	-	X	-
Mongolia	✓	✓	2* (0:2)	✓	1 (1:0)	✓	363 (113:250)
Papua New Guinea	✓	✓	1 (0:1)	X	-	X	-
Philippines	✓	✓	1 (0:1)	X	-	X	-
Totals	21	12	17 (6:11)	11	11 (11:0)	5	1,907 (840:1,067)

*Indicates a team of officials collaborated in the survey questionnaire.

END NOTES

- 1 Our World in Data team. 2023. "Achieve gender equality and empower all women and girls". Retrieved from: <https://ourworldindata.org/sdgs/gender-equality>
- 2 Our World in Data team. 2023. "Achieve gender equality and empower all women and girls". Retrieved from: <https://ourworldindata.org/sdgs/gender-equality>
- 3 Buss, D., Rutherford, B., Stewart, J., Eva Cote, G., Sebina-Zziwa, A., Kibombo, R., Hinton, J. Lebert, J. 2019. "Gender and artisanal and small-scale mining: implications for formalization." *Extractive Industries and Society* 6, 1101-1112.
- 4 Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2018). *Women in Artisanal and Small-Scale Mining: Challenges and opportunities for greater participation*. Winnipeg: IISD.
- 5 This estimate from the 2020 report is based on a review of 25 countries for which there is a data point in Delve on the number of women in ASM.
- 6 This estimate from the online Delve platform is based on the often-quoted estimate found in ASM literature and general agreement that women comprise at least 30% of the ASM workforce. Noting that the 18% figure is likely an underestimate due to data not being collected on women in ASM for the reasons outlined in the 2023 and 2020 reports.
- 7 The African minerals governance framework.
- 8 A due diligence framework aimed at combatting conflict free diamonds.
- 9 The Canadian natural resources-focused NGO.
- 10 See: The EGPS ASM Sahel Associated Trust Fund (EGPS ASM Sahel) launched by the World Bank and government of Belgium; The ACP-EU Development Minerals Programme.
- 11 See: Solidaridad's partnership with Minera Yanahuahua in Peru (https://www.responsiblejewellery.com/wp-content/uploads/RJC-Impacts-Report-2015_final-2.pdf); World Bank-funded Mining And Gas Technical Assistance Project (MAGTAP) in Mozambique (<https://www.responsiblemines.org/en/2022/10/towards-asm-formalisation-mozambique/>); and Pact's market-based women-focused artisanal gemstone sourcing program Moyo Gems in East Africa (<https://moyogems.com/>).
- 12 See: EU and GIZ – Regional resource governance in West Africa: USAID - Property Rights and Artisanal Diamond Development (PRADD) II; Solidaridad – Golden Line Program.
- 13 The questionnaires used the following definition for formalization. "Formalization is the process of moving ASM miners into the formal economy in which they have the legal titles and permits to mine, improved mining techniques, and more

responsible practices. In this survey, formalization interventions are defined as ASM related government activities such as changes to policy, legislation, regulation and other national level activities intended to professionalize and legalize the country's ASM sector."

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MAKE MINING LAWS AND ECONOMIC POLICIES GENDER INCLUSIVE

AUTHORS: Prof. Nellia Mutemeri,¹ Dr James McQuilken,² Nydia Ponnar¹

AFFILIATED ORGANIZATION(S): ¹MutConsult, ¹University of the Witwatersrand, Pact, ³MutConsult

SDG 5 Targets	SDG 5 Indicators
Target 5.1: End all forms of discrimination against all women and girls everywhere	Indicator 5.1.1: Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
Target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life	Indicator 5.5.1: Proportion of seats held by women in (a) national parliaments and (b) local governments Indicator 5.5.2: Proportion of women in managerial positions
Target 5.a: Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	Indicator 5.a.1: (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure Indicator 5.a.2: Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control
Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	Indicator 5.b.1: Proportion of individuals who own a mobile telephone, by sex
Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	Indicator 5.c.1: Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment

KEY FINDINGS

- **The lack of gender-sensitive language in national laws is hindering gender equality in ASM.** Of the national mining codes reviewed, 67% are either gender blind or gender neutral, while 80% of the legal land ownership frameworks are gender blind or gender neutral. Legal frameworks lack of distinction based on gender (gender neutral) or consideration for gender-related issues (gender blind) presents a formidable barrier to addressing the gender disparities that persist within the sector.
- **Governments are increasingly recognizing the importance of women in ASM.** Most government officials (83% or 10 out of 12) stated that they considered or included women in the development of their formalization interventions—further exploring the outcomes and impact of such interventions could be a useful avenue in future work to better understand the gap between law, policy, and program interventions. The majority (67%) of governments surveyed had undertaken programs that specifically empower women in ASM or have women-specific components.
- **Capacity development and financial support are crucial areas that require immediate attention to enable government officials to advance gender equality in the ASM sector.** Government's recognize capacity building (29%) and financial support (22%) as the most common forms of support needed to better consider the needs of women. Officials cite lack of funding (44%) as the greatest challenge to increasing gender considerations into efforts to the support the sector.

Overview

It is generally understood that promoting sustainable development within the ASM sector is a process that comprises two pillars with multiple steps: i) legalization of activities by obtaining the necessary licenses, permits, and access to land required by law; ii) professionalization to improve mining and operational practices in line with national laws, international regulations, and industry best practices (World Bank, 2009; Speigel, 2012; McQuilken and Hilson, 2016; UNITAR, 2017; Hilson et al., 2017; De-Haan et al., 2020; Ofosu et al., 2022; Atienza, 2023). Integrating ASM into the formal economy, society, and regulatory systems encompasses a wide range of activities. Often the first and primary mechanism to do so is through the creation of new, and amendment of, existing legal and policy frameworks to make space for ASM and provide a legal foundation for technical support, engagement, and improvements. As a first step for governments and policy makers, sector development is typically enacted through legislation that clearly defines ASM, regulates the property rights of working areas, regularizes the sector through taxation, and monitors access to the resources that are exploited. This chapter focuses on the legal aspects of the sustainable development of ASM to consider how greater participation and protection of women in wider society, as enshrined in national legal frameworks, can promote and provide impetus for gender equality in ASM.

Legislation can support or impede gender equality and women's empowerment. Discrimination against women in the law is one of the most visible forms of gender inequality (Sever, 2022). On average, women around the world only enjoy three-quarters of the legal rights afforded to men (World Bank, 2022). Moreover, 178 countries around the world maintain legal barriers that prevent 2.4 billion working-age women from exercising their economic rights (World Bank, 2022). Legal constraints on the basis of gender promote the subordination of women and girls and support attitudes and harmful practices that limit their opportunities and potential, and positively correlate with wider gender gaps across a range of economic, social, and political indicators as measured by the Africa Gender Index (AGI) (OECD, 2021). The creation of gender-respon-

sive legal and regulatory systems that ensure girls and women can actively and equally participate in society can catalyze gender parity. Legal recognition is the first step in guaranteeing the rights and fundamental freedoms of women and is particularly important in societies where social norms and traditional practices are detrimental to women's equality.

Legal frameworks regulate access to mineral resources through overlapping and standalone laws—mining codes, property rights frameworks, land tenure agreements, inheritance laws, environmental protocols and waste management standards comprise the body of legislation that ensures that natural resources are managed and disbursed equitably. Women in ASM are constrained by *de jure* (legally recognized practices) and *de facto* (what happens in reality) inequity in owning, accessing, controlling and using land and mineral resources (IGF, 2018). Discriminatory inheritance and property laws deny women control and access to land, thus

restricting the ways in which women can participate in ASM. The majority of mining codes around the world are gender blind or neutral and do not contain stipulations to enhance women's participation in ASM. Without the legal right to mine and additional regulations to provide a legal *de jure* basis for their participation, it is not possible for women to overcome the societal *de facto* norms that prevent their equality in ASM, and society at large.

Even where the legal frameworks exist allowing women to own mining and land rights and participate in ASM, the costly, burdensome, and complicated process of obtaining an ASM license and accompanying permits can be prohibitive for men let alone women who, as outlined, face additional barriers. For example, in Liberia, Hilson and Bockstael (2011) note that a Class C ASM license costs \$150 annually, equivalent to half the gross national income per capita of \$300 at that time. While in Ghana, Adu-Baffour et al., (2021) docu-

BOX 1. Definitions

Gender equality: The enjoyment of equal rights, responsibilities, opportunities, and treatment of women, men, girls, and boys in all spheres of life and work. Gender equality does not mean that women and men will become the same, but that their rights, responsibilities, social status, and access to resources are not determined by gender. In recognition of the diversity of the different groups, gender equality implies that different interests, needs, and priorities of women and men are considered, valued, and favored equally (ILO, 2012; UNIDO, 2015).

Gender equity: Refers to fairness and justice, and acknowledges that adjustments must be made to counter asymmetries. Aims to improve equality of outcomes and results recognizing differing needs and interests; which requires transformative change and a redistribution of power and resources whereas gender equality refers to an equality of opportunities (Eftimie et al., 2012; Rickard et al., 2017).

Gender blind and gender neutral: The failure to recognize that gender is an essential determinant of social outcomes that ignores gender norms, rules, and relations and can result in the creation of projects and policies that reinforce gender-based discrimination, biases, and stereotypes (Côté, 2020). The legal review in this report defines gender blind as excluding gender and disregards the different needs and interests of women and men, and gender neutral as having laws that acknowledge gender but that make no distinction based on gender.

Gender mainstreaming: The globally accepted strategy for incorporating a gender perspective into policies, strategies, programs, and project activities, including the design, implementation, monitoring, and evaluation as well as into the institutional culture of an organization, so that women and men benefit equally and inequality is not increased (Côté, 2020).

ment the 14-step¹ land acquisition and licensing process for acquiring a small-scale mining license including having a mine plan, having signatory from the Minister for Lands and Natural Resources, and securing environmental and water use permits. Additionally, becoming a legal ASM operator also involves accessing the funds to pay for the cost of the ASM license and environmental assessments, as well as sufficient technical knowledge, time, and capacity to complete the paperwork and navigate the legal processes.

With legalization being a core pillar and the first part of ASM sustainable development, it is imperative to understand these legal barriers to women owning and accessing a license and participating in mining in order to design and implement rights-based interventions. Even in countries where women's rights are legally protected, customary tenure arrangements often supersede statutory laws. Traditional beliefs and discriminatory practices constrain women in ASM from fully enjoying their rights, exercising economic autonomy, and making decisions independently.

This chapter provides the status of equality, equity, and empowerment in the life of women in ASM and how this is provided for in the law. It presents evidence from literature, legal analysis of mining codes, as well as the survey and questionnaires conducted in the target countries and compiled case studies. The evidence is presented in line with the relevant SDG 5 targets and indicators to illustrate the role the ASM sector can play in achieving the SDG 5 targets.

Legal provisions to end discrimination and promote equality, access, and empowerment

To understand how broader legal frameworks impact gender equality in ASM and the legal pillar of ASM sustainable development, this section comprises a legal review of 21 ASM countries with significant ASM activity across three regions. The SDG 5 targets and indicators are used as the conceptual framework against which each country's mining legislation and other relevant laws are

evaluated. This review conducts a gender assessment of each country's mining code; whether legal frameworks to promote, enforce and monitor non-discrimination on the basis of gender exist; whether there are legal provisions for women's land rights; and whether there are laws that guarantee sexual and reproductive health rights. Each of these indicators are directly linked to SDG 5 and will provide insight to how gender equality is being supported by the countries in the data set.

MINING LAWS AND GENDER EQUALITY

The Mining Code refers to a set of laws that are in force, whether local or national, that regulate the management, preservation, exploration, exploitation, and processing of minerals for domestic consumption and export, including land tenure rights and obligations, health and safety protocols, and related environmental regulations. The main objective of the Mining Code is to put forth the country's vision for the mining sector and align legal provisions to this vision. For example, the Mining Code can define ASM, national economic objectives, employment equity targets, and specific financial provisions for the mining sector.

On one hand, mining laws can specifically seek to promote and support gender equality in the mining sector, and on the other, gender-blind mining laws are a formidable barrier to advancing women's rights and equal participation in ASM. In the context of ASM, where gender disparities often persist, it is crucial that mining laws acknowledge and address these inequalities. Regrettably, two-thirds (67%) of the mining codes of the countries reviewed were either gender neutral, having laws that acknowledge gender but make no distinction based on gender, or gender blind with a complete lack of consideration for gender-related issues. This finding means that women miners frequently encounter discrimination and obstacles to accessing resources, educational opportunities, and economic growth. Their safety and well-being are also at risk, as these laws often fail to provide protective measures tailored to their needs. To foster a more inclusive and gender-equitable ASM sector, it is imperative that mining laws actively seek to promote and support gender equality. Recognizing and rectifying these gender

TABLE 2. **Gender assessment of legal frameworks**

Gender neutral = laws acknowledge gender but make no distinction based on gender.

Gender blind = excludes gender and disregards the different needs and interests of women and men.

Country	Estimated proportion of women in ASM	Is ASM recognized in the Mining Code?	Does the Mining Code have special provisions for women's equal access and benefits?
LATIN AMERICAN and the CARIBBEAN			
Bolivia	Unknown	✓	Gender blind
Brazil	Unknown	✓	Gender blind
Colombia	56% ³	✓	✓
Ecuador	10% ⁴	✓	Gender blind
Guyana	20% ⁵	✓	Gender blind
Peru	15% ⁶	✓	✓
Suriname	25% ⁷	✓	Gender blind
AFRICA			
Ghana	50% ⁸	✓	Gender neutral
Guinea	70% ⁹	✓	Gender blind
Kenya	40%-45% ¹⁰	✓	✓
Malawi	10% ¹¹	✓	✓
Sierra Leone	47% ¹²	✓	Gender blind
South Africa	Unknown	X	✓
Tanzania	25% ¹³	✓	✓
Zambia	Unknown	✓	✓
Zimbabwe	Unknown	X	Gender blind
EAST ASIA and PACIFIC			
Indonesia	10% ¹⁴	✓	Gender blind
Laos PDR	50%-80% ¹⁵	✓	Gender blind
Mongolia	24% ¹⁶	✓	Gender blind
Papua New Guinea	20% ¹⁷	✓	Gender blind
Philippines	4% ¹⁸	✓	Gender blind

Are there legal frameworks to promote, enforce, and monitor equality and non-discrimination on the basis of gender?	Are there legal frameworks (including customary law) that guarantees women equal rights to land ownership and/or control?	Are there laws that guarantee full and equal access to women and men aged 15 years and older to sexual reproductive health care, information, and education?	Was the IL O Underground Work (Women) Convention 1935 that makes it illegal for women to work underground in any mine still ratified prior to abrogation? ²
✓	Gender neutral	Limited	Yes
✓	Gender neutral	✓	Yes
✓	✓	✓	No (never ratified)
✓	Gender neutral	✓	Yes
✓	Gender blind	✓	Yes
✓	Gender neutral	Limited	No (repealed)
✓	Gender neutral	✓	No (never ratified)
✓	Gender neutral	✓	Yes
✓	Gender neutral	X	Yes
✓	Gender neutral	✓	Yes
✓	✓	✓	Yes
✓	Gender neutral	Limited	Yes
✓	Gender neutral	✓	Yes
✓	✓	✓	Yes
✓	✓	✓	No (repealed)
✓	Gender neutral	Limited	No (repealed)
✓	Gender neutral	✓	Yes
✓	Gender neutral	✓	No (never ratified)
✓	Gender blind	✓	No (never ratified)
✓	Gender blind	Limited	Yes
✓	Gender neutral	✓	No (never ratified)

disparities in the regulatory framework is a fundamental step in ensuring the rights and empowerment of women in ASM.

Of the seven countries that have included gender in their mining codes, five of them (Kenya, Malawi, South Africa, Tanzania, and Zambia) are in Sub-Saharan Africa. This legislative recognition could be a consequence of the inclusion of gender as part of the 2009 African Mining Vision—an African Union-wide policy document for the transparent, equitable, and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socioeconomic development of the region (AMV, 2009). South Africa, Tanzania, and Zambia for example have set gender targets as part of their mining frameworks. Malawi’s draft ASM policy acknowledges that women in ASM face greater challenges than men, specifically, the social norms and cultural traditions that impact their socioeconomic status impose a heavy family burden, limit their independence and mobility, and increase difficulties in accessing financial, technical, and legal support. In the Latin America and Caribbean region, Colombia and Peru are part of the data set with gender-sensitive mining codes. In 2020, the Colombian government created gender equality guidelines for the mining sector to promote gender equality in the industry. An analysis of Peru’s mining code and legal frameworks shows it has provisions for women’s equal access and benefits, although limited laws guaranteeing equal access to health, information, and education services. Meanwhile Ecuador shows signs of advancement, with the government recently issuing a ministerial resolution to create a Committee for Gender Equality within the Ministry of Energy and Mines in order to identify gender gaps and implement strategies to remediate gender inequality. None of the five countries in Asia that were reviewed had included gender in their mining frameworks.

NON-DISCRIMINATION BASED ON GENDER

Gender-based discrimination is prohibited under almost every human rights treaty. It is even the subject of its own treaty—in 1981, the United Nations instituted the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW),

also referred to as the international bill of rights for women. It has since been ratified by 189 states. Ending discrimination against all women and girls everywhere is a key objective of SDG 5. Despite the development of a comprehensive legal framework to guard against discrimination on the basis of gender, women and girls around the world are confronted by unfair and unequal treatment in their homes, workplaces, and in their wider communities. Gender inequality is built into the social fabric and legislative systems—globally, on average, women enjoy only 77% of the legal rights that men do (World Bank, 2023). Moreover, 178 countries have laws that discriminate against women economically, including 18 countries where women are legally required to seek permission from their husbands to work (World Bank, 2022).

The ASM-hosting countries in the 2023 State of the Sector Survey data set have all ratified CEDAW and have created legal frameworks to reduce gender inequality at a national level. However, the ILO Underground Work (Women) Convention, 1935 (No. 45), which legislates that “No female, whatever her age, shall be employed on underground work in any mine” is still in law (although not always enforced) in 68 countries around the world, 13 of which are part of this data set: Bolivia, Brazil, Ecuador, Ghana, Guinea, Guyana, Indonesia, Kenya, Malawi, Papua New Guinea, Sierra Leone, South Africa, and Tanzania. A 2018 ILO standards review marked the convention as outdated and the convention is set for abrogation at the forthcoming 112th Session of the International Labour Conference (2024) (ILO, 2021). Historically, the ILO Convention 45 and other prohibitive laws are responsible for the pervasive socially constructed norm that mining is men’s work, which disadvantages many women participants in ASM. Women are generally boxed into peripheral roles on ASM value chains that replicate the societal belief that women are physically and intellectually weaker. As a result of performing ancillary roles such as washing ore, processing, and transporting, women in ASM are excluded from the highest-earning activities and do not derive the same economic benefits that men in ASM do.

WOMEN'S ACCESS TO, USE, AND CONTROL OVER LAND AND PRODUCTIVE RESOURCES

“Land is key to a life with dignity and a basis for entitlements which can ensure an adequate standard of living and economic independence and, therefore, personal empowerment”

(GELBSPAN AND NAGARAJ, 2012).

Women’s access to, use, and control over land and productive resources is inextricably linked to the achievement and enjoyment of a broad range of human rights such as the right to equality, housing, health, water, food, work, and education (UN OHCHR, 2013). Women’s secure access to land has also been inextricably linked to sustainable economic development, global food security, and the prevention and response to gender-based violence (GBV) (UN OHCHR, 2013). As such, policy frameworks to protect and support women’s land rights have been developed at global, regional, and national levels. Realizing women’s secure access to land and productive resources is a pivotal part of the gender-responsive Sustainable Development Agenda as evidenced by its inclusion in SDG 5 under target 5.a: “Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.”

Local property rights systems affect women’s capacity to benefit from ASM. Without ownership, control of, or access to mineral-bearing land, women are forced into lower-earning activities that position them poorly for participation in decision making. In the absence of land tenure, women in ASM are also unable to access capital and credit to grow their operations, buy equipment, and invest in technology to generate higher value from mining. As outlined, the majority of the reviewed countries either have gender-blind or gender-neutral land rights frameworks where gender neutral means the laws acknowledge gender but make no distinction based on gender, and gender blind excludes gender and disregards the different needs and interests of women and men. Both, gender-neutral and gender-blind legislation can in effect deny women secure

access to land. Only three countries in the data set have passed gender-sensitive land laws. Zambia’s National Land’s Policy, for instance, aims to achieve a gender-sensitive land sector by reserving 50% of available land for women. Tanzania’s revised Land Act ensures that women comprise 25% of the village councils that govern customary land tenure arrangements. Colombia’s Law 731 aims to improve the quality of life of rural women including women in mining by prioritizing low-income women and enshrining specific measures aimed at accelerating equity between rural women and men, such as quotas and preferential financing.

While *de jure* laws and regulations may provide for equal access and ownership of land and natural resources between women and men, in ASM-hosting countries customary tenure arrangements are often more prevalent and dominant (Freudenberger, 2011). Customary tenure refers to customs, practices, and beliefs that are accepted as obligatory rules of conduct by a community in regard to land ownership and access. Customary land ownership systems tend to prioritize men over women and patriarchal systems govern decision making, land disbursement, and inheritance rights.

Despite the absence of legal requirements for men to grant permission to women for land ownership or land tenure security in the data set countries, customary structures often perpetuate discrimination against women concerning land ownership, inheritance, and access. For example, in Sierra Leone, the dominance of customary law results in 95% of the land being managed under rules that prohibit women from managing and inheriting land (Conteh, 2015). And in Colombia, the prevailing traditional belief that women bring bad luck to mine sites limits women’s access to productive assets forcing them into less lucrative roles.

Meanwhile, Ghana’s legal framework, encompassing the Constitution and the 2019 Land Bill, explicitly champions gender equality in land ownership. Despite this, deeply ingrained social norms act as formidable barriers to women’s access to and utilization of land. Customary laws often view property as a family asset under the control of the male family head, leading to restricted land and agricul-

tural resource access for women (Government of Ghana, 2015, McQuilken and Hilson, 2016).

In Indonesia, the Basic Agrarian Act No. 5 of 1960 officially upholds gender-neutral access to land rights and inheritance, in line with the Civil Code. However, the practical application of these laws is frequently hindered by the influence of Islamic Law and customary practices, resulting in limited shares of family property for wives and daughters. Similarly, in Guinea, land laws explicitly grant equal land rights to both men and women. Nevertheless, customary practices often discourage women from asserting ownership rights to land, causing them to rely on use-rights to land owned by male relatives.

In Kenya, customary laws across various ethnic groups frequently restrict women from inheriting land, compelling them to reside on land as guests of male relatives, whether by blood or marriage. A comparable pattern is observed in Tanzania, where women primarily acquire land interests through their husbands, especially in patrilineal systems practiced by about 80% of ethnic groups.

Throughout much of Sub-Saharan Africa, including Zambia, widows, in particular, encounter substantial barriers when attempting to access family land after their husbands' deaths, despite statutory laws protecting women's rights. This issue is pervasive in Sub-Saharan Africa, extending to countries including Burundi, the Democratic Republic of Congo (DRC), Eritrea, Sierra Leone, Sudan, and Tanzania. Here, widows, divorcees, and victims of conflicts and civil wars often find themselves denied access to matrimonial and family land due to adherence to customary and patriarchal rules.

Patriarchal land inheritance practices persist in Sub-Saharan Africa despite the region's commitment to gender-equality objectives and national land reforms. These practices consistently designate land as men's domain, relegating women, including daughters, sisters, and wives, to secondary access through their male relatives. This entrenched framework often portrays women as individuals in transition, moving from their natal homes to marital households. Consequently, women are frequently pressured to marry if they wish to own or access

land, perpetuating gender disparities in land ownership and access. These enduring patterns persist across the region, obstructing the realization of gender equality in land ownership and access.

SEXUAL AND REPRODUCTIVE HEALTH RIGHTS

Universal access to sexual and reproductive health (SRH) and reproductive rights and the elimination of violence and harmful practices are targets set by SDG 5. SRH can be understood as a person's right to a healthy body and the autonomy, education, and health care to freely decide who to engage in sexual activities with, free of coercion, discrimination, and violence; and how to avoid sexually transmitted infections or unintended pregnancies and access adequate antenatal health care (WHO, n.d). Women's SRH is related to several human rights, including the right to health, life, privacy, education, to be free from torture, and the prohibition of discrimination, as such, countries are duty-bound to respect, protect, and fulfill these rights. Apart from Guinea, all the countries in the data set have enshrined access to sexual and reproductive health in their legal frameworks. The level of access ranges from limited to universal: Colombia, Guyana, and South Africa are on the upper end of the spectrum guaranteeing universal access to methods of contraceptives and fertility control and making sex education, maternal care, and abortions available without restriction. In contrast, Bolivia, Peru, Sierra Leone, Zimbabwe, and Papua New Guinea provide access to sexual and reproductive health information, but other aspects of sexual health are limited. For instance, Sierra Leone forbids abortions, even if the life or health of the woman is at risk; in Papua New Guinea, parental consent is required for contraceptives; and in Bolivia, child marriages are legal—girls can marry at age 14 and boys at 16 with parental permission, with further exceptions made for pregnant minors.

Health care is often very limited around ASM sites, despite the wide range of health and safety risks that stem from ASM. The seasonal and migratory nature of ASM and access to sex work around mine sites can result in high-risk behavior that can facilitate the spread of sexually transmitted infections/diseases (STI/STD), HIV, and AIDS (WHO, 2016). The prevalence of HIV is highest in Sub-Saharan

Africa where the proportion of women working in ASM is the highest, and six of the countries from the analysis (Kenya, Malawi, South Africa, Tanzania, Zambia, and Zimbabwe) rank in the top 20 most-affected countries in the world (Elflein, 2022). The majority of people living with HIV/AIDS are women and women also constitute a larger portion of the new infections globally (UN Women, n.d.).

Maternal mortality rates are the highest in Sub-Saharan Africa, with highest levels of maternal death on the continent overlapping with several ASM-hosting countries, such as DRC, Guinea, Nigeria, Sierra Leone, and Zimbabwe. This could indicate a general lack of government capacity in these countries to extend health care generally but also specifically to remote ASM areas that tend to lack antenatal care or maternity wards, leaving local women to depend on NGOs, midwives, or traditional healers. Additionally, a study conducted in Tanzania indicated that women in ASGM regions are more likely to suffer adverse birth outcomes due to maternal exposure to arsenic and mercury (Nyanza et al., 2020).

Femicide and GBV¹⁹ are prevalent in the countries in the data set. Bolivia, Brazil, Colombia, Guyana, Suriname, and South Africa have some of the highest rates of femicide in the world, and all the countries in the data set have a high rate of GBV, with rates of female genital mutilation as high as 94% in Guinea, and Papua New Guinea having one of the highest rates of GBV in the world outside of a conflict zone (28 Too Many, 2021; McLennan, 2021). Incidence of violence against women in ASM areas has been documented across the globe (Rustad et al., 2016 and Hinton et al., 2003). GBV and sexual assault is prevalent in ASM settings due to the highly masculinized culture, and the remote, informal, often illegal, and precarious nature of ASM (Hinton et al., 2003).

Insights from the 2023 State of Sector Survey

This section draws on the data gathered from the 2023 State of the Sector Survey to examine whether and how women in ASM have been included in the legislative and policy aspects of the sustainable development of the ASM sector.

INCLUSION IN POLICY FORMULATION

Women have a right to equal participation in decision making. Having the involvement of women and men in public and private decision making processes broadens perspectives, increases innovation, heightens accountability, reduces conflict, results in a more robust solutions, and generally benefits not only women but society at large (Asuako, 2020). Equal participation is also key to sustainable development and reflected in the SDG 5 target “ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life.” Relatedly, women in ASM should be included in policy making to advance gender equality and improve the sustainability of the sector. The 2023 State of the Sector survey revealed that 10 out of the 12 governments (83%) considered or included women in developing ASM interventions. When asked about how women were included in the development of interventions, the majority of governments indicated they consulted with organized WIM groups. This points to the tendency of governments to lean toward interacting with organizations. It also highlights the importance of organized women in mining groups as the vehicle to communicate the voices of women in mining.

From a women-in-mining perspective, seven of the 11 leaders of WIM groups surveyed (64%) believe that their government is supportive of gender equality in ASM. It should be noted that the survey had two WIM groups from Zimbabwe, with one group responding “Yes” to this question, while the other responded “No”. The other “No’s” came from WIM groups from Ecuador, Mongolia, and Indonesia. Reasons for the belief that their government did not support gender equality included: lack of awareness, the illegality of ASM operations, a lack of effort or follow-through from governments in addressing women in ASM’s needs (even in cases where policy has been formulated), a lack of regulatory clarity, and gender discrimination.

THE NEEDS OF WOMEN IN ASM

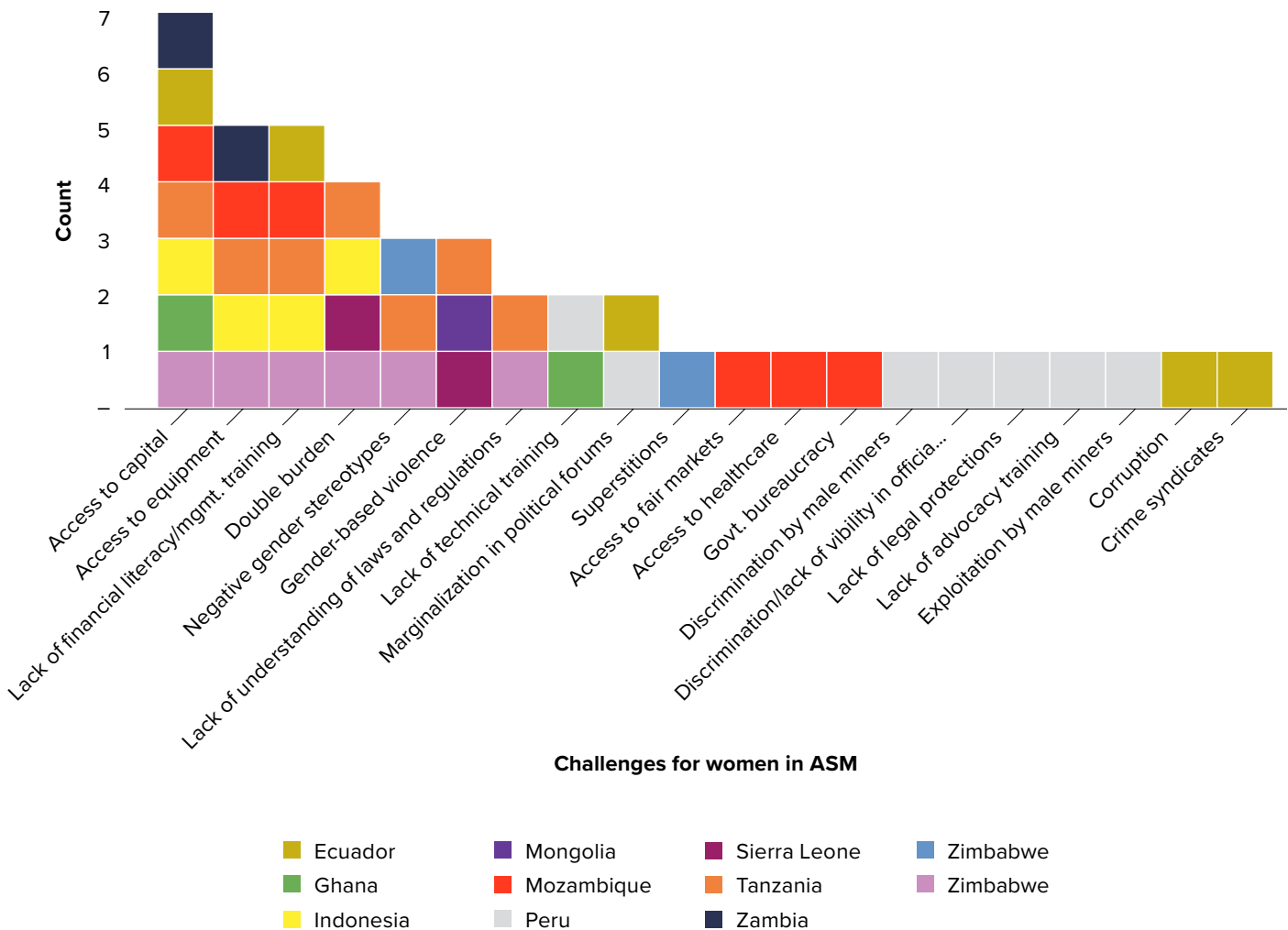
Gender-blind development approaches overlook women in ASM as an important stakeholder group and fail to consider their unique gender-specific

needs. Consequently, there is a lack of information and understanding of the on-the-ground needs of women in ASM. The 2023 State of Sector Survey sheds some light on this matter, by asking the WIM groups “what are the challenges women in ASM experience?”

Though not the most selected answers, there are several challenges selected by WIM groups that relate more explicitly to legal and social barriers to women’s participation in ASM and thus sustainable development of the sector, including the cost of and capacity needed to pay for and navigate the ASM licensing process. First, is “lack of financial literacy/management training,” which was chosen as a key challenge by five WIM groups and was still the second most-selected challenge out of 20, placing it high up the list. Without the kind of

formal education and training that men typically have more access to, it is difficult for women to navigate the legal ASM licensing process and have full and effective participation in decision making and leadership positions in ASM organizations (SDG 5 target 5.5). Similarly, de jure challenges that women face in ASM such as lack of understanding of laws and regulations, marginalization in political forums, lack of legal protections, and de facto barriers such as superstitions and discrimination and negative gender stereotypes are all selected by one or more WIM groups as challenges. Ensuring there are laws and regulations in place to secure and promote women’s participation in ASM and that they are empowered to exercise those rights is therefore a key part of the sustainable development of the ASM sector.

FIGURE 2. From your experience in your organization’s work what are the challenges women in ASM experience? (WIM Questionnaire)



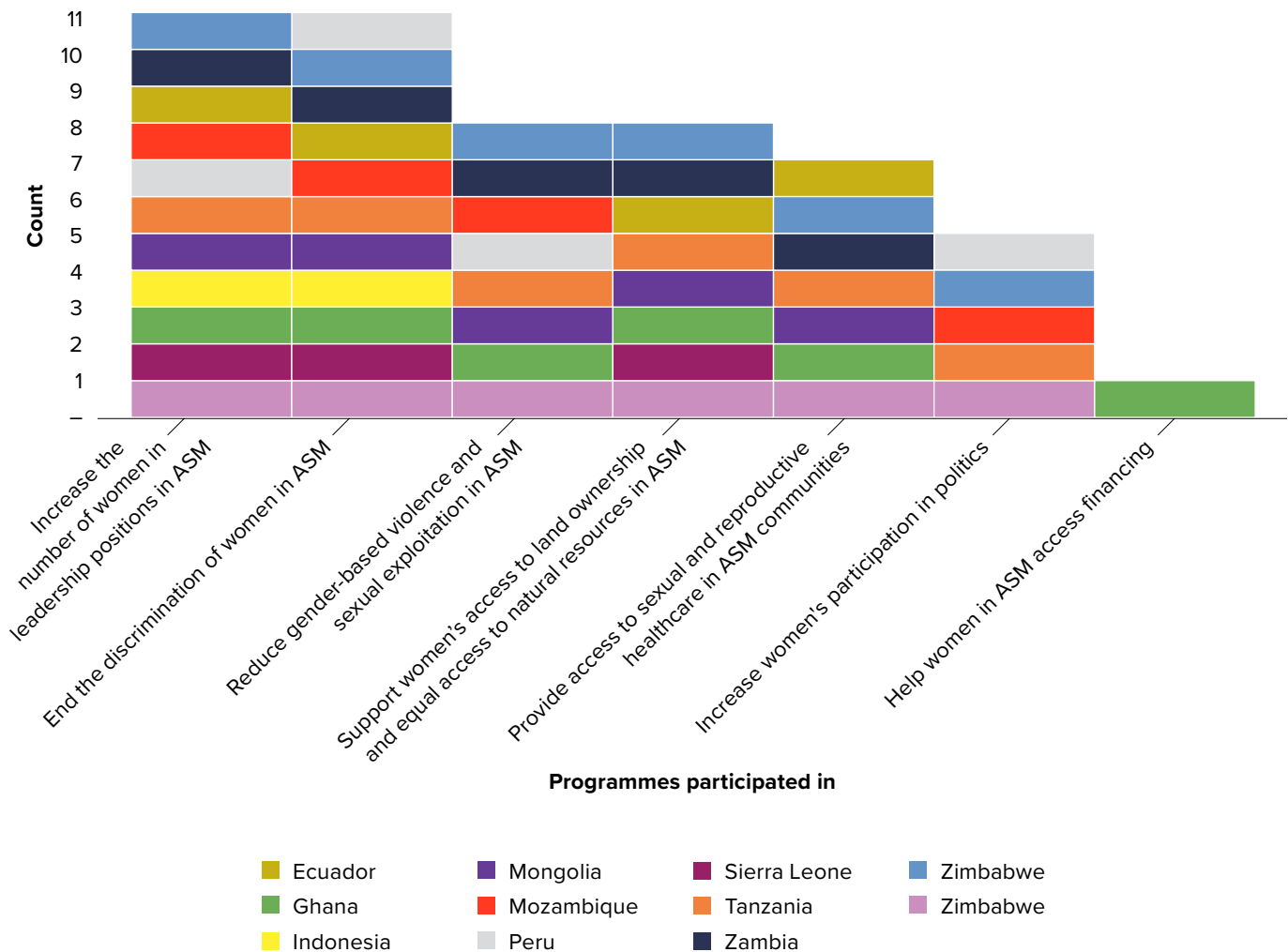
The top four types of programs WIM groups have participated in (Figure 3) were aimed at: increasing the number of women in leadership positions, ending the discrimination of women in ASM, reducing GBV and sexual violence, and supporting women’s access to land/mine ownership. Again, such programs are key to ensuring that fundamental legal rights exist and are exercised to enable women’s participation in ASM.

The most-selected answer by the leaders of WIM groups regarding challenges that women face was access to capital. Access to capital can be a barrier to obtaining the licenses and permits required by law to mine with numerous studies in the literature highlighting the often-complex, costly, and time-consuming process of obtaining an ASM

license. On a related note, access to equipment and a lack of financial literacy or management training were the second and third most selected challenges. Given that access to equipment is typically the result of financial constraints, this indicates that the top three challenges facing women in ASM, as selected by WIM leaders, are related to or a consequence of insufficient access to finance impeding not only their access to a license but also to equipment needed to upgrade operations and increase productivity and incomes.

The need for access to capital initiatives is further underlined by the responses from the leaders of WIM groups shown in Figure 3 showing which types of ASM programs and initiatives they had participated in. Of the 11 groups participating in

FIGURE 3. What types of programs has your group participated in? (WIM Questionnaire)



the WIM Questionnaire, only one had participated in interventions designed to “help women in ASM access financing.” These findings further illustrate the need for women-focused access to finance initiatives in the ASM sector that also account for the initial start-up costs of owning, operating, and upgrading a financially successful ASM site.

EFFORTS TO ADDRESS WOMEN’S NEEDS

Development interventions that overly focus on landowners and lack a gender component tend to overlook women in ASM. This is because such interventions do not identify or address the structural legal barriers that might prevent women’s full participation in ASM. Subsequently, gender-specific programming is fundamental to addressing the needs of women in ASM. Of the governments surveyed, eight out of 12 (67%) had undertaken programs that specifically empower women in ASM or have women-specific components. These programs included: market access initiatives, capacity building and training, a health program, and one access-to-finance initiative.

The three governments that had not undertaken gender-specific programming elaborated on why they believe they had not attempted such programs. One official stated that they believed focusing on one gender would make the government appear gender biased. An official from Asia pointed to a lack of financial and human resources, while a respondent from Latin America stated that other priorities and issues were the reason such initiatives had not been undertaken.

Additionally, only 50% of government officials participating in the survey indicated their government was considering or planning programs that specifically empower women or have women-specific components in ASM. The other 50% responded “unknown”. Of the governments that are considering programs that specifically empower women in ASM and were willing to share details of their plans, programs focus on providing access to financial services, markets, and capacity building, with none related to legal aspects of ASM sustainable development.

The responses indicate there is general impetus

behind gender-responsive programming in ASM. Moreover, it is evident that governments that have plans to initiate future interventions are responding to the pressing financial needs of women in ASM as indicated by the previous section.

IMPACTS OF FORMALIZATION ON WOMEN

To unpack the gender-ASM sustainable development nexus, the impact of formalization activities on women needs to be assessed. The Government Questionnaire asked officials to assess the impacts of government formalization interventions on a variety of issues, including those related in full or part to legal aspects of formalization such as access to capital (for licensing and titling costs), women’s licensing applications, society’s perceptions of women in ASM, and women’s participation in the sector. Capacity building might also be considered to support the legal aspects of ASM sustainable development if aspects on land titling and licensing processes are included. The results are summarized in Table 3.

Only four of 12 government officials (33%) reported that women’s access to capital had increased as a result of government formalization efforts. However twice as many officials (eight out of 12 or 67%) reported that women’s opportunities for generating income had increased. This difference is to be expected given that income-generating opportunities, particularly employment, livelihood diversification, and entrepreneurship opportunities, are easier to expand through largely government and donor-supported interventions such as training, capacity building, and gender sensitization. While access to capital is a pervasive barrier to sustainable development across the ASM sector, there is a need for the private banking and finance sector to understand ASM, de-risk their investments, and be able and willing to lend to ASM operators on suitable and sustainable terms. The relative ease with which sustainable development of the ASM sector can expand opportunities for women, in which government intervention is the most important lever, is also seen in the responses to “Women’s participation in ASM” and the “Number of women participating in capacity building,” which were both reported to increase in nine of the 12 (75%) countries surveyed.

TABLE 3. What have been the impacts of government formalization interventions on...? (Government Questionnaire)

Country	Women's Access to Capital	Women's Income Opportunities	Negative Environmental Impacts Women are Exposed to	Women's Licensing Applications	Women's Participation in ASM	Share of Domestic Work done by Women in ASM	# of Women Participating in ASM Capacity Building	Society's Perception of Women in ASM	Incidences of gender-based violence in ASM
Kenya	Increased	Increased	Decreased	Increased	Increased	Decreased	Increased	Deteriorated	Decreased
Tanzania	Unchanged	Increased	Unchanged	Increased	Increased	Unchanged	Increased	Improved	Decreased
Philippines	Unchanged	Unchanged	Increased	Unchanged	Increased	Increased	Increased	Improved	Unknown
Zimbabwe	Increased	Increased	Decreased	Increased	Increased	Unchanged	Increased	Unchanged	Unknown
Zambia	Increased	Increased	Decreased	Increased	Increased	Decreased	Increased	Improved	Decreased
Indonesia	Unknown	Unknown	Increased	Increased	Unknown	Unknown	Unknown	Unknown	Unknown
Papua New Guinea	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Malawi	Unknown	Increased	Decreased	Increased	Increased	Unknown	Increased	Improved	Unknown
Mongolia	Increased	Increased	Unknown	Increased	Increased	Unknown	Increased	Improved	Unknown
Ecuador	Unchanged	Increased	Increased	Increased	Increased	Increased	Increased	Improved	Increased
Peru	Unknown	Increased	Unknown	Unknown	Increased	Unknown	Increased	Unknown	Increased
Bolivia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

In contrast, access to finance in ASM broadly, not only for women, is more complex as it requires a larger range of stakeholders (e.g., financial institutions), a functioning financial ecosystem, market access, appropriate licensing regimes, financial literacy on the part of ASM operators, operational and production data, and significant de-risking of both financial and reputational risk (ANRC, 2022).

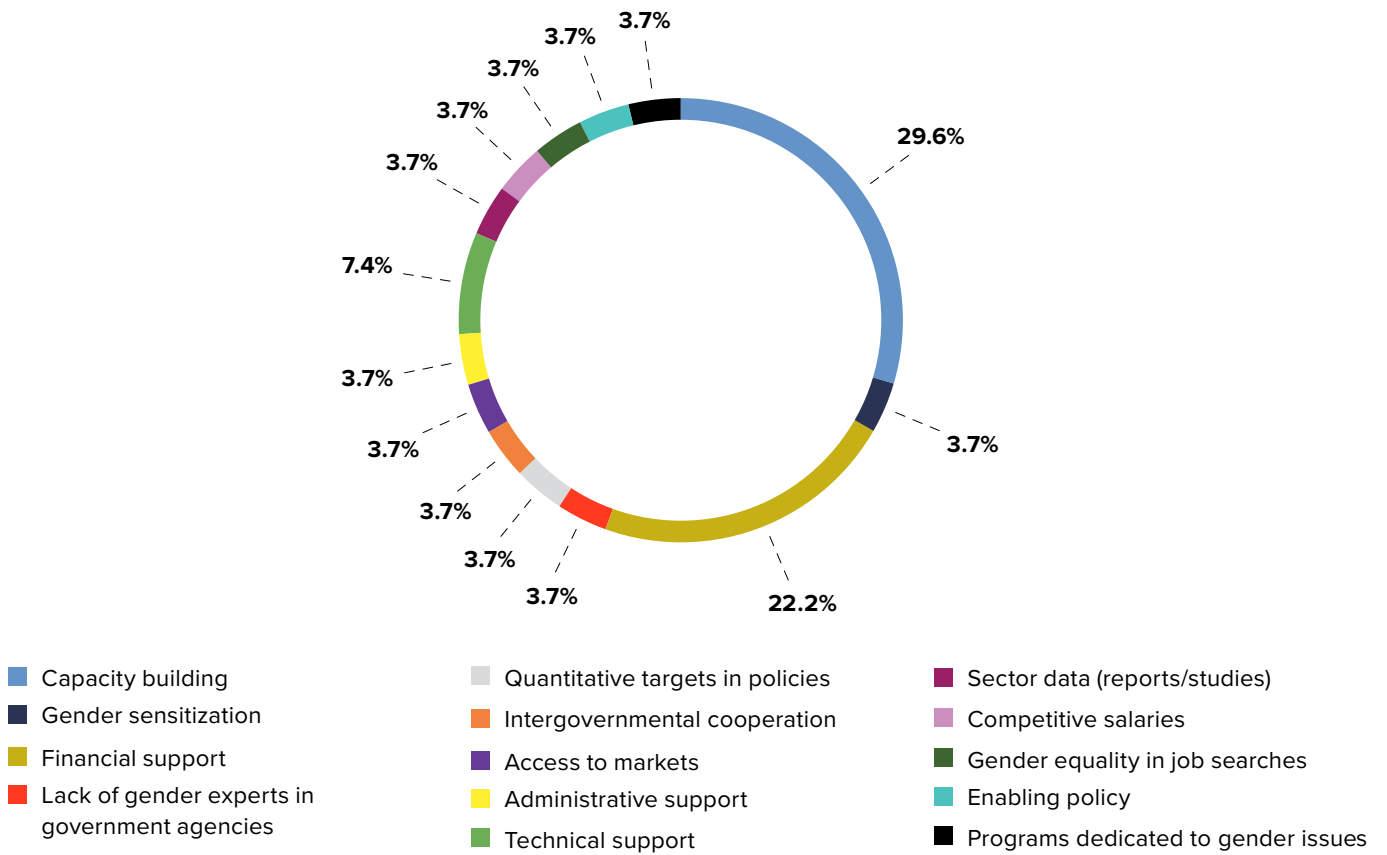
Eight out of 12 government officials (67%) also reported that licensing applications from women had increased as result of formalization interventions. This is to be expected due to the strong association between the countries where licensing applications from women have increased and those reporting increases in the number of women participating in capacity building. This illustrates that capacity building can help women navigate the often-complex licensing process. The other data points summarized in Table 3 are discussed in the corresponding sections in the remainder of the report.

CAPACITY TO ENSURE GENDER-RESPONSIVE DEVELOPMENT APPROACHES

A foundational pillar of ASM sustainable development is the building of state capacity to implement, monitor, and enforce interventions in accordance with national laws and international standards. To ensure that activities are gender responsive, it is necessary for governments (national and local) to develop this capacity.

The pie chart in Figure 4 illustrates the results of a question posed to government officials to identify the support they require to better address the needs of women engaged in ASM. Nearly 30% of respondents indicated that capacity building is the most crucial and most selected form of support needed. This suggests that officials require more knowledge and skills to better consider the needs of women in ASM. Capacity building can equip officials with the necessary knowledge on legal frameworks as well as the tools and resources to lobby

FIGURE 4. What support does the government need to better consider the needs of women in ASM? (Government Questionnaire)

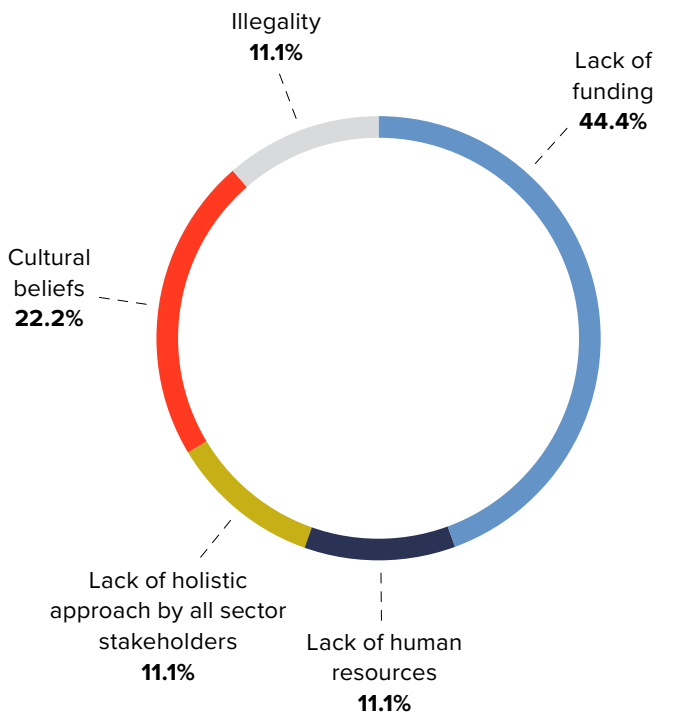


for legal change and create more effective policies and programs that support women in ASM.

Financial support was the second most-selected need at 22.2%. This implies that government officials require financial resources, such as budgets and grants, to implement policies and programs to advance gender equality in ASM. By providing financial support, officials can help women in ASM start and expand their businesses, enhance their working conditions, and upgrade their equipment. The need for capacity development and financial support to improve the ASM sector are themes that run throughout the questionnaires.

In addition to the capacity issues noted earlier, Figure 5 summarizes the responses from government officials to the question: “What, in your opinion, have been the greatest challenges to the inclusion of gender considerations in the formalization process?” A lack of funding is, by a significant margin, the most stated challenge to gender

FIGURE 5. What, in your opinion, has been the greatest challenge? (Government Questionnaire)



considerations in formalization. Cultural beliefs are the second most-selected challenge, showing that negative perceptions of women in ASM, and likely of ASM more broadly, are still a significant hurdle to gender mainstreaming in formalization processes.

Overall, the data presented in the figures highlight that governments need to improve their internal capabilities and operations to support women in ASM centers and that, perhaps most importantly, they are aware of these shortcomings. Capacity development and financial support are crucial areas that require immediate attention to enable officials to better consider the needs of women in this sector. By addressing these needs, officials can create an enabling environment for women in ASM to prosper, promote gender equality, and drive economic development.

Insights from the case studies

Chapter 1 and the recommendation to “make mining laws and economic policies gender inclusive” is accompanied by five case studies. They show the need for legal frameworks and formalization initiatives to include women in their creation and implementation to realize gender equality in ASM.

The first case study on Madre Dios, Peru, by the Instituto Redes de Desarrollo Social (RED SOCIAL) highlights the prominence and leadership role of women as legally recognized miners. Madre Dios has the highest level of female participation in ASM in the country. Women constitute 30% of the legal concession holders and also 30% of the 9,520 people involved with the formalization process. The high levels of women miners in Madre Dios can be attributed to the conducive geological structure, increased learning opportunities, the use of clean technologies, and women in leadership positions due to existing interventions and practices that include women in the creation of regulations. Madre Dios provides an understanding of the cause and effect of higher levels of female participation in ASM activities.

Next, a case study on ASM in South Africa by Imbokodo Mining Services, the National

Association of Artisanal Miners, and Women in Artisanal Scale Mining (WIASM) improves understanding of the gendered aspects of formalization programs. The case study provides some much-needed insight into how women are impacted by formalization initiatives, including unintended consequences, that in this case included increased gender discrimination and marginalization of some women involved in the intervention. Through gender-disaggregated data tracking (a recommendation of the 2020 State of the Sector report), the longitudinal study charts the experience of 159 women involved in the landmark intervention. The South African experience provides an understanding of the unique gender dynamics of ASM formalization that lays the groundwork from which gender sensitive policy frameworks can be created.

The third case study by Women in Mining in Nigeria (WIMIN) explores the advancement of gender equity through the lens of education and capacity building in Nigeria. To counter the significant gender gap in Nigeria’s mining sector, WIMIN, in collaboration with the Ford Foundation and Open Society Initiative for West Africa (OSIWA), established the Women in Mining Training Institute (WIMTI) to provide women in the sector with continuous training and capacity development. In an effort to address gender inequality at the source, they also launched the Girls for Mining (G4M) Club, an intervention aimed at girls in school. Through coaching and mentorship, it encourages them to pursue science, technology, engineering and mathematics (STEM)-related courses and exposes them to opportunities in mining. These largely online forums demonstrate the opportunity to leverage digital technologies to address gender inequality and capacity building in ASM.

Sierra Leone’s 2018 Artisanal Mining Policy designed to promote formalization is discussed in the fourth case study by Cem mats Group. Although the national mining laws and regulations offer some protection for women, there have been no specific directives toward safeguarding women in the sector and the initiatives that may see women protected and empowered. The case study clearly highlights how important gender-inclusive mining legal frameworks are to the full participation of

women in ASM. Adjacent policies and regulations have played a role in increasing women's security and progress in the industry, with a new Gender Equality Act in 2023 that aims to increase women's participation at the leadership and decision making level through gender targets and safeguarding mechanisms, but specific mining legislation is also needed. The case study ends with a call to action for the government to spur the formation of women cooperatives as a means to help catalyze financing and improve their standing within the ASM sector. Notwithstanding the impetus for greater social protection, women will continue to face significant challenges, particularly in financial equity and security, if improved legislation and policy is not matched with concomitant on the ground activities.

The fifth and final case study in Chapter 1 details the partnership between the Alliance for Responsible Mining (ARM) and the Association of Women Mineral Selectors and Peacebuilders (ASOMUSELUPAZ) in the municipality of Suarez, Cauca, Colombia.

Women account for more than 50% of ASM workers in Colombia, yet they face a range of gender-based barriers and inequalities, earning less than men for the same roles, exposed to gender-based violence, and often excluded from mining associations and cooperatives—leaving them unable to access formal markets. To overcome this, ARM supported a group of women miners to organize and become formally recognized as a miner collective, leading to the creation of ASOMUSELUPAZ. Through becoming legally recognized as a group, ASOMUSELUPAZ increased their legitimacy with state entities, creating collective identity to represent them and participate

in public dialogues they were previously shut out of thereby improving the participation, representation, and visibility of women miners.

Conclusion

Many countries in the 2023 State of the Sector Survey data set have supported gender equality in ASM and are at various stages of gender mainstreaming their laws and policies. However, the advancement of gender equality in ASM is conditional on the reform of gender-blind mining codes and protective legislation that enshrines discriminatory practices. Equally, both statutory land ownership frameworks and customary tenure arrangements must afford women and men the same land rights in order for women in ASM to advance from low-earning ancillary roles along the value chain to mine ownership as central tenants of rights-based sustainable development of the ASM sector. For women to fully participate in ASM, their health and safety need to be prioritized, especially considering that women require specialized sexual and reproductive health care. Overall, the respondent countries in the 2023 State of the Sector Survey have included gender as part of their ASM development strategies. But, for ASM development efforts to increase gender parity in the sector, interventions must carefully encourage equal participation and seek to address the needs of women. The findings of the survey also highlight the need for the capacity and financial ability to support, monitor, and enforce a gender-responsive approach for the sustainable development of the ASM sector.

END NOTES

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CASE STUDY #1

Credit: AMATAF and Pure Earth, 2020

INCREASING THE PRESENCE OF WOMEN IN ALLUVIAL MINING IN PERU: THE CASE OF MADRE DE DIOS

AUTHORS: Olinda Orozco Zevallos¹ and Guadalupe Eto Chero¹

AFFILIATED ORGANIZATION(S): ¹Instituto Redes de Desarrollo Social (RED SOCIAL)

INTRODUCTION

This case study from the Department of Madre de Dios (MDD) in the Peruvian Amazon reveals the flaws of the state's institutional framework in the face of uncontrolled growth of informal and illegal mining, which unequally impacts the lives of MDD women and men. Approaching this case study from a gender perspective exposes the participation of women miners in the formalization process and demonstrates how unique geography and the leadership of women in social and environmental responsibility initiatives can propel them towards greater representation in a formalized ASM sector.

The research (Prevenir-USAID- Red Social, 2021) was carried out between August–November 2020 and its results were presented in early 2021. Secondary studies were used as well as official information and statistics from the Ministry of Energy. The primary data was collected through interviews (via video calls due to COVID-19 health restrictions) with women leaders and members of mining concessions, producer and union leaders, consultants, specialists, and state officials.

Increasing the visibility of women miners in MDD

Studies on ASM in Peru have focused primarily on the role of miners as producers, rights holders, workers, traders, and suppliers in economic, legal, technical, environmental, and social interactions. The results are valuable, but the studies have not taken gender into consideration, which has hidden the presence of women in the ASM gold value chain.

Although some studies have addressed the social problems of women in ASM as victims of trafficking and sexual exploitation and what their rights are, this study highlights the prominence and leadership of women artisanal miners. According to the Ministry of Mines' MDD Mining Formalization Information Registry database (MINEM, 2020), women make up 30% of the formalized concession holders. Likewise, it shows that of the total 9,520 legal persons in the formalization process, 30% are women—placing MDD as the leading department in Peru in terms in terms of percentage of women who are concession holders in the country's ASM sector.

Among the factors that explain this high statistic is the Amazonian geography with accessible soils

and minerals where alluvial mining occurs in open spaces allowing for operations to be observed and picked up easier. Women are also favored in leadership roles in the social and environmental responsibility of the pilot reforestation programs and the use of clean processing technologies such as gravimetric plants.

This trend portrays a new vision of socially and environmentally responsible ASM, which helps change the face of Amazonian mining and promote strategies to eradicate illegal mining practices in MDD.

A CALL FOR A BETTER USE OF LIMITED RESOURCES

With the state focusing on attacking the effects from illegal mining and not its causes, their actions are more limited to addressing the victims of trafficking and sexual exploitation, while women miners who fight for formalization and feel threatened by illegal mining appear ignored.

The National government has prioritized temporary military operations against illegal mining in MDD with minimal achievements, to the detriment of institutional and budgetary support for the ASM formalization process. Between 2014 and 2019, 364

Women from the AMATAF artisanal mining association involved in a reforestation pilot



Credit: AMATAF and Pure Earth, 2020

million Brazilian soles were spent on these military operations with limited results, while the Regional Directorate of Energy and Mines of the MDD received only 0.5 million soles per year to manage the entire formalization process (Prevenir-USAID- Red Social, 2021). This imbalance needs to be rectified.

Conclusion

There is a growing role for women miners in Madre de Dios, which is evidenced by the fact that women are owners of one in three operations belonging to private citizens and partners in one in four operations belonging to legal entities. The number of

AMATAF Clean Technologies Center in MDD, Peru



women in mining is also attributable to the geography that allows for easier access to resources and a production cycle that is easy to learn.

Formalized women miners are employing responsible mining practices, including pilot programs to use clean technologies and aid in the recovery of degraded areas. In addition, female leadership enhanced by the association of producers gives women the potential to improve responsible mining rates in the region and effective state policies could further strengthen the role women play in combating illegality in the sector. In particular, the government needs to better allocate available resources.

There is still a need for more studies with a gender approach to identify needs, interests, and demands of women. This will strengthen the representation and leadership of women in managing mining sites, exercising their rights to equality and decision making, and in their communities.

ACKNOWLEDGMENTS

We want to thank the Prevent Project—USAID/DAI that financed this study.

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CASE STUDY #2

Credit: Kgothatso Nhlengetwa

FORMALIZATION AND GENDER: LESSONS FROM THE DIAMOND ASM KIMBERLEY CASE IN SOUTH AFRICA

AUTHORS: Kgothatso Nhlengetwa¹ and Michelle Lillian–May Goliath²

AFFILIATED ORGANIZATION(S): ¹Imbokodo Mining Services, ²Women in Artisanal Scale Mining (WIASM)

INTRODUCTION

This case study presents the experiences of women in the only ASM project to formalize in South Africa. A longitudinal action research study was conducted between 2017 and 2021 that resulted in the issuance of two permits. The process involved collaboration between government, unregulated miners, the Department of Mineral Resources and Energy (DMRE), a large-scale mine, the local government municipality, a social housing company, and one of the authors of this case study. The co-researched process aimed to attain a permit through social justice activism and a unique “dummy application” process, which used Section 104 of the Minerals and Petroleum Resources Development Act (MPRDA, 2002) through a special consent by the Minister of Mineral Resources and Energy to award a five-hectare permit to the primary cooperative, Bathopele Primary Mining Cooperative, in 2018. An initial five-hectare portion came from the municipality and additional land was transferred, with rights, by the Ekapa Mining-Kem JV (a large-scale mining joint venture). A tripartite agreement was used to direct the process and included rules and negotiated terms of engagement. This unique approach was necessary because South Africa had no policy on artisanal mining at the time and the legal framework for small-scale mining was through the DMRE permitting system.

The study also tracked 159 women out of a group of 3,000 artisanal miners. The experiences of the women in this project offer South Africa a perspective on gender in artisanal mining, an understanding of the unique vulnerabilities of women, and how to ensure they are included in future ASM policy and legislation, as current policy is completely gender blind.

Women’s participation in the project

Disaggregated data was collected on active women miners in Kimberley between 2016 and 2021 (Figure 8). In 2016 and 2017 a total of 56 women were illegally mining in Kimberley according to data from a court list that was compiled when miners registered to be formalized with the DMRE. Of this list, only 13 women completed the formalization process in 2018, one of which was elected to Primary Cooperative Management. After the permits were obtained, an additional 125 women registered with the cooperative to mine legally and continued to mine during 2019. A combination of factors such as COVID-19, alternative employment, and on-site violence, saw 101 women leave active mining towards the end of 2020. Of the original group, at the time of writing, no women miners are currently actively mining.

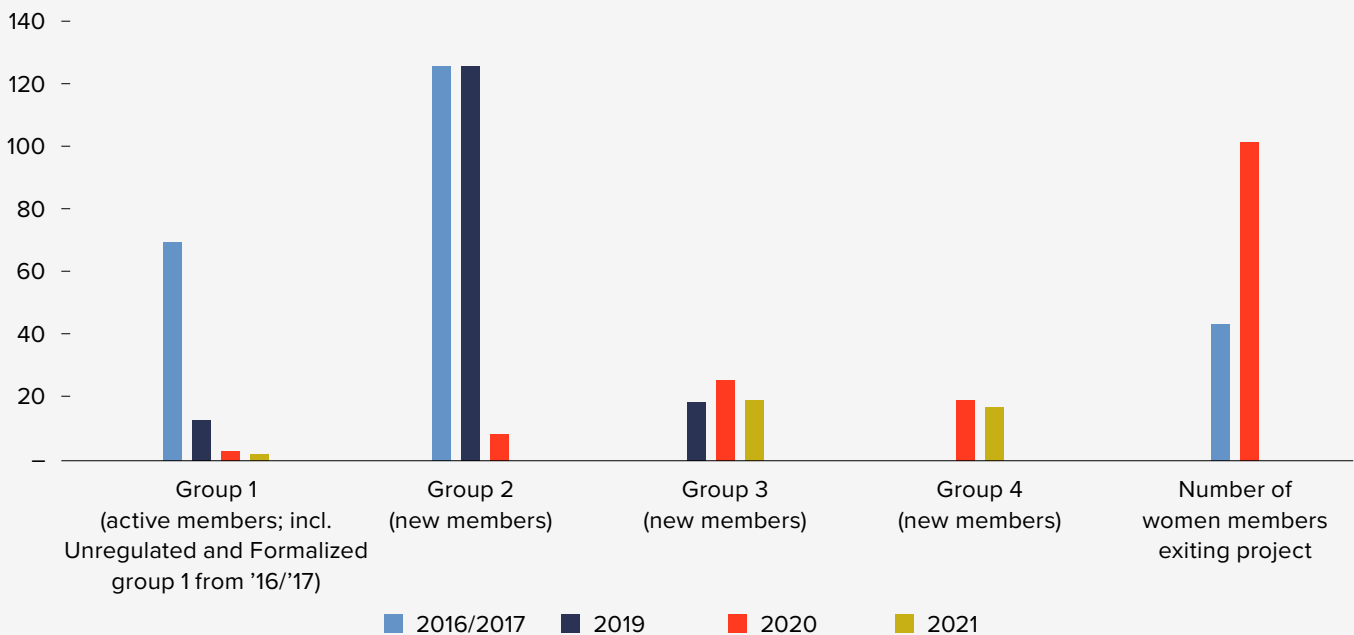
Moving up the value chain: opportunities and barriers

During 2019, gender mainstreaming in the project included focused empowerment training, particularly gemstone evaluation training, at the Kimberley Diamond and Jewelry Academy (KIDJA). This opportunity exposed women to the possibilities of trading directly with registered cutters and polishers as well as entering the jewelry making industry. The process included evaluating linkages to the tourism sector, where women organized their own diamond mining tours.

This intervention allowed some women to leave the mining fields and enter other areas of the value chain. During this time, linkages were established to the international jewelry market, which indicated interest in buying all the “salt and pepper” ethically sourced natural diamonds from Kimberley that would be marketed for their perceived uniqueness, affordability, and the fact that they contribute to sustainability by extending diamond resources. Unfortunately, due to COVID-19, many women left the site and those who remained were unable to produce sufficient diamonds at scale for international trade.

FIGURE 6. Active women miners per annum

Bathopele Cooperative—Women members by cohort



Women artisanal mining day tour Beef Master Camp, Kimberley



Credit: Conrad Goliath

It should be noted that male artisanal miners overall expressed that gender mainstreaming was a type of favoritism and was unfair to largely vulnerable groups. Women on the other hand felt they could escape dangerous situations by finding employment in other segments of the value chain and were excited by the prospects of jewelry making, rough evaluation, and trade. Women also performed various additional tasks such as sieve construction and repair to supplement their incomes.

Further artisanal mining-related training was offered by the DMRE, however the minimum entrance requirements to participate in the training was a barrier to broad scale participation by women due to their lower formal education levels. To overcome this barrier, artisanal miners sent their unemployed children who met the minimum education levels to the training.

Women construct sieves for additional income



Credit: Kgothatso Nhlengetwa

Conclusion

The project presents mixed results. Although most women exited the diamond ASM field, many went into the mainstream economy and ASM provided a foundation for them to do so. The project in Kimberley was formalized through a unique collaboration of stakeholders and although successful from a legal perspective, the women who started the process are no longer active. This suggests that the project in its initial structure was unsustainable for women's participation.

The authors propose that for future formalization initiatives, women should play a more active role in the design of the project and in leadership levels of cooperatives. To improve sustainability, it is recommended that the education levels of artisanal miners be taken into account for development and training and that training be developed uniquely for women in ASM.

The current ASM policy is silent on the gender dynamics of ASM and the Kimberley diamond ASM example should be taken as evidence-based research input into the legal framework to be set up by the DMRE.

ACKNOWLEDGMENTS

Thanks to the Bathopele Artisanal Mining Primary Cooperative, the South Africa National Association of Artisanal Miners, the University of the Free State, and all women in artisanal mining.

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CASE STUDY #3

Credit: Women in Mining in Nigeria

CAPACITY TRAINING AS A SPRINGBOARD TO SUSTAINABLE DEVELOPMENT IN NIGERIA'S MINING SECTOR

AUTHORS: Olusola Olaniyi¹ and Janet Adeyemi²

ORGANIZATION(S): ¹Berillos Proconsultants, ²Women in Mining in Nigeria

INTRODUCTION

In Nigeria, women make up approximately 14% of the country's mining workforce (NEITI, 2020). This case study shows the importance of educating and empowering women and girls in artisanal and small-scale mining (ASM) communities using capacity training as a springboard to bridge the gender inequality gap in the ASM workforce and coach girls for the sustainable development of mineral resources in Nigeria. In particular, the case study highlights how improving gender equality in ASM can help achieve SDG 5 target 5.1 to end discrimination against women and girls by making mining more accessible to women and actively supporting their inclusion and participation in the ASM sector and target 5.5 to ensure women's full effective participation and equal opportunities for leadership in political, economic, and public life. The use of digital platforms also showcases how target 5.b to enhance the use of ICT to promote women's empowerment can be supported in ASM development projects.

Engaging women and girls

The Women in Mining Training Institute (WIMTI) was established in 2021 by Women in Mining in Nigeria (WIMIN) to provide continuous capacity training for women miners in Nigeria, and especially those in ASM. The institute's Girls for Mining (G4M) club was created to introduce mining as career path for girls and young women in secondary and tertiary education. Both initiatives aim to increase the involvement of women and girls in mining-related peer learning, training, and specialized knowledge transfer, providing them with a strong foundation to enhance their technical skills. This focus on skill development is intended to foster wealth creation and drive long-term performance improvements, ultimately contributing to decreasing the gender inequality gap in the country's ASM sector and helping to achieve SDG 5 targets 5.1 and 5.5. Specific training themes include responsible methods and practices of mining, gender issues, justice, leadership, and the economics and business of mining.

WIMTI launched its monthly online training classes in July 2021 targeting women artisanal small-scale miners with attendees from both across Africa and around the globe. This regular online school continues to grow and it is also being attended

by a range of participants including Women in Mining members, ASM community members, resource persons, policy makers, professionals, extractive industry experts, economists, business coaches and leaders, as well as potential miners. WIMIN's research on gender justice and gender mainstreaming, funded by the Ford Foundation and the Open Society Initiative for West Africa (OSIWA), gave birth to the Girls for Mining (G4M) Club, launched on March 8, 2022, in Abuja, Nigeria, to mark International Women's Day with 51 girls inducted as inaugural members. The initiative encourages the next generation of girls to embrace mining and science, technology, engineering, and mathematics (STEM)-related courses and exposes them to opportunities in the extractive industry and better prepares them for the future.

Nigeria's Minister of Mines and Steel Development (MMSD) in his speech at the launch of G4M, said, "Gender inequality is one of the many challenges preventing the mining industry from reaching its full potential. While Nigerians understand that gender inequality in the mining industry is a deep-seated issue, the time to make the industry more inclusive for both genders is now and not when the country has advanced."

The winner of the quiz during a launch receives a Lenovo laptop



Credit: Women in Mining in Nigeria

FIGURE 7. Training sessions organized by Women in Mining Training Institute



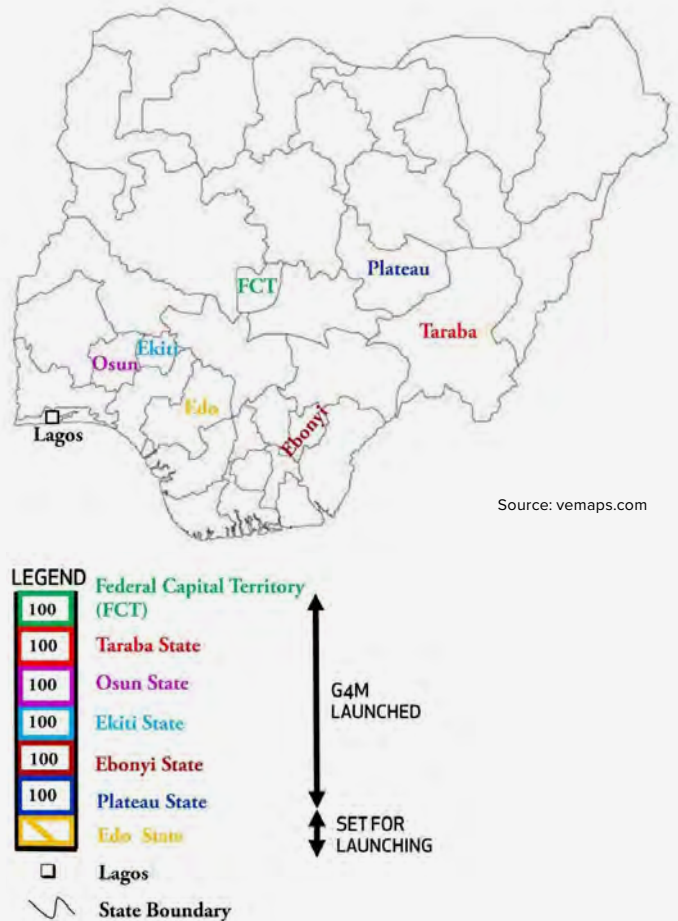
Embracing the future

Mining is characterized by constant changes but most importantly, it is a key driver in this new era. With the Fourth Industrial Revolution fast-tracked by the COVID-19 pandemic, every sector of the economy is going through drastic digital technological changes. WIMIN saw the pressing need to close the gender divide and is leveraging digital channels to do so.

As envisioned, WIMTI has turned to a virtual knowledge hub in line with the new global digital transformations and innovations. Recently, WIMTI online training focused on the theme of the 2023 International Women’s Day Celebration, “DigitALL: Innovation and technology for gender equality” (UN Women). The WIMTI Class in March 2023 (Figure 7) focused on three topics: the role of digitization in the mining sector, the use of software in the digitalization of mining in Nigeria, and why women must embrace the digital loop.

During this training, participants were informed that digitalization has the potential to bring about modern transformative changes, create new opportunities, as well as open a plethora of doors for job efficiency and professional growth. The trainees gained greater insights into emerging technologies in the mining sector and that with digital, remote, and virtual jobs the future of ASM is looking brighter, especially for women and girls. Although the full effects from digitalization are uncertain, women

FIGURE 8. Map of Nigeria Showing G4M Presence and Number of Student Members in Six States



artisanal and small-scale miners and girls in ASM communities have hope for improved environmental protection and better workplace health and safety.

G4M now has a robust program including real-time orientations, local and international exchange programs, trainings, coaching, and mentoring by ASM experts and experienced professionals. Ten girls in 10 different schools, totaling 100 per state across ASM communities in Nigeria, are being taken through intensive personalized guidance to build their knowledge and skills, confidence, and professional networks in readiness for future livelihoods in mining.

Figure 8 shows G4M currently has a presence in six states: Federal Capital Territory (FCT), Taraba, Plateau, Osun, Ebonyi and Ekiti, while Edo is set for launching.

To encourage participation, inspiration, and generate excitement, participants receive a school bag at each state's launch and the winner of a quiz competition receives a laptop. The program is helping young women visualize their future in the mining sector, thereby enhancing gender inclusion.

“The G4M club is nice and I am happy to join. I know a geologist studies the earth...I would like to be a miner in the future.”

– FAVOR BALA (G4M MEMBER)

Conclusion

While progress is being made, further research and the collection and analysis of sex-disaggregated data on the ASM and large-scale mining sector in Nigeria is needed to provide a robust evidence-base of women's skills and capacity needs in the sector. Furthermore, investment in the form of funding, grants, and sponsorships are needed for the sustainability of initiatives such as WIMTI and G4M because many women artisanal and small-scale miners and girls in ASM communities may not be able to afford the costs of paid training sessions.

WIMIN through WIMTI and G4M is successfully utilizing capacity training as a springboard to encourage and help women in ASM and girls in ASM communities improve their knowledge, skills, and choice of education for better livelihoods. G4M was set up to help young girls understand mining, build capacity, address human rights issues, and bridge the generational and gender gaps. At the G4M launch, Janet Adeyemi observed that, “low participation of women is due to lack of education and stringent cultural barriers. With enlightenment and more educated young women coming into the sector, those barriers can be broken, and we can more quickly achieve equality in the sector.”

ACKNOWLEDGEMENTS

The authors acknowledge the collaboration by WIMIN with the Ford Foundation, OSIWA, Solid Minerals Development Fund (SMDF), and MMSD on gender justice and mainstreaming that led to the formation of G4M. Also thanks to Berillos Proconsultants, the interviewees, and the contributions from presenters and attendees in WIMTI classes.

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CASE STUDY #4

Credit: Muhammad Shah Jaman, iStock

THE NECESSARY NEXT STEP IN SIERRA LEONE'S EFFORTS TO MAINSTREAM GENDER INTO ASM FORMALIZATION

AUTHORS: Andrew Keili¹

ORGANIZATION(S): ¹Cemrats Group Ltd.

INTRODUCTION

Attempts at formalization in the Sierra Leonean mining sector have been few with women given limited consideration. However, broader laws and regulations are now empowering women, including those in the ASM sector. Here, we make the case that the time has come for Sierra Leone to make progress on both formalization and gender equality in ASM. This case study demonstrates how reforms to national laws can promote gender equality in ASM and help achieve SDG target 5.a to undertake reforms to give equal economic rights to women, and 5.c to adopt and strengthen policies and legislation to promote gender equality and women and girls' empowerment.

Sierra Leone's ASM sector

Diamonds, often associated with Sierra Leone's mining sector, were first "discovered" and mined commercially as artisanal operations in the eastern part of the country in the 1930s. Today, artisanal mining occurs in more than half of the country's 190 chiefdoms. Primarily diamonds and gold are mined, though some coltan and zircon are mined using artisanal methods.

It is estimated that artisanal diamond and gold mining, and related livelihood activities, support at least 300,000 Sierra Leoneans and that upwards of 10% of the population are supported by artisanal diamond and gold mining. The Baseline Study on Artisanal Mining, funded by the World Bank and carried out by Levin Sources and Cemmat Group (2021) estimates, from export and extrapolated survey data, that Sierra Leone's annual artisanal production of diamonds is between 180,000 and 200,000 carats. In 2018, the value paid for these stones at the miner level was approximately \$27 million, or about 40% of the value at export of \$65 million. The same study estimates that Sierra Leone's annual gold production is approximately 3 metric tons, representing about 2.6 tons of pure gold. Based on the average sales price at the time of the study, this production was sold by miners for \$86.7 million. The export data however shows that only around 4% of unrefined produced gold is exported legally with the rest smuggled. Given these figures, formalization is imperative for the country's development.

The difficulties of formalization

Hilson, Maconachie and Kieli (2016) largely attribute the slow progress of formalization in Sierra Leone's ASM sector to the "large scale mining bias" of the government. Many formalization interventions in the ASM sector, largely donor-funded or driven by private interests, have floundered for various reasons. One example is the Peace Diamond Alliance (PDA) initiative that was initiated by USAID in 2002 to address issues relating to the formation of mining cooperatives, financing artisanal mining operations, and the fair trade of diamonds produced by artisanal miners. Although

it succeeded in meeting some of its objectives, the project was discontinued and did not lead to the significant market, governance, or gender balance impacts that were envisioned for the sector.

Women's role in Sierra Leone's ASM sector

Women sometimes take higher-paid roles and leadership positions as mine owners and site managers in Sierra Leone's artisanal mining industry. Some hold licenses and financially support operations. The Baseline Study on Artisanal Mining indicated that women play an important role in supporting mining, especially in gold. The survey found that 17% of those involved in site management were women, with half of them serving as project supporters, especially in gold mining. The same study indicated that while representing around 30% of the work force, women collectively only produce a little more than 16% of the gold that men produce, 363 kg of gold versus 2,171 kg. The production estimate shows that women are likely excluded from more productive assets, tools, and roles. Women serve as washers/panners and transporters and play important roles as auxiliary actors, notably as cooks, food sellers, and vendors of consumer goods.

Notwithstanding their participation in the sector, women face severe challenges due to many factors that include poor and unequal access to land, lack of skills training, inappropriate technology, functional literacy problems, and a lack of marketing and finance skills.

Legislative progress in Sierra Leone

An area where Sierra Leone has made progress to empower women, broadly and in ASM, is in legislation. To reflect the commitment of the government in meeting global obligations, legislative reforms in critical areas have been enacted, as required by the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). In addition to the 2007 Gender Laws, the Sexual Offences Act was also passed in 2012. Select laws are outlined below.

TABLE 4. **Laws increasing women’s empowerment in Sierra Leone**

Law	Purpose
Domestic Violence Act (2007)	Addresses all types of violence in a domestic setting.
Devolution of Estates Act (also known as the “Intestate Succession Act”) (2007)	Provides protection for women in terms of land and estate inheritance in the event that her spouse dies intestate (without a will).
Registration of Customary Marriages and Divorces Act (2009)	Outlines a framework for registering customary marriages and divorces, which provides further economic and legal protection for women.
The Sexual Offences Act (2012)	Provides a clear framework for addressing sexual violence crimes.

A new Gender Equality and Women’s Empowerment Act promulgated in 2023¹² seeks to increase the number of women in leadership and decision making positions, aiming for women to hold 30% of positions in elective office and appointment positions. This act therefore supports the aims of the revised 2018 Artisanal Mining Policy⁷ designed to formalize ASM operations to be legally compliant and to improve access to finance. The policy acknowledges the fact that women have dynamic roles in artisanal mining operations including as license holders, diggers, panners, cooks, and mineral traders and that some women are engaged in mining but also play roles in mineral trading and local farming. The policy states that female participation will be promoted and opportunities for capacity building and formalization pursued. It advocates for ASM business planning to be given prominence and for ASM business structures to be set up. These structures will require finance.

The difficulties of finance

A survey carried out by Cemmat in 2021 on a women’s organization with 33 members called Choconde (meaning “good dream”) indicated that their average earnings per month was very low and they had problems saving money. They however contributed to an Osusu scheme (saving centrally and donating proceeds to one person at a time on a rotational basis). They had no supporter outside the group and found it impossible to access loans as financial insti-

tutions required collateral. They supplemented their earnings by performing gardening services.

“We have difficulty saving as we contribute to our “Osusu” scheme. It is impossible to access loans as financial institutions require collateral, often in the form of submitting a house plan. We find this impossible. Although six of us in our group have husbands, they are farmers and cannot help with accessing loans.”

– CHOCONDE MEMBER.

Access to credit for ASM is very difficult. Banks in Sierra Leone charge punitive interest rates and are reluctant to fund projects in the mining sector (especially the ASM subsector) because of inherent uncertainties with geology, grades, production, and the lack of collateral.

A lack of cooperation

A host of women’s rights and empowerment organizations have appeared over the past decade, including the 50:50 organization and SEND Sierra Leone that have given increased confidence to women to combat discrimination of various sorts. This needs to be replicated in various forms in ASM.

Despite formal attempts at organizing miners in cooperatives or associations, these groups are few and far between and can fail due to a range

of internal, external, and cooperative design factors (Levin and Turay, 2008). There are informal arrangements whereby female miners pool resources together either with their own funds or with funds from financial supporters for mining. Such schemes are neither organized nor pervasive.

In the Baseline Study on Artisanal Mining, only 4% of those interviewed said they were part of a cooperative or association. Upon further investigation, many of these groups appeared to be informal self-help groups or “pre-cooperatives” rather than organizations that collectively represent miner’s interests or share in risk and reward.

The moment to promote the association of women in ASM is now

Attempts at formalization in Sierra Leone’s mining sector have mainly been restricted to pilot projects, which have failed to take root. There are however opportunities to markedly improve upon this by encouraging more women to participate in the sector formally. Though national laws and regulations address a lot of the issues that would prevent women participating in the formalization of the sector, there needs to be specific initiatives undertaken for the mining sector for their full benefits to be realized. The primary opportunities are through encouraging the formation of cooperatives and providing them with routes to securing financing.

The following recommendations are made for enhancing formalization for women miners:

1. The government, through the Ministry of Mines and Mineral Resources and the National Minerals Agency, should encourage the formation of mining cooperatives and associations and provide accessible guidance and funding to interested parties. The Mines Ministry does not presently fund such schemes. The government should however provide funding for this or encourage the funding through rural banks. Women’s enterprises and organizations should be promoted and supported. These may include a collective of women panners to acquire a number of wash plants and other

equipment that can be rented out and serve as a source of income. A collective of women may also be assisted in providing cooking services or participating in post-mining reclamation activities

2. Women’s associations and networks must be supported by government funding and training and encouraged to hold governments to account on legislative and regulatory gender provisions. A formal network for women in mining should be created similar to the Malawi Women in Mining Association (MAWIMA), which acts as a direct link to local government and government departments responsible for mining. There are similar groups in Ghana, Rwanda, Tanzania, and Kenya, yet Sierra Leone has not advanced to this stage. Organizations that already exist, such as the Women on Mining and Extractives (WoME), a national NGO that works in mining communities with women and young people to raise awareness, build capacity, and advocate for women, could have their role in governance and communication with government expanded.
3. The government should encourage and even require, where appropriate, women’s participation in decision making. This could include simple measures such as promoting women’s inclusion in site-level committees and ensuring their representation during wider stakeholder consultations for the ASM sector.

As shown by the successes of the Alliance for Responsible Mining (ARM) project in Colombia (case study #5), cooperatives and formalization go hand in hand with improving the standing of women and helping to increase the financial resources available to them. Assisting this process is a natural next step for Sierra Leone’s government.

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CASE STUDY #5

Credit: ARM

ASM FORMALIZATION TO PROMOTE WOMEN'S HUMAN RIGHTS IN COLOMBIA

AUTHORS: María Kamila Gómez Colmenares¹

AFFILIATED ORGANIZATION(S): ¹Alliance for Responsible Mining (ARM)

INTRODUCTION

In Suárez, a town and municipality in the Cauca Department of Colombia, an association of female artisanal miners (ASOMUSELUPAZ), together with the Alliance for Responsible Mining (ARM), have worked to achieve formalization and mitigate the gender-based violence and discrimination to which they have been exposed. This case study describes the holistic approach this project has taken to empower women using formalization.

The income gap between women and men in peripheral and dispersed rural areas in Colombia is almost twice as high as in the capital cities (16.4% versus 33.6%) (DANE, 2020). These areas with the poorest households also offer fewer services, increasing the vulnerability of the population, and due to persistent socioeconomic and gender inequalities in Colombia, rural women's opportunities to escape poverty are limited. Artisanal mining in Colombia mostly occurs in peripheral and rural areas of the country affected by multidimensional problems, such as internal armed conflict, drug trafficking, and illegal exploitation, among others (Ministry of Mines and Energy, 2022).

The mining sector in Colombia is highly masculinized with low participation of women as a result of industry-wide gender gaps (*Ministry of Mines and Energy, 2020*). It is not easy to perform a comprehensive quantitative analysis because complete data on the current labor conditions of women in the ASM sector does not exist (*Ministry of Mines and Energy, 2020*).

According to the “Genesis” platform,¹ in Colombia women represent more than 50% of ASM workers (*Ministry of Mines and Energy, 2022*). This activity allows them to generate an income to support themselves and their families without requiring a high degree of technical skills. This is very important considering the precarious conditions and low access to formal jobs that women face in the mining sector.

However, women in the ASM sector are exposed to constant sexual, economic, institutional, psychological, and physical violence (*Arcos and Rivera, 2019*). Here are some examples illustrating that gender inequality cuts across many areas of women’s lives on a daily basis:

1. Women in artisanal mining earn less than the legal minimum wage² (roughly US\$123 dollars a month) (*Ministry of Mines and Energy, 2020*).
2. Women are also typically in charge of children, sick and/or disabled people (*Ministry of Mines and Energy, 2020*)
3. Women also dedicate more hours per week on average to housework (*Ministry of Mines and Energy, 2022*).
4. Women are constantly exposed to gender-based violence such as sexual harassment or abuse, mistreatment by members of their family, colleagues, and others (*Arcos and Rivera, 2019*).
5. Some women are not allowed to be part of organizations, associations and/or cooperatives where they could have a voice and vote or be recognized as miners (*Ministry of Mines and Energy, 2020*).

This case study focuses on the case of subsistence mining in the Cauca Department. ARM has worked with a group of women miners in the region since 2017. Under the implementation of different projects,³ they have sought to address to gender-based violence, responsible mining practices, environmental issues, entrepreneurship, and social and economic solidarity. These projects have allowed ARM to weave strong ties between women and other key actors, mitigating risks and gender-based violence, and also responding to SDG 5 and Law 1257 of 2008⁴ promoting a life free of violence against women.

The women miners’ experience in Cauca, Colombia

The municipality of Suarez is located in the southwest of Colombia, in the region of Cauca, which is characterized by economic activities such as mining and agriculture. Since 2017, as part of a project implemented by ARM, a series of dialogues have been initiated with a group of women artisanal/subsistence miners who were located on the roadside or at the exit of the mine entrances and who at that time, were not recognized as miners by the government nor by other small-scale miners.

We experienced skepticism from external actors while working with this group of women. There was an entrenched lack of trust due to the absence of the state, the historical presence of several armed groups, and the general lack of actions guaranteeing the rights of women miners in the region. For these reasons, ARM began their work with trust-building activities using participatory approaches. Together with women miners, a set of specific needs and concerns were identified and prioritized.

The group of women who chose to participate in the project were characterized as follows:

- 80% of the women were mothers and head of households
- 88% considered themselves victims of armed conflict

- 93% self-identify as black and/or of Afro descent
- Their average age was between 25 and 59 years old (73%), with the group's ages ranging between 18 and 67
- The illiteracy rate among them was 5.8%
- The main income-generating activity was mining for 93% of the group. Most did not work every day in this activity as they had to attend to unpaid household chores 50% of their time
- None of the women reached the minimum wage in effect for 2017 in Colombia (Col\$737,717/month, or US\$254/month for that year)
- They had low access to financial entities (13%) (Alliance for Responsible Mining, 2018)

Based on this context, and within the framework of one of the projects implemented by ARM, this group of women “*seleccionadoras*” started the process of creating an organizational scheme to be recognized as a women’s miner collective.

Periodic meetings were held with the women to discuss the importance of the association to generate actions to improve their quality of life. Workshops explored and strengthened their knowledge and skills in relation to traceability in the gold supply chain (showing it is ethically sourced), leadership, environmental management, marketing, and human rights. On September 11, 2017, the Association of Women Mineral Selectors and Peacebuilders (ASOMUSELUPAZ) was created to make their work visible so they could be recognized as important stakeholders in the municipality.

The process to formalization

ASM formalization presents several challenges for miners: the absence of state actors to engage with local authorities, a lack of knowledge of mining standards, and the necessary requirements to formalize and commercialize operations. The following sections detail the results of the group’s formalization process.

Connecting to the formal market

In the past, the women’s group worked between four and six days per week collecting minerals. However, they were marginalized by male miners and were not allowed to process their minerals on a daily basis, so they had to process their ore in very short shifts and on a specific day of the month, every 15 or 20 days. The main reason being they were not considered “real miners” due to the small amount of material they collected, ranging from 3–14 grams per person.

Another major challenge was they only had access to informal buyers who underpaid for their product. Due to insufficient information provided by the women on the purity of the extracted mineral and fluctuations in the international price of gold, women received less than 70% of the international price, in comparison to men, who received better prices (Alliance for Responsible Mining, 2017; Alliance for Responsible Mining, 2020).

In addition, a constant fear of commercializing operations under formal schemes was identified due to historical linkages to informal markets as well as a lack of support towards formalizing subsistence mining in the territory (Alliance for Responsible Mining, 2020). Thus, support was given to help the women mineral sorters connect to the formal market through the necessary steps: (1) registration in the RUT,⁵ (2) registration in the RUCOM platform,⁶ (3) online registration in the “*Sí Minero*” platform,⁷ and (4) the opening of bank accounts⁸ (Alliance for Responsible Mining, 2020); all of these steps were in compliance with the criteria established in the CRAFT Code (Code of Risk-mitigation for ASM engaging in Formal Trade).

Although many formal gold buyers prefer not to source from subsistence miners due to the risks associated with the traceability of these minerals, the implementation of CRAFT increased the buyer’s confidence, interest, and commitment to be involved (Alliance for Responsible Mining, 2020). As a result, establishing formal supply chains through CRAFT led to a pilot sale in which the group of women obtained a 20.8% increase in their final profits, which meant they received 92.48% of the international price. This allowed them to demon-

strate to their community the benefits of formalization and help change perceptions around it.

“It has brought us benefits such as being on a government platform (Genesis platform and bank access), where we can receive economic assistance and be able to sell our gold at a higher price when we can process mercury-free gold.”

– DIANA LUCUMI, (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

Governance

One of the goals of the women’s group was to improve their visibility as female miners to increase legitimacy with state entities. By going through the formalization process, encouraging the collective identity of women miners, and strengthening their knowledge in leadership and advocacy, the women began to participate in dialogue on mining in the territory as active and relevant agents in municipal debates.

“We can be part of calls for proposals from public and private entities, we have meetings with other women, and the opportunity to meet other key people to grow”

– DIANA LUCUMI, (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

BOX 2. Formalization in Colombia

Formalization is, in essence, the process that mining organizations must undertake, considering their conditions, needs, and characteristics, to be able to legally work on a mining site. This process requires the completion of technical and legal protocols such as obtaining environmental and mining licenses given by the national authorities. In Colombia, the latest framework related to formalization processes is the Law 2052 of 2022. It includes different strategies to help informal miners transition to legal mining operations.

To improve the conditions faced by the women miners in Cauca, ARM has helped improve governance through strengthening leadership and building relationships with strategic actors. As a result, mining communities have been connected with key regional players to promote dialogue that can contribute to addressing the current needs in the region. These plans were developed with the input of multiple institutions (such as the Chamber of Commerce, the Secretary of Economic and Competitiveness Development, the Secretary of Mines, the Municipal Mayor’s Office of Suárez, the Suárez Mining Cooperative, and public universities) and organizations working in the region, and the active participation of women in the association.

During 2022, the last round of discussions had more than 50 attendees who were key stakeholders in the region. Those spaces opened up the opportunity to activate institutional mechanisms to prevent gender-based violence and promote women’s participation in ASM.

“We have also been able to be seen, we are part of a fully constituted association with a Chamber of Commerce and tax identification number, and we are recognized. One of our colleagues was able to go to the OECD in Italy and demonstrate what artisanal mining is like, and we have been able to make ourselves known thanks to formalization.”

– DIANA LUCUMI, (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

Human rights and gender

The environment where the women miners live is characterized by social structures impacting their daily lives where child labor, forced recruitment, gender-based violence, absence or weakness of the state, among other problems, are common and represent latent social risks.

As part of recognizing and applying due diligence and the CRAFT code, a series of spaces were created where women could identify the different types of violence they face, reflecting on their individual and collective situations. The result was the recognition of

different types of physical, sexual, economic, institutional, symbolic, and psychological violence that were common not only in mining but also in their daily lives.

The women earned an active voice on these issues in the territory, gaining recognition and participating in the mining debate in the community and in national and international exchanges where they articulated their efforts, needs, and achievements.

“The benefits are many, we are now empowered women, women not afraid to face the public, with the awareness that being formalized and joining together is essential.”

– DIANA LUCUMI, (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

Progress in mining formalization for women has helped mitigate gender-based violence in the following ways:

- **Sexual violence:** bringing light to gender-based violence has generated support networks to prevent and seek mitigation strategies.
- **Economic dependence:** the identification of violence has prompted women to seek economic autonomy as a way out of the cycles of violence and ensure better living conditions for themselves and their families.
- **Visibility of women miners:** currently the women of the association are recognized by governmental entities, which has allowed them to promote the rights of women miners.
- **Internal governance:** forming an association has allowed them to move forward with formalization processes and spread the message of good practices to other women in the territory.

Recommendations and key findings

There are barriers that prevent women from achieving formalization that contribute to violence against women. We suggest paying attention to the following technical considerations when replicating this exercise in other territories:

- **Digital literacy and access to digital infrastructure:** To register and formalize women miners, entities often require email addresses and stable internet connections. Many miners are elderly women who do not have smartphones or computers due to low educational levels and access. Strategies should be used that do not discriminate and are suitable across generational and educational gaps. Another alternative is for institutions to offer training and support in the management of information and communication technologies to facilitate this process.
- **Lack of clear information:** There is a lack of clarity about the formalization process for both institutions and mining communities. It is essential to continue promoting inter-institutional communication to promote standardized and accurate information as way to increase formalization.
- **Financial literacy and access to financial services:** It has been identified that for formal sales, transactions through banks reduce risks, especially those related to the financing of illicit economies. However, banks require certificates that do not apply to artisanal miners, demonstrating a lack of understanding of artisanal mining. Therefore, incentivizing financial institutions to become familiar with the formalization processes of subsistence mining will allow for greater access to banking services and contribute to risk mitigation.

Mining communities are often marked by a strong sexist culture that hinders and limits women’s economic empowerment and access to opportunities, negatively affecting their economic, social, political, and cultural rights. Due to these conditions, there is scarce state presence, which leads to the normalization of different types of violence and human rights violations. To overcome these problems, it is necessary for the mining regulations to continually reflect the experiences of women miners, and thus contribute to the implementation of actions within the framework of the subsistence mining policy (2022) that mainstreams a gender perspective. The above recommendations should be accompanied by advice, mercury-free technolo-

gies, adequate inputs and equipment, and organizational processes that allow for the consolidation of actions aimed at sustainability and improving gender equality.

“As miners and as an association, we need support. Support from government agencies, municipalities, and the country as a whole, that supports the mining sector and gives more confidence to women, supports us in gender and human rights... They should strengthen us and help us grow, give us a hand, and help us move forward”

– DIANA LUCUMI, (FEMALE ARTISANAL MINER FROM SUÁREZ CAUCA, COLOMBIA, 2023)

This project demonstrates the power of a holistic multi-stakeholder approach. ARM has been working with banking institutions, public entities, and other organizations that impact the mining sector. The achievements are interrelated as association de-risks formalization, and formalization increases economic power and legitimacy. The combination of this progress gave this group of women a legitimized and collective voice to promote a life free of violence.

ACKNOWLEDGMENTS

We express our gratitude to all funding partners who help pave the way to sustainability, better mining practices, and respect for human rights in these types of communities:

- The Ford Foundation and European Partnership for Responsible Minerals (EPRM)

“Laboratorios de MAPE responsable: del diálogo a la acción”, 2017–2019

- FOS—Fondo Sueco-Noruego de Cooperación con la Sociedad Civil Colombiana

“Pilotos de gobernanza local del recurso minero desde el territorio, en el marco de un modelo global de cadenas de suministro para minerales libres de conflicto y peores prácticas en el departamento del Cauca, Colombia”, 2018–2020

- UNDP Proyecto PlanetGold Gestión Integrada del Mercurio para el Sector ASGM, 2020–2023

- Kering, 2022–2023

END NOTES

1 Platform for the registration of subsistence (artisanal) miners in the country who seek to be recognized and formalized. The main requirements for registration on the Genesis platform are: ID document,

Beneficiary Selection System for Social Programs Card (SISBEN), Single Tax Registration—RUT (Spanish acronym), with the activity corresponding to the mining sector.

- 2 The legal currency is the Colombian peso, and the current legal minimum wage (as of 2023) is Col\$1,160,000, equivalent to US\$250. In 2020 (the year of publication by the Ministry of Mines), the current minimum wage was Col\$877,802, equivalent to US\$238 at that time.
- 3 Together with the support of USAID, UNDP, Kering, FOS, and the Ford Foundation.
- 4 By which norms of awareness, prevention, and punishment of forms of violence and discrimination against women are dictated, the Criminal Codes, Criminal Procedure, Law 294 of 1996 are reformed and other provisions are dictated.
- 5 Single Tax Registration—RUT (acronym in Spanish).
- 6 Single Register of Mineral Traders—RUCOM (acronym in Spanish). It is a control measure, through which the Mining Authority publishes the authorized miners in the country and certifies the persons who trade, consume, or process minerals in the national territory, with the purpose of providing greater transparency to the activity.

7 This platform was replaced in 2020 by Genesis.

8 The process was accompanied by ARM at the headquarters of Banco Agrario in the municipality of Suárez, the only bank with a physical office. While there is no explicit obligation for banking in Colombian regulations, it is identified that for formal sales, transactions through banking facilitates the reduction of money laundering (ML) or terrorist financing (TF) risks, mainly those related to the financing of illicit economies (Alliance for Responsible Mining, 2020).

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ADVANCE WOMEN'S SOCIAL PROTECTIONS AT THE MINE AND HOME

AUTHORS: Stacy Hope,¹ Marie-Rose Bashwira,² Michael Akilimali,² Nellia Mutemeri,³ Ege Tekinbas,⁴ Marion Langlois,⁴ Nydia Ponnar⁵

AFFILIATED ORGANIZATION(S): ¹Women in Mining UK, ²International Institute of Social Studies, ³University of the Witwatersrand, ⁴International Institute for Sustainable Development, ⁵MutConsult

SDG 5 Targets

5.4: Recognize and value unpaid care and domestic work through the provision of public services, infrastructure, and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

SDG 5 Indicators

5.1.1: Proportion of time spent on unpaid domestic and care work, by sex, age, and location

KEY FINDINGS

- **Women are being included by government in ASM development initiatives, increasing women's participation and improving perceptions of them in ASM.** Most (83%) government officials reported women are included in the formalization process, while 75% reported an increase in women participating in the ASM and capacity building initiatives, and 67% reported formalization interventions had led to an increase in licensing applications from women. In Bolivia, Guyana, Sierra Leone, Zimbabwe (four of the five mine site questionnaire countries), participants overwhelmingly reported an increase in the number of women working in ASM and that society's perception of women in ASM improved. These findings were supported by WIM Groups, with 64% noting that women's participation in ASM had increased in Indonesia, Mongolia, Mozambique, Peru, Tanzania, and Zimbabwe, and gender-based violence (GBV) at and around mine sites had decreased in some countries also.
- **ASM support initiatives need to consider how to reduce disparities in domestic work performed by women versus men.** On average, women working in the ASM value chain performed 26% (five hours per week) more domestic work than men. Only 16% of governments reported that formalization had led to a decrease in the share of domestic work women perform and 17% reported that it had instead increased.
- **Gender-specific ASM networks and associations are critical to improving women's visibility in ASM and advancing gender equality.** All the WIM organizations surveyed state they play a role in ASM formalization, including advocating for the rights of women in the industry and ensuring a gender lens is employed in policy making and reformation. WIM groups' participation in formalization initiatives resulted in a reported increase in the number of women in leadership positions, decrease in discrimination, reduction in GBV, and increase in women's access to land/

mine ownership. Empowering, legitimizing, and professionalizing these gender-specific professional groups is critical to advancing gender equality in ASM.

- **Governments lack a reporting mechanism to monitor GBV in ASM communities.** Only 17% of government officials (two out of 12) reported collecting data on GBV in ASM, while 58% of government participants (seven out of 12) did not know how GBV was being impacted by ASM formalization efforts.

Underpinning the ASM sector is the notion that it is an informal industry that is in opposition to human rights and safe and healthy environments. Today's discourse surrounding artisanal and small-scale miners has endured greater scrutiny as global demand for minerals to meet the supply needs of net-zero targets put them at the heart of discussions around responsible sourcing. At the epicenter of responsible supply chains where miners are prevalent, social protection systems constitute an integral part of its definition and adherence. Yet, for social protection mechanisms to flourish and be sustainable, the inclusion of ASM in the design and implementation of these interventions is key. To do so, government must pave a pathway toward sustainable development of the ASM sector—enabling communities, government agencies, the private sector, and civil society organizations to work together toward a holistic approach for economic growth, wealth creation, and social inclusion for all. Yet not all ASM stakeholders are included, in particular women. Hence, ASM interventions must move beyond a generalist approach and adapt a gender-responsive one to ensure equitable protection and progress are met.

Social protection as a concept

The precarious nature of ASM has for its history been marred by images that oppose mechanisms for social protection to thrive. An image that has left a lasting image of the sector is one of workers clamoring for space to obtain ore bodies that offer great value to the downstream producers of the Global North, that appears to suggest little to no

safeguarding of human life and human rights. It is an often-accurate portrayal of an industry that is, for almost its entirety, an informal one—unregulated and unprotected. However, it is not the picture in its entirety, nor a narrative that cannot transform.

Social protection is a fundamental construct within national development strategies and is particularly relevant to SDG 5 as a contributor toward gender equality and women's and girl's empowerment. By definition, social protection is:

“a set of policies and programs aimed at preventing and protecting all people against poverty, vulnerability and social exclusion, throughout their life cycle placing a particular emphasis on vulnerable groups. This means ensuring adequate protection for all who need it, including children; people of working age in case of maternity, sickness, work injury or for those without jobs; persons with disability and older persons. This protection can be provided through social insurance, tax-funded social benefits, social assistance services, public works programs and other schemes guaranteeing basic income security and access to essential services.”

(SOCIAL PROTECTION INTER-AGENCY COOPERATION BOARD, 2019)

The World Bank Gender Strategy 2024–2030: Accelerate Gender Equality for a Sustainable, Resilient, and Inclusive Future (Consultation Draft) emphasizes that social protection programs help build and protect human capital (World Bank, 2024). Cash-plus approaches with psychosocial components can tackle multiple gender gaps and promote women's agency and bargaining power at the household level. Adaptive social protection delivery systems that leverage digital technologies can recognize specific vulnerabilities that women, girls, and sexual and gender minorities face and thus better help all people cope with crises, shocks, transitions, and aging. Social workers can promote women's, girls', and sexual and gender minorities' rights, including sexual and reproductive health rights, and protection against violence.

BOX 3. The ILO strategy on the extension of social protection

National social protection floors are seen as ways to guarantee that minimum levels of social security needs are met. These social protection floors “are nationally defined sets of basic social security guarantees that should ensure, as a minimum that, over the life cycle, all in need have access to essential health care and to basic income security which together secure effective access to goods and services defined as necessary at the national level” (ILO 2012).

To date, social protection systems have failed to capture the majority of citizens, with 55% of the world's population not having any coverage while many others have only partial protection (ILO, 2017a). For most workers in the informal economy, the lack of social protection is a key issue as they are mostly excluded from social protections systems on the grounds that informal work “structurally limits the ability to organize social protection systems primarily on the basis of contributory social insurance” (Calligaro et al, 2023: 1). This lack of social protection and progress prevents them from obtaining financial security, dignity, decent work, and the ability to exercise their rights. However, even more concerning is that women represent the majority of those unprotected (ILO, 2017a). Hence, social protection systems must address gender inequalities, and therefore be gender responsive, to prevent exacerbating the many intersecting forms of discrimination and exclusion women and girls face.

With ASM playing an integral role in the livelihoods of an estimated 44.67 million people¹ globally and growing, 80–90% of artisanal and small-scale miners who operate informally are not covered by social protection mechanisms (World Bank, 2020; ILO, 2020). Adding another layer of complexity, gender politics within lower-middle income countries where ASM is prevalent pose the risk of not only excluding women, but children and other

vulnerable communities as well. Although the realization of social and economic development through social protection is a global political commitment, this has not yet been achieved or translated into many of these countries' policies and actions.

There is a growing understanding that social protection can be the catalyst for reducing gaps in inequality, promoting social inclusion, and eradicating poverty. Within the context of the ASM sector, accelerating progress in building social protection mechanisms through policies and policy reforms have the potential to drive growth that is more inclusive and fairer (UNEN, n.d.). However, understanding that social protection systems must be designed within the national context and be inclusive of all participants within the sector—both women and men—is only part of the solution. It's also necessary to understand that women's challenges begin from childhood, as young girls trying to access education; to adolescence where they are at risk of early pregnancy and leaving school early; through to adulthood where they are faced with inequalities and precarious and unsafe working conditions. This requires placing social protection interventions across all stages of the life cycle and attacking inequality from all angles.

Notwithstanding the immense panoply of challenges that the ASM sector faces, the sector is responding to these gaps in social protection through partnerships with governments and civil society organizations working toward increasing access to social protection for ASM operators, as well as (re)defining social protection systems that address gendered risks. In doing so, such an approach acknowledges that the relationship between the social protection and gender is symbiotic: social protection systems increase access to interventions and programs that can strengthen women's access to decent work, quality care services, livelihood programs (e.g., training), financial independence and security, and sustainable infrastructure. Social protection can also facilitate access to vital services that meet their health (including sexual and reproductive health) and education needs and increase demand and confidence in accessing gender-based violence services (SPIAC-B, n.d.).

Leading the charge in advocacy surrounding women in ASM are WIM organizations. These organizations lobby and create programs to amplify women's voices and agency, bring attention to the challenges they face in accessing equal opportunities, and safeguard their rights to decent and safe work. Governments are also taking note, as they are increasingly including WIM organizations into the mining reforms and ASM policy making and interventions.

GENDER-BASED VIOLENCE AND SOCIAL PROTECTION

Gender-based violence is one example where strong social protection mechanisms are needed to achieve SDG 5 target 5.2 and eliminate all forms of violence against women and girls. Gender inequality and GBV are in a complex by-causal relationship—GBV is caused by, and is also a product of, gender inequality. Violence is used as a form of social control, is it used to enforce gendered norms and power asymmetries between women and men. In an environment like mining that is hyper-masculine, and more specifically ASM that can occur outside of formal or legal bounds with limited government oversight and police presence, criminality, lawlessness, and violence can be prevalent. This context, coupled with deep-rooted gender inequalities, makes ASM areas and host communities fertile ground for GBV.

Violence against women and girls is one of the most prevalent and pervasive human rights violations in the world. GBV can take many forms, it can manifest as physical abuse, rape and sexual violence, female genital mutilation, honor killings, child marriage, workplace harassment, and economic violence, among others. GBV is widespread—it occurs in homes, schools, offices, in any place in every country around the world, regardless of socioeconomic status. The World Health Organization's (WHO) analysis of longitudinal data from 161 countries estimates that one in three women will experience sexual or physical abuse in her lifetime (WHO, 2021).

GBV does not only negatively impact the physical and mental well-being of the survivor, but it also has far-reaching development repercussions. It is estimated that violence against women and girls

costs the global economy \$1.5 trillion due to lower productivity levels, decreased labor supply, lost tax revenue, diminished earnings, diverted resources, and associated opportunity costs (Ouedraogo and Stenzel, 2021). GBV also directly impacts public spending and service delivery by placing a higher burden on public health care, social services, and the justice system. The World Bank estimates that national economies can lose between 1–2% of their GDP due to GBV, however this is believed to be a conservative estimate due to the sensitivity of the subject and that violence against women is universally underreported (Duvvury, et al., 2013).

In recognition of the link between reducing GBV and positive development outcomes, target 5.2 “Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation,” and target 5.3—“Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation,” aim to reduce violence against women at a national and international level. In addition to SGG 5, reducing violence against women and girls will also contribute to the attainment of several other SDGs.

In ASM, women are regularly exposed to GBV and sexual harassment with multiple forms of violence against women documented in ASM communities around the world (Arcos and Rivera, 2019; Watson, 2021; Perks, 2011; Hayes and Perks, 2012; Bashwira et al., 2014; Hinton, Viega and Beinhoff, 2003). The Pallaqueras (‘gold pickers’) in Peru face a range of violence while just trying to do their jobs—physical abuse, harassment, discrimination, and contempt (Guzmán and Lazarte, 2022). It has been recorded that girls and women from Bolivia, Côte d’Ivoire, Ghana, Guinea, Mali, and Peru have been trafficked to mine areas lured by promises of economic prosperity (Global Initiative, 2016; Koné and Faye, 2021). In Zimbabwe, Mafongoya et al., (2021) found elevated rates of child, early, and forced marriage in three mining hotspots; these marriages are traditionally accepted, and perceived as a social safety net. Concerns of modern slavery and forced labor have been well documented along informal tin, tungsten, and tantalum (3T) value chains in the DRC (Bashwira and Hintjens, 2019, McQuilken et

al., 2022), and Rustad, Østby and Nordås (2016) found that women are more likely to experience sexual violence the closer they live to an ASM site. In addition to the physical violence experienced by women in ASM, the economic deprivation of land rights and land tenure amounts to a form of socio-economic violence.

Insights from the 2023 State of Sector Survey

The momentum surrounding social protection and the role in which the ASM sector plays in establishing a more secure fiscal regime is growing. Slowly, governments are growing their ASM interventions as a means to bring artisanal and small-scale miners into the national economy and to better address their vulnerabilities and development needs. For this 2023 report, the three questionnaires of the State of the Sector Survey have given more granular context to how social protection systems are viewed and being shaped across the globe through governments, WIM organizations, and among the artisanal and small-scale miners themselves.

GOVERNMENT FORMALIZATION AND GENDER EQUALITY

The Government Questionnaire makes it apparent that governments are moving in the direction of professionalizing the sector through ASM formalization. Such interventions include legal status for ASM operators protected under law with rights to mine ownership (within the constructs of licenses), health and safety sensitization, value addition through access to finance, equipment and market schemes, and capacity building. Even more promising is that 83% of government officials participating in the questionnaire reported the inclusion of women in the formalization process.

The impacts of these formalization interventions, as reported by government officials, provide positive signals for progress toward gender equality in ASM (Table 3). The majority of survey participants (67%) reported that the impacts of government formalization interventions led to an increase in women’s

income-generating opportunities. Similarly, 67% of governments reported that formalization interventions had led to an increase in licensing applications from women. While 75% of governments reported an increase in women participating in the ASM sector, a similar percentage of governments reported an increase in women participating in ASM capacity building initiatives. Also promising is that society's perceptions of women operating in the sector are beginning to shift. With six (50%) government participants stating that perceptions of women in ASM have improved, this will have significant implications on women's ability to operate safely (Figure 9).

ROLE OF WOMEN IN MINING ORGANIZATIONS

In countries where there are no nationwide interventions that include women in ASM, women in mining organizations and NGOs are critical as they facilitate necessary multistakeholder engagement. For example, in Bolivia, the National Network of Women in Mining bring together women miners—particularly ASM operators—to address issues surrounding violence, equitable access, and agency to enforce their rights.

In the WIM Questionnaire, among the 11 WIM organizations that participated, seven institutions believed that their government was supportive of gender equality in ASM, whereas four did not:

“Over the years, women have been facing challenges of access and control over resourceful land. [R]esearch [has] been done and discussions have been [held] with different ministries representing women and the Ministry of Mines, but very little effort [has] been shown to end these challenges and to support the women financially to own land, property rights and grow their business.”

– AWOME REPRESENTATIVE IN WIM QUESTIONNAIRE

Although not all WIM organizations perceived their governments to be supportive of gender equality in ASM, all organizations did, however, state that they played a role in ASM formalization that included advocacy surrounding the rights of women in the industry and ensuring a gender lens was employed in policy making and reformation. These organizations sit on technical committees (Association of Zambian Women in Mining AZWIM), Women on Mining and Extractives (WoME) Sierra Leone, National Network of Women Miners of ASM (Peru) or participate in ongoing discussions and debates surrounding formalization activities (the Umbrella Federation of ASCM in Mongolia, Association of the Mozambican Women in Mining, Women in Mining & Energy (Indonesia), and the Tanzanian Women Miners Association (TAMOWA)).

Additionally, such groups also put in place social protection mechanisms where government-led ones are absent, and there are many examples to share on how this is being done. For example, in Zambia, the AZWIM has developed the Worth-Tiffany-AZWIM Savings Group program—an initiative to educate artisanal and small-scale miners on financial literacy and planning and to provide access to financial institutions and options that would enable economic empowerment. The group is also responsible for the development of cooperatives in four provinces. The TAWOMA and Women in Mining Ghana have also outlined their efforts to provide financial security to women in the industry. Others, such as the Women on Mining and Extractives and African Women in Mining Empowerment Trust (AWOME), focus on empowering women to overcome vulnerabilities, abuses, and traumas experienced as a result of mining—working toward ending discrimination, sexual harassment, GBV, and sexual exploitation. Added to this, capacity building surrounding leadership and entrepreneurship (usually encompassing financial literacy) are pivotal to the visibility of women in ASM and emboldening their voices, as was highlighted by the Umbrella Federation of ASCM in Mongolia.

All of the 11 organizations surveyed raise awareness of the ASM sector in their respective countries and sometimes beyond. All but one, the exception being the Association of the Mozambican Women

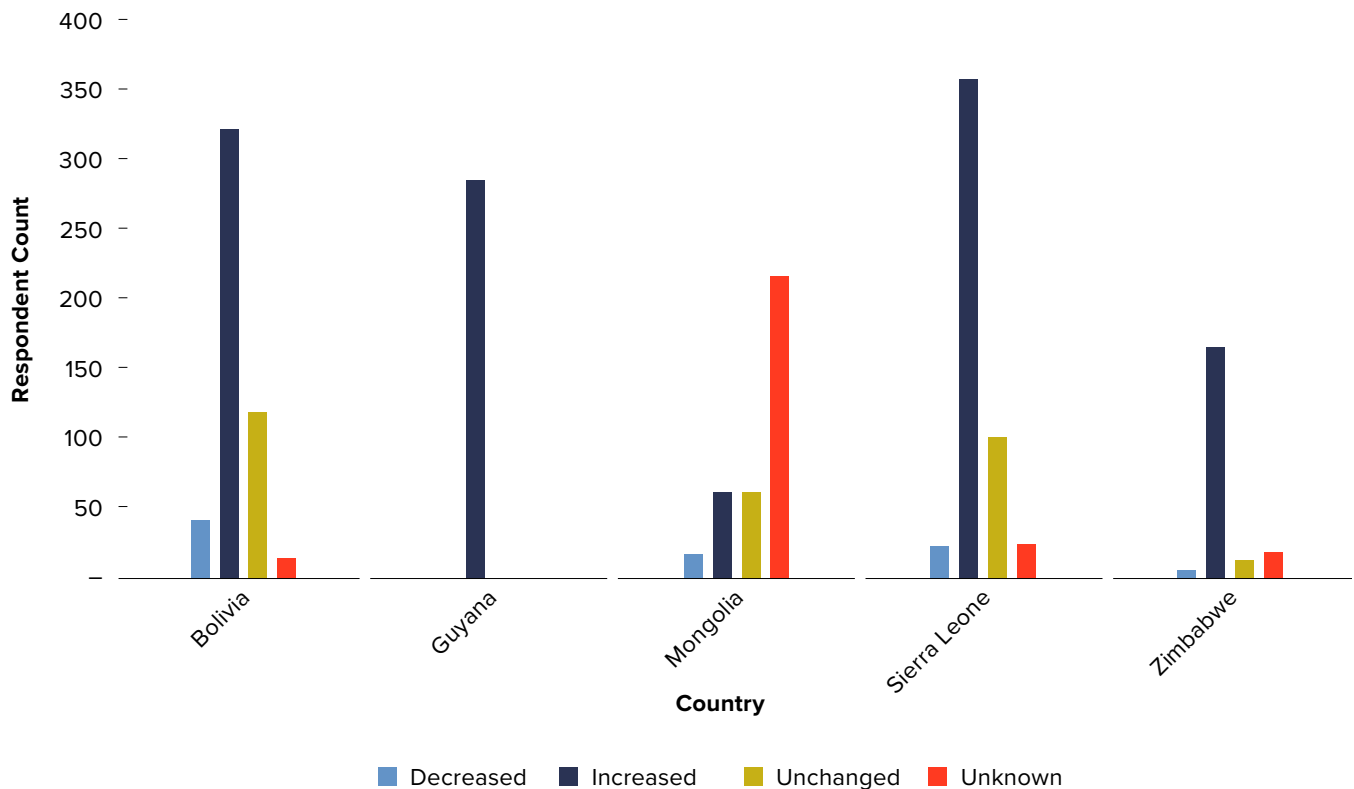
in Mining, reported that they employ training and capacity building of ASM stakeholders as a way in which they currently support the sector. Part of social protection includes the fair and equitable participation in trading goods on the market. For female gold sorters in the Puno region of Peru, their participation in the national multisector policy of ASM—Peru’s first policy on the sector—has enabled them to obtain Supreme Decree 018 that allows the registration of manual gold sorters and thus authorizes them to market their ore at fair prices. However, compliance to this has not been monitored, with several sorters reporting that they are still underpaid for their gold.

There is evidence from the questionnaire that a correlation between government ASM formalization interventions and social protection-relevant indicators, such as women’s participation rates, exists. Most WIM participants (seven out of 11 or 64%) noted that women’s participation in ASM has increased in recent years—namely WIM organizations in Indonesia, Mongolia, Mozambique, Peru, Tanzania, and Zimbabwe.

WOMEN’S SHARE OF DOMESTIC WORK

Where formalization efforts by governments have not made that much of an apparent impact is in the share of domestic work women are expected to do, with only two of the 12 governments reporting that the share of domestic work that women take on has decreased as a result of formalization initiatives and two stating that it has actually increased. Half (50%) of the governments in the Government Questionnaire responded “unknown” to this question, perhaps signaling that the share of domestic work women in ASM undertake is not given equal consideration in comparison to other indicators or that, unlike participation rates, it is harder to measure or estimate. Yet, the “double burden” (the combination of domestic and work duties) that women carry is a significant reason why women work fewer hours at mining than men do. The limits in working hours directly impacts women’s earnings. Similar to the Government Questionnaire, the WIM Questionnaire showed government-led ASM interventions have not demonstrated as much impact on the amount of time women spend performing domestic work, with only Zambian and

FIGURE 9. In recent years, has the number of women working in ASM changed? (Mine Site Questionnaire)



Zimbabwean organizations noting that domestic work for women has decreased.

At the mine-site level, the 2023 State of the Sector Survey revealed that in the five countries surveyed, the share of domestic work performed by women is most frequently reported to have increased in Guyana and Zimbabwe and remained the same in Bolivia and Sierra Leone. Most participants answered “unknown” in Mongolia. This indicates that, from the perspective of ASM value chain participants surveyed, women’s share of domestic work has either not changed or increased. Furthermore, the Mine Site Questionnaire found that on average women working in the ASM value chain performed 26% (five hours per week) more domestic work for than men.

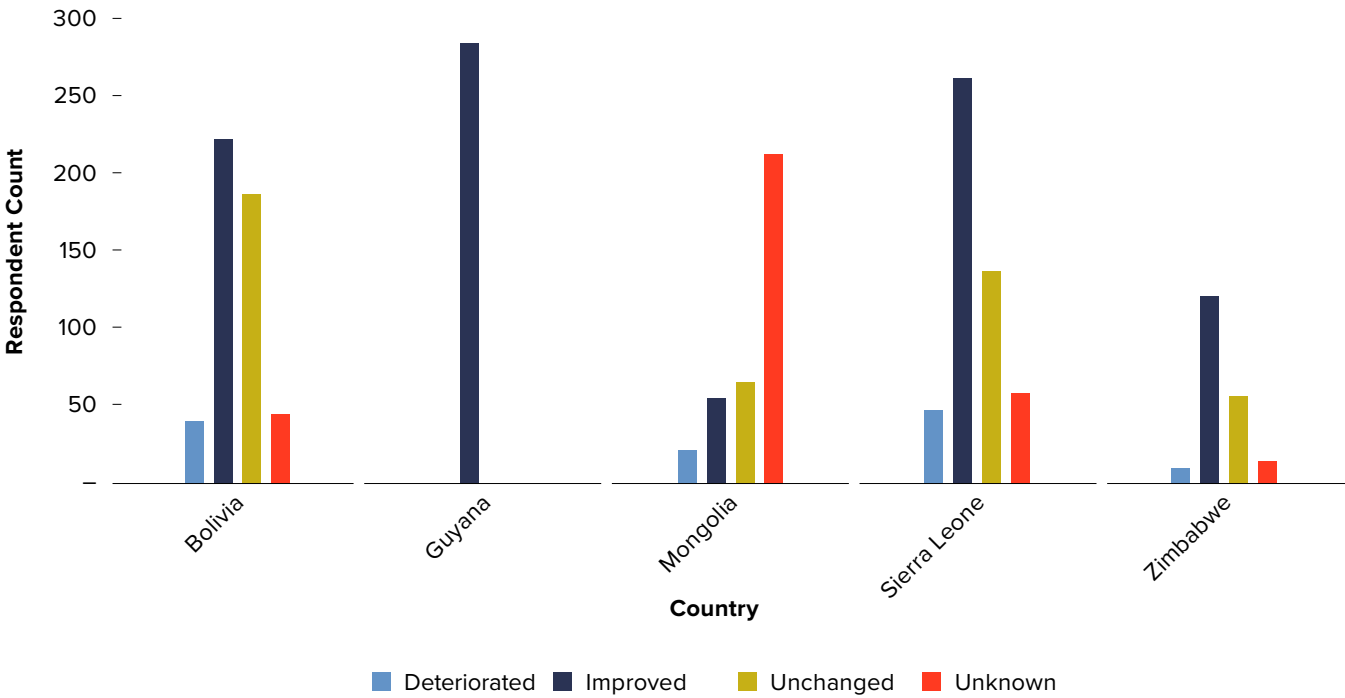
FEMALE PARTICIPATION AND ACCESS TO RESOURCES

Despite women bearing a greater portion of domestic work, in four of the five countries surveyed at the mine-site level, ASM participants overwhelmingly reported an increase in the number of women working in ASM or experiencing an increase in income-generating opportunities (Figure 9).

Perhaps unsurprisingly, ASM value chain participants’ perception of women in the sector is widely reported to have improved in these four countries (Bolivia, Guyana, Sierra Leone and Zimbabwe), with all Guyanese participants attesting to this in their responses.

Under target 5.a, the goal is to “Undertake reforms to give women equal rights to economic resources, as well as to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national law.” When examining women miners’ access to capital or financing, the results from the Mine Site Questionnaire show a reported “increase in access to capital for women” as the most selected response for those operating in Guyana, Sierra Leone, and Zimbabwe. Signaling an increase in accessibility for those groups. In Bolivia, the most selected response to this question is that it “remained unchanged” and most Mongolian participants “did not know.” Similarly, improvements in society’s perception of women in ASM are reported in all countries by Mongolia, though in Bolivia and to some extent in Sierra Leone many participants

FIGURE 10. In recent years has society’s perception of women in ASM changed? (Mine Site Questionnaire)



also answered “unchanged” (Figure 10). Overall, there is improvement, but there is still much to be done especially when considering the impact of traditional beliefs on women’s participation in ASM as outlined in the first section of the 2023 report.

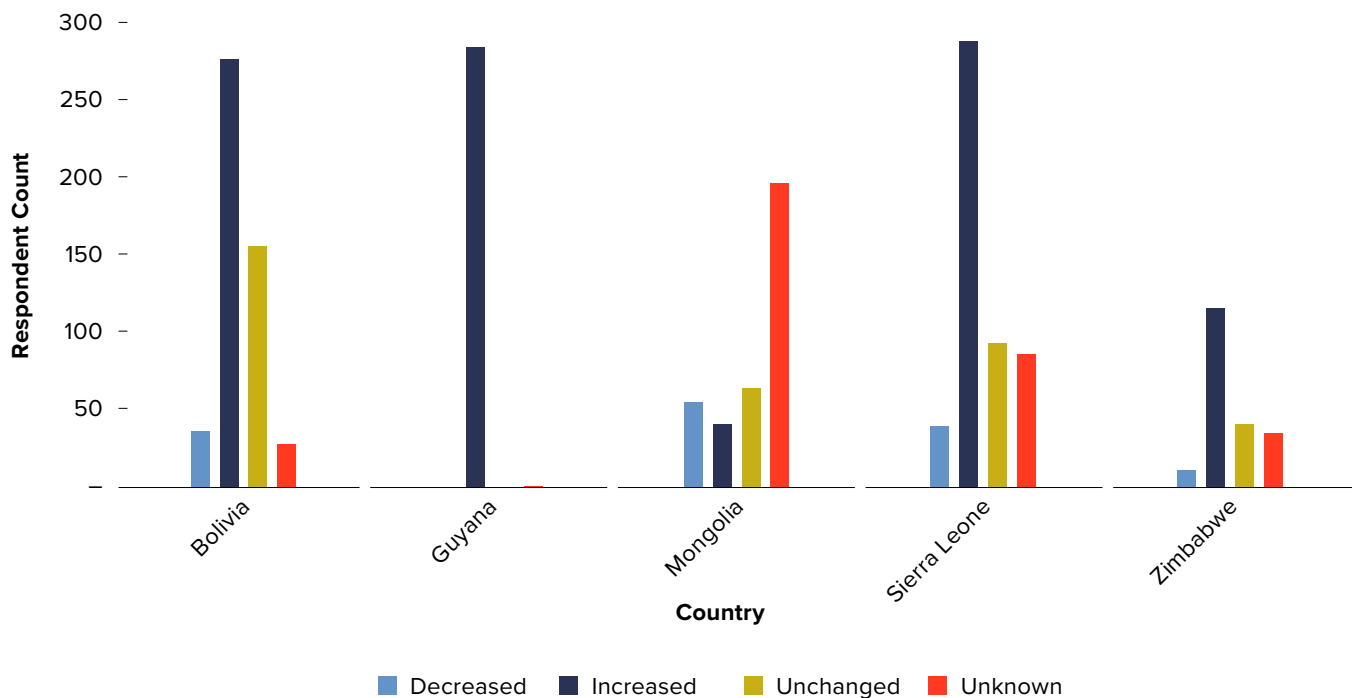
As previously mentioned, access to capital and financial services for women ensures their equal participation and equal rights to economic agency. Access to loans, informal credit schemes, and a bank account, are but a few of the ways this can be achieved. For female and male miners participating in the questionnaire, informal credit is their most commonly used financial service, followed by a bank account. However, a significant number of women do not access any financial services, and among men this was the second most common response.

Whereas in the past access to operating permits for women in certain jurisdictions was not prevalent, participants in four of the five countries overwhelmingly reported an increase in women who hold licenses/permits. Although some increase was reported in Mongolia, most participants at ASM sites answered “unknown” (Figure 11).

Perhaps most revealing among the site-level participants is examining levels of access and control—who has it and in which context. It is encouraging to see that in three of the four countries² that responded to questions surrounding control and agency at the mine site, the most-selected response option among participants was that both “men and women have the power to make decisions about the selling of minerals at the site”. However, when it comes to who controls access to the site, more mixed results are found. Only in Mongolia did the questionnaire find that most participants reported that “both men and women control access to the site”. In Bolivia and Sierra Leone, the most-selected response was that “men control access to the site”. In Zimbabwe, there is an almost equal number of responses for “both genders controlling the site” and “men controlling the site”.

Statistically, the Mine Site Questionnaire revealed that a higher percentage of men have access to information on government programs or opportunities for training, finance, and various other enabling initiatives than women. However, as efforts to create equitable access to gender-responsive social protection mechanisms increase, it is inevitable

FIGURE 11. In recent years have the number of women with licenses/permits changed? (Mine Site Questionnaire)



that women-focused initiatives will also increase to promote their inclusion, remove barriers, and ensure the provision of regular and adequate protection.

In terms of channels used to access information on government programs or other opportunities in ASM, there is no clear single preferred channel. For instance, engagement forums (nongovernmental training events, workshops, or community meetings) are the most popular channel in Sierra Leone but traditional media (TV, radio, and newspapers) are also important. Social media is the most popular channel for accessing opportunity information in Zimbabwe and Mongolia but so too are mining cooperative's, WIM groups, and other organizing bodies. What is evident from the data is that an omni-channel approach is necessary to ensure a growing awareness of government and nongovernment programs and opportunities.

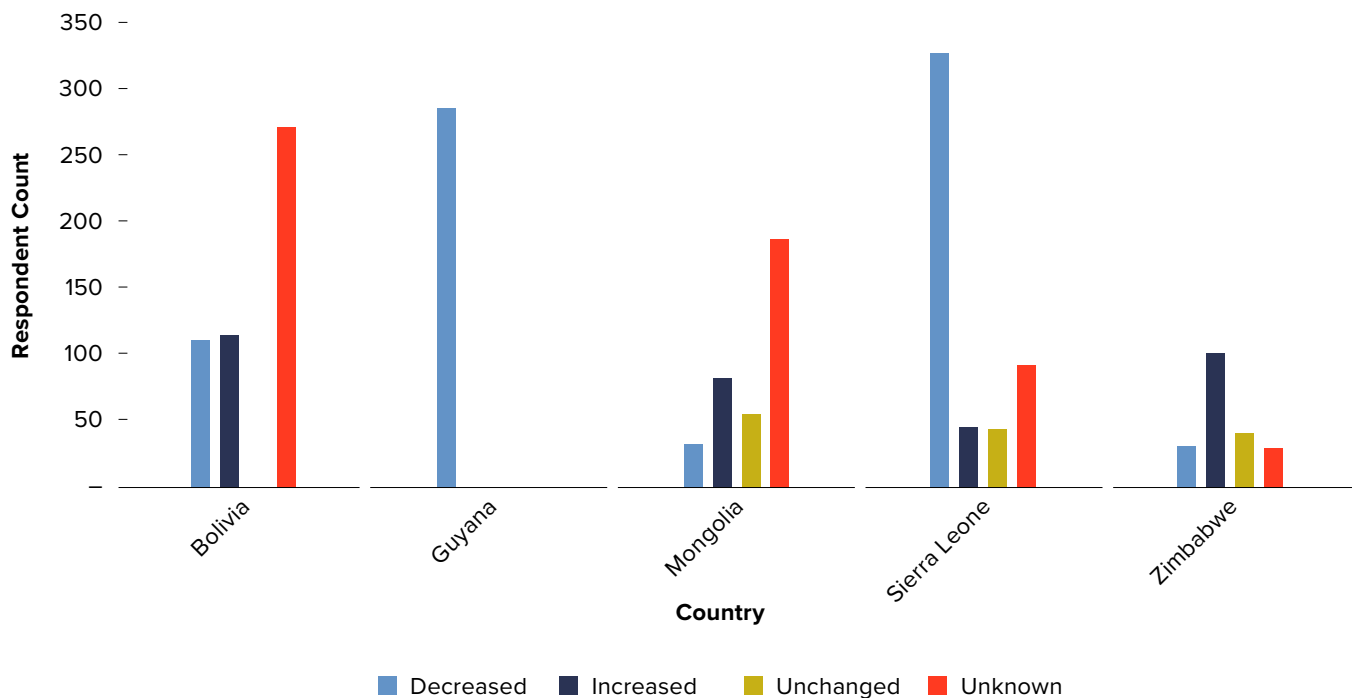
GENDER-BASED VIOLENCE

The 2023 State of the Sector Survey results provide revealing insights into the extent to which GBV and asymmetries of decision making power negatively impact women in ASM.

Most participants of the Government Questionnaire, 10 out of 12 (83%), reported that the government does collect data on GBV. However, worryingly, only 17% of government officials (participants from Ecuador and Kenya) reported collecting data on GBV in ASM. The difficulties of collecting data in ASM are well established, however, the lack of government activity in this area likely indicates that collecting this data is not high enough on the agenda of most governments.

In response to the question “What impact have government formalization interventions had on incidences of gender-based violence in ASM?” most government representatives (seven out of 12 or 58%) answered “unknown”, which is likely a result of data not being collected on this topic. Of the remaining participants, three responded that they believed it had decreased and two responded that GBV had increased. In the WIM Questionnaire, participants provided an equally inconclusive picture on the impact of formalization on incidences of GBV with four out of 11 organizations (33%) responding that it had decreased (Indonesia, Mozambique, Tanzania, Zimbabwe-1), two reporting that it had increased (Ecuador, Zimbabwe-2) two reporting “unknown”

FIGURE 12. In recent years how have the cases of GBV in ASM changed? (Mine Site Questionnaire)



(Peru, Sierra Leone) and three reporting that incidences of GBV had remained unchanged (Ghana, Mongolia, Zambia).

The Mine Site Questionnaire provides details from the members of mining communities on gender-based violence more broadly. When asked “in recent years how have the cases of GBV in ASM changed?” (Figure 12) participants from Guyana and Sierra Leone overwhelmingly answered that it had decreased. However, worryingly, in Zimbabwe and Mongolia, excluding the “unknown” responses, the responses overall indicated that GBV in ASM had increased or remained unchanged.

In addition to determining increases or decreases in GBV, the Mine Site Questionnaire provides useful insights into incidences of GBV. Most participants indicated they had heard of an instance of GBV within their community in the last year indicating a prevalence of GBV within the ASM communities surveyed (Figure 13).

To assess if survivors of GBV incidents received any assistance from government agencies or NGOs, the Mine Site Questionnaire also asked

FIGURE 14. Do you know if the survivors were provided with any assistance/support? (Mine Site Questionnaire)

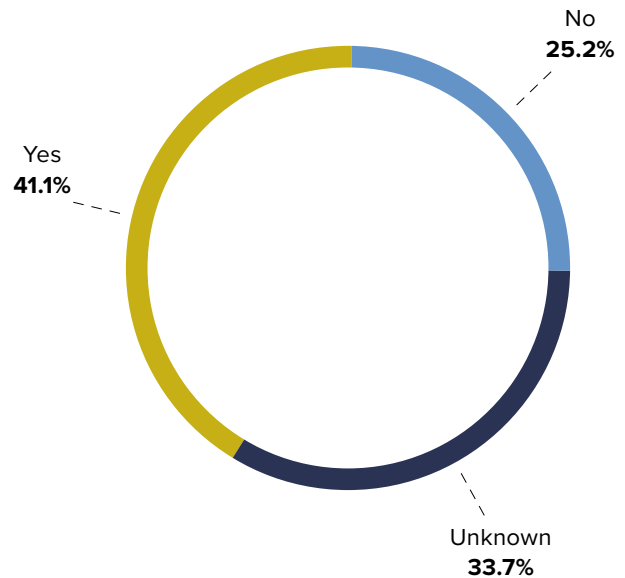
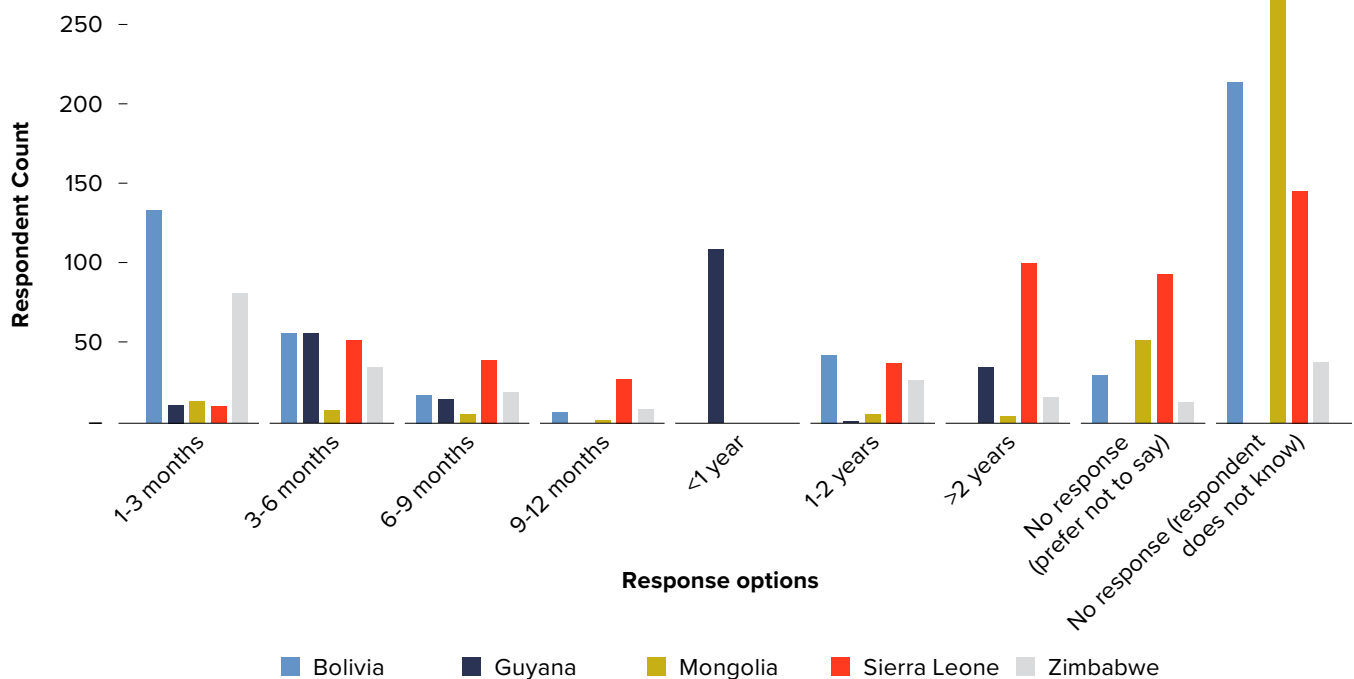


FIGURE 13. When was the last time you heard of any instances of gender-based violence against women in mining communities in the area? (Mine Site Questionnaire)



those participants who knew of incidences of GBV if the survivors had received assistance or support (Figure 14). Across all countries surveyed, 41.1% of participants (403 out of 981) reported that the survivors had received assistance, while 25.2% and 33.7% responded “No” and “unknown” respectively. In every country except for Zimbabwe, most participants answered “unknown” to this question. In Zimbabwe, participants responded “Yes” and “unknown” equally. This data combined with that in Figure 13 suggesting GBV is increasing in some of mine sites surveyed, suggests a situation where GBV is prevalent and acknowledged in these communities but assistance for survivors is not openly discussed and thus likely not provided.

Insights from the case studies

Chapter 2 and the second report recommendation to “advance women’s social protections at the mine and home” is accompanied by six case studies. The case studies reveal the interconnectivity between the sustainable development of the ASM sector and realization of social protection systems. The collective examples also offer insight into ways in which social protection systems must be designed and implemented—with gender inclusion and equity as integral parts, to stimulate socio-economic growth and well-being.

The seventh case study in the report by the international NGO Pact focuses on the Pílares Solidarity Network in Bolívar, Colombia, demonstrating the power of collective social protection approaches to address child labor and unacceptable working conditions in ASM. Beginning as an association of 12 civil society organizations, growing to 36, the collective approach by the network has created common objectives to better represent the community and legitimacy with local government. In turn, this has resulted in the network having greater influence on local government as well as a more collaborative approach—working together on shared social challenges across ASM, agriculture, and fishing livelihoods to promote the creation and adoption of comprehensive public policy social protection measures on child labor. The network has also supported its members through diagnostic

tools and awareness-raising to empower them to identify and implement social protection measures in their municipalities. The case study demonstrates the importance of local actors including communities, civil society, and government to identify and implement social protection measures within ASM and related communities for a holistic and powerful collective approach.

The Artisanal Gold Council and planetGOLD Mongolia provide the eighth case study on Mongolia. The case study shares findings from an assessment on artisanal miner’s access to social services covering four key aspects of social protection i) social insurance, ii) social welfare, iii) health insurance, and iv) health care services. The assessment finds, despite the vulnerability and differentiated needs of artisanal miners, there is no specific or targeted social protection program for them, and miners are left out of existing social welfare and employment support programs as they are not considered target groups within these programs. Social protection programs that exist for businesses in Mongolia have not been tailored to ASM as they do not account for dynamics of seasonality, irregularity, migration, mobility, and high levels of personnel turnover. Inconsistent ASM formalization policy framework and non-allocation of new ASM land over the last three years has also meant many artisanal miners are jobless and failed to pay social health insurance contributions that serve as one of the most important bases for social protection in Mongolia. The result is end-of-life poverty for both female and male miners, disability, and early deaths for miners in ASM communities.

Village-level savings and loans associations (VSLAs) for artisanal mining communities in the Central Africa Republic are a social protection example shared by USAID and Tetra Tech in the ninth case study. With no microfinance services available for women in the remote southwestern part of the Central African Republic, women miners were being left behind in the broader governance shift to professionalization, commercialization, and strengthening of Kimberley Process Certification Scheme (KPCS) chain of custody in the diamond mining sector. As part of the Artisanal Mining and Property Rights project, VSLAs were therefore

established to enhance women's social inclusion and provide much-needed financing to do so. The 14 VSLAs saved enough money to offer a 5% interest rate, significantly lower than the 15% rate from traditional microfinance institutions, providing finance to their members for investments and insurance in case of emergencies. Crucially, women were engaged from the outset of the project design through Participatory Rural Appraisal assessments and development of a Gender Action Plan, ensuring their voice and agency are heard and protected.

The 10th case study by Solidaridad also focuses on access to finance through a pilot project with women goldminers in Ghana. Following a review of women working in artisanal and small-scale gold mining (ASGM), a key barrier to their equal participation was found to be a lack of access to finance and performing low paid jobs, reflecting their wider marginalized position in their communities, and hindering their economic and social development. To address this inequality, the project aimed to improve the financial and social position of women through a range of activities, including establishing VSLAs, external funding for business support, engagement of women, men, and key stakeholders on the role of women in households and businesses, and training in responsible mining, group dynamics, and leadership skills. The Solidaridad case study provides a benchmark for how to support women in exercising their economic rights and financial inclusion, thereby enhancing their social protection safety nets.

The 11th case study by the international NGO Pact and Ifakara Health Institute (IHI) provides examples of social protection measures to remove children from mining in Tanzania. As part of the five-year (2016–2021) USAID Kizazi Kipya project, the case study highlights the numerous risks and vulnerabilities that children in mining face such as dangerous working conditions, susceptibility to HIV, violence, limited education opportunities, and difficulty accessing essential social services. To address these challenges, the project was designed with a focus on children's health, safety, education, and livelihoods, considering gender and age. The intervention employed a gender-sensitive case management approach, which tailored support to each child's specific needs. Professional

social workers played a crucial role in dealing with complex cases, including high rates of violence. They identified abuse cases and provided parenting interventions to improve skills and reduce harsh punishment. Regular visits by social workers led to a reduction in abuse frequency among children who disclosed experiencing it, emphasizing the importance of ongoing support and intervention. The project also implemented strategies to support children engaged in mining by focusing on school enrollment, progression, and alternative livelihood options. The endline assessment showed that over half of the children involved in mining at the beginning of the project had left mining activities. This progress is essential to supporting parents and caregivers and providing safer livelihood opportunities for children in ASM communities.

The 12th and final case study in Chapter 2 under the recommendation to “advance women's social protections at the mine and home” is by BAN Toxics, an NGO in the Philippines. Focused on the Compassionate Gold program to engage with ASGM communities and promote gender inclusion, the NGO conducted a gender assessment to identify key issues that women experience and potential mitigating actions. Through community awareness-raising and lobbying with local government, BAN Toxics operationalized their findings and empowered women in ASGM through targeted initiatives. Government agencies provided women in mining groups with livelihood starter kits and financial assistance, skills and business training, and seedlings and farming equipment to create alternative livelihood opportunities. These activities legitimized the role women play in the ASGM value chain and also gave them the opportunity to pursue alternative livelihoods based on their skills and talents, increasing and diversifying their economic resilience and social protection from economic shocks.

Conclusion

The three questionnaires of the 2023 State of Sector Survey demonstrate that the ASM sectors of the countries under study are, broadly, making progress in relation to indicators associated with social protections. In particular, it is heartening to

see the perceived increases in women's participation in the sector, license applications, and improvements in perception of women miners as a result of formalization interventions. Of concern is that none of the three questionnaires indicated a significant improvement in women's share of domestic work. This should be a key consideration for policy makers and ASM project planners given the wide reports of women's increased involvement in the sector.

The case studies from Colombia and the Central African Republic outline the methods that organizations are using to successfully improve social protections and gender equality in different parts of the world. The recurring theme in this regard is the importance of helping stakeholders work together to achieve outcomes beneficial for women. The case studies from Mongolia and Sierra Leone also make clear that while well-structured policy is important, concrete actions to enable these policies are required for them to make meaningful changes in the lives of artisanal and small-scale miners.

END NOTES

- 1 Delve database (August 2023): <https://delvedatabase.org/>
- 2 Results from Guyana are excluded due to an insufficient number of responses to this question.

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CASE STUDY #6

Credit: Pact

LOCAL CIVIL SOCIETY ORGANIZATIONS WORKING TOGETHER WITH THE COLOMBIAN MUNICIPAL GOVERNMENT TO ADDRESS CHILD LABOR IN ASM

AUTHORS: Alejandro Mora,¹ Laura Cortes,¹ and Felipe Chaparro¹
AFFILIATED ORGANIZATION(S): ¹Pact

INTRODUCTION

The Pilares Solidarity Network started as an association of 12 local civil society organizations (CSOs) working in the municipalities of San Martín de Loba and Barranco de Loba, south of the department of Bolívar, Colombia, in 2018. As of February 2023, Pilares grew to include 36 CSOs in four municipalities. Their main objective is to address child labor and other unacceptable working conditions through a collective impact approach. The CSOs formed the network to ensure better community representation, common objectives with greater influence on municipal decisions, and to facilitate collaboration with local governments. The initiative makes a significant contribution to SDG Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

A diagnostic tool was used to identify child labor risks.¹ The network then conducted awareness-raising activities through communications and small high-impact grants to address child labor and other unacceptable working conditions. This work piqued the interest of local governments and alliances were built to move towards common objectives.

Working with local governments and other public and private institutions has allowed the network to advance towards its goals, strengthen technical teams, enable new alternatives in income generation for vulnerable families, and explore various options to create alternative uses of children and youth's recreational free time.

Encouraging collective impact

Pilares has integrated 36 mining, agricultural, fishing, and livestock CSOs, among others, based on the collective impact model and has fulfilled the five conditions² for a successful collective impact initiative (Stanford Social Innovation Review, 2011). The network has worked in a coordinated manner among its members and collaborated with public and private entities to advance the understanding of child labor and other unacceptable working conditions in their municipalities.

With Pilares' support, the local governments have recognized the importance of government policies related to child labor. They are implementing two aspects of the public policy for the Prevention and Eradication of Child Labor and Protection of Young Workers:

- 1) The Inter-Institutional Committee for the Prevention and Eradication of Child Labor (CIETI): Pilares has represented civil society in the CIETIs of each municipality.
- 2) The Integrated Information System for the Identification, Registration and Characterization of Child Labor and its Worst Forms (SIRITI)³: SIRITI is an information logging tool that should have been operating since 2013 but only started operating in 2021 thanks to the collaborative work between Pilares and the local govern-

ments. It operates in the municipalities of Barranco de Loba and San Martin de Loba.

Pilares performs diagnostic exercises to identify child labor and other unacceptable working conditions risks in rural and urban areas. The network uses an information system, operated using the Google suite of work products,⁴ to collect and analyze information and subsequently build reports that are shared with the local authorities in the CIETIs. This allows the development of joint actions with the local governments in the rural areas prioritized to implement SIRITI.

Since its formation, the CSOs that make up the network understood that generating alliances with public and private entities would be key to achieving its goals and ensuring its sustainability. Some of its alliances have been with the National Learning Service training members of the network; the Secretariat of Mines and Energy of Bolivar diagnosing IT and safety risks in ASM; IT and safety risks in ASM; and recently, Pilares worked in coordination with the University of Cartagena to strengthen a beekeeping project.

In 2022—thanks to the results of a Pilares' diagnostic exercise that showed the main cause of child labor was due to the lack of economic alternatives in the territory—the network started a bee farm with the support of Pact and the local governments. This was a new alternative for income generation and benefits more than 30 families (117 people) identified as at risk of child labor and other unacceptable working conditions. Once linked to the project, parents can ensure that their children are in school. That same year, Pilares received a \$21,000 award through a competition financed by the University of Cartagena to technically strengthen CSO networks. The network used the funds to strengthen the bee farm operation by purchasing equipment, materials, and supplies, including 3D printers to produce beehives.

Another risk associated with child labor identified by Pilares is the lack of activities available for children and youth during their recreational free time.⁵ Pilares and local governments joined efforts and resources to purchase musical instruments and study materials, hire teachers, and fund transporta-

Barranco de Loba, young participants of the accordion workshop



tion to rural areas where child labor is most evident (International Labor Office and United Nations Children's Fund, 2021). As a result, more than 200 children and youth received music lessons.

“We know that access to music, especially when it is something as strongly rooted in our culture as vallenato (a popular folk music genre from Colombia), engages children and allows us to take them out of difficult environments.”

– MANUEL RAMOS, MAYOR OF BARRANCO DE LOBA (EL UNIVERSAL, 2021)

Digital literacy is also high on Pilares' agenda. They believe this is one of the competencies that should be provided to CSOs and encouraged in rural communities to explore new digital platforms, the opportunities they offer, and as a way to gain knowledge.

Conclusion

Working with CSOs since 2018, the Pilares Solidarity Network has applied and adjusted the collective impact methodology at the community level, which has proven to be a successful approach for local development and empowerment. CSOs have been significantly strengthened and gained more confidence to progress the project, propose different initiatives to potential partners, and continue working with the local governments. A strong sense of ownership of the initiative among the network's CSOs aids decision making, planning, and implementation of activities.

Pilares also autonomously convenes its meetings, indicating a path towards organizational sustainability. Using community spaces in the municipalities to develop activities allows the CSOs and local governments to feel the project is rooted in their communities.

This project demonstrates that community development must be driven by local actors to be successful. Thanks to the knowledge of local contexts, Pilares has gained the trust of communities with more CSOs joining the initiative who are motivated to bring change to their communities. The network continues to deliver strong messages about the fight against child labor and to establish partnerships with local governments, the private sector, and other institutions to achieve greater project sustainability over time.

ACKNOWLEDGMENTS

The Pilares team acknowledges the commitment of the CSOs participating in the project and all the institutions and actors who support and work with the CSOs, including the local governments of San Martín de Loba and Barranco de Loba, the University of Cartagena, the Servicio Nacional de Aprendizaje (SENA), the Instituto Colombiano de Bienestar Familiar (ICBF), el Ministerio de Trabajo de

Colombia, la Agencia Nacional de Minería, la Secretaría de Minas de Bolívar, and the Diversidad Rural y la Agencia de Minería Responsable.

The project team is very grateful for the administrative support of Pact Colombia and Pact DC as the project executing organization.

Pilares is grateful for the full funding provided by the U.S. Department of Labor and for the support and guidance of its staff.

DISCLAIMER

Pilares funding is provided by the U.S. Department of Labor under cooperative agreement number IL-31477-17-75-K. The total cost of the project is financed with U.S. federal funds.

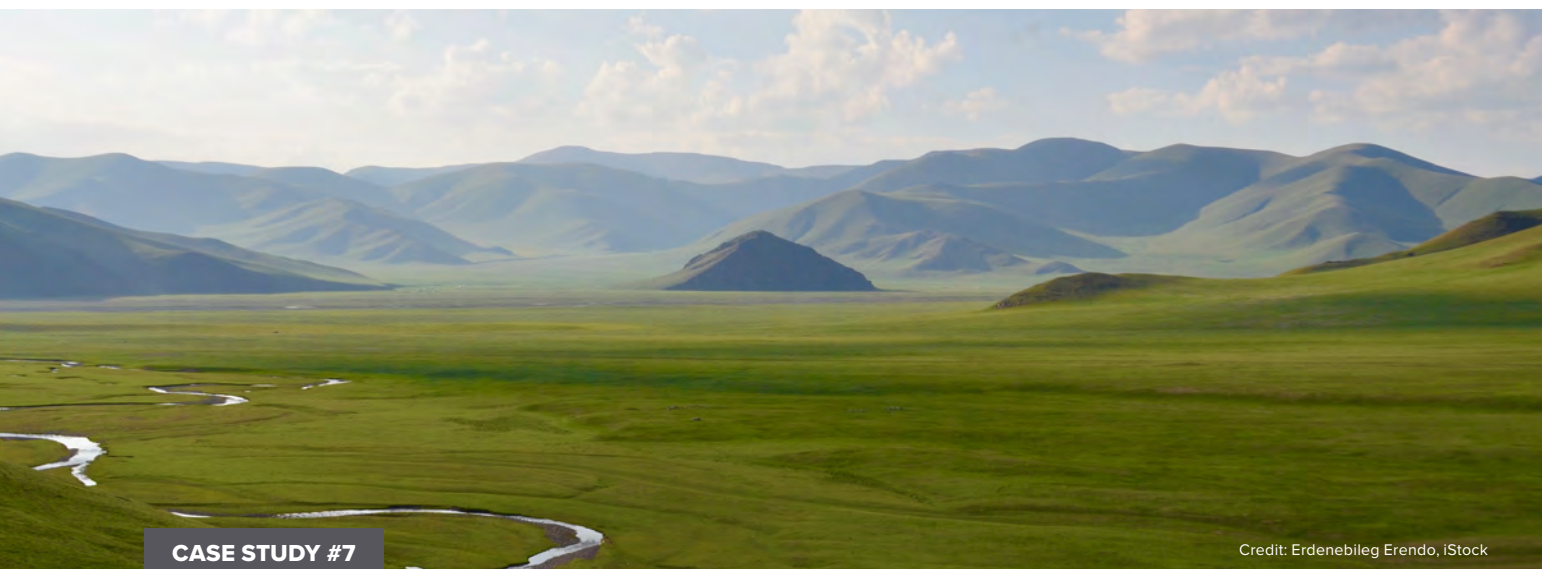
This material does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

END NOTES

- 1 Tool co-created by Pact and RS.
- 2 The five elements are a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and backbone support organizations.
- 3 SIRITI website: <https://app2.mintrabajo.gov.co/siriti/>
- 4 Google Forms, Google Docs, Google Sheets, Google Sites.
- 5 Pilares identified that the options for recreational use of free time for children and youth is limited, becoming one of the main reasons for them to access technology.

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CASE STUDY #7

Credit: Erdenebileg Erendo, iStock

CONCERNS OVER THE SOCIAL PROTECTION FOR MONGOLIAN ARTISANAL MINERS

AUTHORS: Lkhagvadulam Jamiyandagva^{1,2}

AFFILIATED ORGANIZATION(S): ¹planetGOLD Mongolia, ²Artisanal Gold Council

INTRODUCTION

Social protection is a fundamental human right and an important concern for ASM as it is crucial for the overall welfare, quality of life, and the resilience of both women and men in ASM communities. Developing ASM regulatory frameworks and the political will to recognize and formalize ASM have been historically unstable in Mongolia, due to the government's former beliefs in the 1990s that ASM is a temporary social phenomenon (United Nations Environment Programme, 2012). For example, it took almost three years to get new ASM regulations approved between September 2019 and August 2023. Furthermore, despite being an important aspect of ASM, the gender perspective is not considered in ASM Regulation #296 on the Extraction of Minerals by Artisanal and Small-scale Mining, approved in August 2022 (Government of Mongolia, 2022).

Consequently, as ASM jobs have not been secure and formal in the past, social protection policy for artisanal miners is left out of the picture, making 40,000-60,000 miners vulnerable. One-third of these miners are women, who in turn support another 120,000-180,000 people (Sustainable Artisanal Mining, 2010, 2018). Importantly, ongoing formalization efforts blindly claim to improve social protection for artisanal miners without a closer look at their current situation. To achieve the 2030 Agenda for Sustainable Development, Leave No One Behind, and its SDG 5 to promote gender equality within the ASM sector, careful analysis should inform the ongoing revisions and amendments to the social insurance package laws the main legislation for social protection (Ministry of Labor and Social Protection, 2023).

Aiming to capture the current reality for miners on the ground, take stock of best practices available, and provide policy recommendations to relevant government stakeholders, the planetGOLD Mongolia project is conducting an in-depth qualitative study covering four key aspects of social protection, including i) social insurance, ii) social welfare, iii) health insurance, and iv) health-care services in its ongoing study (planetGOLD Mongolia, 2023). This case study presents the early findings from this study.

Findings from the assessment of artisanal miners' access to social services

The early findings show a considerable gap persists in social protection for artisanal miners, making them economically vulnerable and susceptible to unfavorable and unforeseen risks and incidences that might happen during their ASM employment. The underlying reasons are multifaceted and vary for each aspect studied.

GENERAL HIGHLIGHTS OF THE FINDINGS

- Although artisanal miners are typically perceived as a vulnerable group (e.g., unemployed in rural communities with limited employment opportunities), there is no specific social protection program targeted at them and

artisanal miners are left out of existing social welfare and employment support programs, as they are not considered target groups within these programs.

- Due to inconsistent policy on ASM formalization, the delayed approval of the new ASM regulation, and the non-allocation of new ASM land for three years, many artisanal miners have been jobless and failing to pay social insurance and health insurance contributions, which serve as one of the most important bases for a social protection safety net in Mongolia. As a result, most artisanal miners are stuck in a vicious cycle of joblessness with unpaid social insurance, poor access to social protections, and no income.
- Ongoing formalization efforts, in effect since August 2022, are limited to improvements in the legal framework of ASM operations, without any consideration of its social protection aspect. In fact, such efforts push artisanal miners' partnerships or cooperatives to be treated the same as a business entity, requiring them to pay compulsory social insurance, health insurance contributions, and other taxes, without considering different features of ASM, for example, seasonality, irregularity, migration, mobility, and change of personnel.

SOCIAL INSURANCE AND SOCIAL WELFARE

Mongolian Law on Social Insurance (1994) stipulates the implementation of a voluntary and contributory plan for artisanal miners. This plan enables several social security services through retirement insurance, benefits insurance, and industrial accident and occupational disease insurance. As identified during planetGOLD Mongolia's previous studies (planetGOLD Mongolia, 2021a; planetGOLD Mongolia, 2021b), only 36% of the miners pay the social insurance contributions regularly, which results in less access to available welfare services. It also showed that social insurance coverage was higher among formal miners (39%) than informal miners (27%). A national survey conducted among artisanal miners in 2021 identified artisanal miners' social insurance coverage to be 42.9% (National

Statistics Office, 2022). All these are alarming findings compared to the average coverage of the Mongolian workforce of 82.2% (Ministry of Labor and Social Protection, 2023). In addition, it should not be overlooked that paying social insurance contributions is regularly used as proof of regular income and facilitates improved access to loans and finance in many cases.

The key concerns of social insurance and social welfare identified as requiring urgent attention for artisanal miners in Mongolia are:

1. The voluntary social insurance plan applicable to artisanal miners is being valued and treated the same as being unemployed rather than self-employed. It cannot guarantee access to the social protection benefits that miners need.
2. The existing classification of artisanal miners, as it relates to social insurance and its integrated database, does not offer any relief or facilitated retirement. In large-scale mining, certain technical employees (e.g., underground, toxic and hot, and harsh working conditions, etc.) are eligible for earlier or facilitated retirement because of their harsh and difficult working conditions. Artisanal miners are calling to be treated equally and be eligible for such practice.
3. Current social insurance payment (e.g., fixed schedule) practices does not consider the different needs of artisanal miners, e.g., seasonality, unstable mining operations, and irregular revenue due to the quality of the ore.
4. It was found that artisanal miners do not benefit sufficiently from voluntary social insurance plans due to their lack of awareness, non-payment of social insurance contributions, and lack of outreach activities from social protection-related government actors. For example, it is worrisome that there are artisanal miners, both male and female, experiencing minimum income security (i.e., social welfare pension of approximately \$80 per month) and end-of-life poverty. Also, even eligible miners are not applying for a temporary incapacity benefit due to a lack of knowledge.
5. Between the relatively lower life expectancy of Mongolian men—the national average being 67 years old, 9.4 years less than women (Mongolian Statistical Information Service, 2021), and the everchanging retirement age, male artisanal miners are unsure about whether they will age into retirement age (65 years old according to the revised law) and benefit from pensions.
6. As paying social insurance makes women eligible for maternity benefits and other forms of gender-specific additional support, female artisanal miners have higher rates of social insurance coverage than men.

HEALTH INSURANCE AND HEALTHCARE SERVICES

Unlike social insurance, health insurance is mandatory for Mongolians in order to receive various healthcare services. Emergency care is also available for everybody, regardless of insurance status. Most of the medical care and services, especially those that artisanal miners often need, are based on paid contributions and high out-of-pocket expenses. As per previous studies, 63% of the miners pay their health insurance contribution regularly. When healthcare service is needed, the current plan allows artisanal miners to retroactively pay their health insurance for the last four to five years to get needed healthcare services. This results in artisanal miners believing that the amount of health insurance contribution is relatively affordable, if not accumulated for many years. As a result, nearly two-thirds (64%) of miners indicated they have access to healthcare while working at artisanal mining sites. This is a significant problem because:

1. Miners reported institutional and legal barriers to access to healthcare.
2. It was found that artisanal miners may not be aware of the importance of preventive health screenings and check-ups. From a gender perspective, access to prenatal and post-natal health check-ups is also an important determinant of the physical and mental health of women miners.

3. Due to poor quality occupational health and safety practices, there were unfortunate cases of disability and death due to silicosis, tuberculosis, and industrial accidents. Regardless of being mandated to reach out to artisanal miners, responsible government officials lack the means, resources, and knowledge to build the occupational health and safety capacity of ASM communities.
4. It was observed that male miners lack both health-seeking and healthcare-seeking behaviors due to common gender stereotypes that men have to be tough and are socialized not to express their pains and discomforts.
5. Miners could have benefitted more from a targeted health screening for occupational diseases via mobile clinics or partnership-initiated periodical check-up practices, rather than general medical care.

Conclusion and recommendations

Social protection should be an important consideration in the development of a sustainable workplace and responsible labor practices in ASM, especially when formalization is ongoing and on the government agenda. Although slow, a shift towards full-fledged social protection for artisanal miners requires a concerted effort from key government and non-government stakeholders. For this purpose, the following recommendations are:

1. Allow retroactive payment of social insurance contributions for artisanal miners for the period when ASM regulation was not in place.
2. Introduce a facilitated or earlier retirement plan for artisanal miners due to their underground and harsh working conditions, similar to large-scale mining employees, especially in light of current formalization efforts.

3. Conduct multi-government stakeholder information-sharing sessions and outreach activities for artisanal miners to increase their awareness of the importance and benefits of currently available social protection services.
4. Provide targeted mobile clinic services in ASM sites or special health screenings to raise miner's health awareness and provide needed healthcare services.
5. Train a critical mass of artisanal miners as advocates for social protection among their peers.

ACKNOWLEDGMENTS

This case study is based on the planetGOLD Mongolia project. The project is funded by the Global Environment Facility (GEF), led by the United Nations Environment Programme (UNEP), and implemented in collaboration with the United Nations Industrial Development Organization (UNIDO). It is executed by the Artisanal Gold Council (AGC) in partnership with the government of Mongolia through the Ministry of Environment and Tourism. Thanks goes to the tremendous support and contribution of artisanal miners in Selenge province and my colleagues, as well as heartfelt thanks to the research team, especially my role models, Ms. Khishigsuren Lkhagva and Ms. Amarjargal Dairii.

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CASE STUDY #8

Credit: USAID

GENDERED IMPACTS OF ASM FORMALIZATION: WOMEN IN THE ARTISANAL MINING SECTOR OF THE CENTRAL AFRICAN REPUBLIC

AUTHORS: Maxie Muwonge,¹ Bocar Thiam,² and Mark Freudenberger²

AFFILIATED ORGANIZATION(S): ¹USAID, ²Tetra Tech

INTRODUCTION

SDG 5's ambition to “achieve gender equality and empower all women and girls” is a core foundational principle for the ASM sector. The low participation of women in the ASM economy is a global challenge. According to the Delve 2020 State of the Sector report, globally, women remain largely invisible despite making up significant portions of the ASM workforce. Women often suffer workplace discrimination (World Bank, 2020).

In the Central African Republic, artisanal mining is dominated by men, yet women play a vital role in transporting and washing diamondiferous gravel deposits. Few recognize the key role women also play in growing and processing food crops for the ASM labor force. Recent field studies show that nationally approximately 20% of artisanal miners are women, and yet in the southwest of the country only about 3% of the miners are women (Pennes and others, 2018).

Cultural barriers and inadequate technical capacity limit women entrepreneur's entry into diamond extraction and export (Benjamin Ndongo, 2022, Sabine Jiekak, 2019). Mining communities in the Central African Republic often hold the beliefs that women should be at home caring for children; that women are physically weak and not fit for mining; or the unfounded theory that menstruating women bring bad luck to mining sites. Some women mine site owners who have inherited or bought mining sites are forced to transfer the management of these sites to their sons or male spouses as a result.

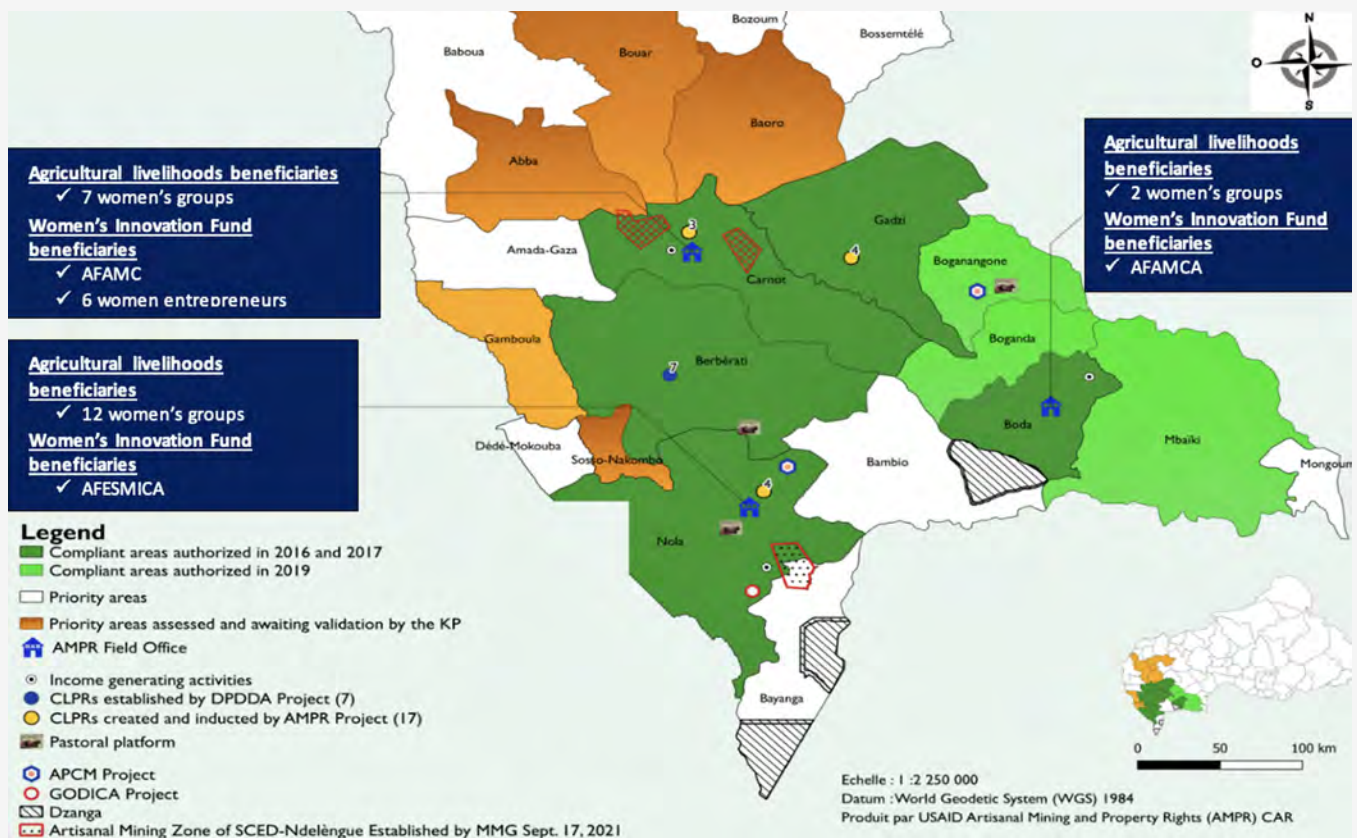
The USAID Artisanal Mining and Property Rights (USAID AMPR) project launched an innovative initiative to remove these barriers and improve the place of women in artisanal diamond mining. This case study describes the initial results. It also illustrates how SDG targets 5.a and 5.c can be achieved by giving women rights to economic resources and access to financial services and adopting and strengthening sound social policies that promote the equality and empowerment of women and girls in ASM.

Working with women in the Central African Republic's artisanal mining sector

The USAID AMPR project, implemented by Tetra Tech, supports the Ministry of Mines and Geology (MMG) to strengthen the chain of custody for diamonds under the Kimberly Process Certification Scheme (KPCS).¹ Among several project components, one addresses women's social inclusion in the artisanal mining sector. At the outset of the five-year project, a Gender Action Plan was prepared with women involved in the diamond sector through Participatory Rural Appraisal assessments carried out in the project's intervention sites in the south-west of the country (Jiekak, 2019). By the fourth year of the project, results began to be achieved among women entrepreneurs working through cooperatives, rural business associations, and mentorship programs, the focus of this case study.

The USAID AMPR project has worked with the MMG, prefecture level federations of women's

FIGURE 15. Map of southwestern Central African Republic showing AMPR's supported women's activities



networks, and several national NGOs to support the KPCS compliant subprefectures of Boda, Carnot, and Nola. The project worked with women's and mixed-gender organizations comprising a total of 535 members, among which 425 are women and 110 men.

Over the last four years, the project has worked with these entities to design, at their request, specialized trainings on a wide variety of technical topics and also provided material support. Training and support included small-scale agricultural production training, soapmaking skills, organizing village savings and loans systems, organizational management of cooperatives and associations, and functional literacy.

Leveraging village-level savings and loan associations

Village-level savings and loan associations (VSLA)² have proven particularly popular because no microfinance services for women exist in the remote southwestern part of the country. Within three months, the 14 VSLAs set up by the project raised sufficient internal capital funds among themselves to provide credit to their members at a 5% interest rate, significantly lower than the 15% standard rate applied by microfinance institutions in other parts of the country. While loans offered internally to members are small, the VLSA's encourage saving, credit for small-scale investments, and most importantly, financial insurance in case of emergencies.

AMPR VSLA members take loans ranging from about 30,000 to 120,000 Central African CFA francs (about \$50 to \$200) at a 5% monthly interest rate. The absence of basic rural finance capital for rural economic activities is a major bottleneck in the Central African Republic. Microfinance provides up to 500,000 Central African CFA francs (approximately \$850) secured by a borrower's guarantee at a 15% monthly interest.

By 2021, the success of working through women's organizations led the USAID AMPR project to set up a Women's Innovation Fund to support entrepreneurial women to expand their participation in the artisanal diamond mining sector. The grant mechanism supports the training of 120 women to expand their place in the artisanal diamond sector by providing them with skills to engage in diamond extraction, and eventually in commercialization of diamonds. Women are trained in how to prospect for diamonds with hand-held augers and the use of SMARTER³ mining techniques consisting primarily of bench terracing and backfilling. In addition, the women are instructed on previously well-tested methods of converting mined-out pits into plots for gardening and crop production. The project helps to secure land rights to these restored mining sites.

The Women's Innovation Fund is used to teach women diamond valuation techniques and commercial sales through legitimate trade, as structured by the KPCS and the Operational Framework applied to the Central African Republic. Government diamond

TABLE 5. Beneficiaries of AMPR VSLA Support

Sub-Prefecture	Women	Men	Sub Total
Boda	41	12	53
Nola	133	63	196
Carnot	97	10	107
Total	271	85	356

evaluators of the *Bureau d'expertise et de contrôle du diamant et de l'or* (BECDOR) and the USAID AMPR staff have so far trained 182 women artisanal miners and newly established women mine site owners on the principles and practices of diamond valuation. This includes instructing women on how to use hand-held loupes to classify and evaluate rough diamonds for the 4-Cs (Cut, Carat, Color and Clarity). By knowing the quality of rough diamonds in advance of sales, women are better prepared to bargain for a better price.

The USAID AMPR training in diamond valuation led to the emergence of women skilled in diamond evaluation and SMARTER mining. This core group is the foundation of entrepreneurs and resource persons in each sub-prefecture for scaling up support to women interested in expanding their place in the diamond economy. The networks of the Association of Women Artisanal Miners of Carnot (AFAMC), Association of Women Artisanal Miners of the Central African Republic (AFAMCA), and Association of Women in the Central African Mining Sector (AFESMICA)⁴ are guided by an Action Plan that supports interested women with further training. The government BECDOR diamond valuers are fully supportive of this new initiative in the sub-prefectures of Boda, Nola, and Carnot. The USAID AMPR project provides the networks with training modules in the local Sango language as well as material support to enable the network to train other rural women in livelihood strengthening and diversification and women's entrepreneurship.

As a complement to the range of trainings provided to women's groups, the USAID AMPR project produced a short video in Sango on tested methods for the promotion of dialogue among women and men diamond miners on sensitive issues around gender discrimination and opportunities for the inclusion of women in the diamond mining value chain.

Diversifying livelihoods

The provision of organizational support, training, and some materials and supplies have led to unexpected benefits. Surprisingly, the COVID-19 pandemic generated new economic opportunities for women. Since soap needed for hand washing is so rare in remote diamond mining communities, and yet critical to mitigate against the transmission of COVID-19 and other diseases, the USAID AMPR team launched artisanal soapmaking in mining communities based on the positive experiences gained under the previous USAID PRADD I project (USAID, 2013). Experienced soap makers were hired by the project during the height of the pandemic to provide conceptual and hands-on training to 194 members (175 women and 19 men). Among the five soapmaking associations monitored closely, net revenue was on average about \$170/association. This may appear insignificantly small, but not for a context where daily wages in even the formal sector are about \$2.50/day (Wage Indicator, 2023). Soapmaking has now become an established supplemental income generation activity for many groups.

TABLE 6. **Beneficiaries of AMPR's livelihoods support**

Sub-Prefecture	Trained Soap Makers			Beneficiaries of Agric. Livelihoods		
	Women	Men	Sub Total	Women	Men	Sub Total
Boda	43	5	48	42	6	48
Nola	100	9	109	114	73	187
Carnot	32	5	37	64	20	84
Total	175	19	194	220	99	319

Conclusion

The place of women in the artisanal and alluvial diamond mining sector in the Central African Republic has long been relegated to simply transporting and washing diamond gravel. Cultural taboos and structural impediments limited the role of women in the economy. The USAID AMPR project has gone a long way toward overcoming, with the support of the women themselves, some cultural taboos and technical impediments in the southwest part of the country. The strategies used by the project may be of interest to others.

While the verdict is still out on whether the USAID AMPR interventions will lead to long-term scaling-up in the southwest, key lessons are beginning to emerge. At the outset of project implementation, donor-funded projects like USAID AMPR benefit greatly by carrying out participatory Action Plans with the women beneficiaries themselves. Women

involved in the mining sector, however marginalized and disempowered initially, contribute greatly to helping to design training programs for themselves and the provision of other support needed to expand their place in the sector. These Action Plans educate project staff about the opportunities and hurdles that come with trying to strengthen the roles of women in the ASM sector. But this alone is not enough. Projects must complement Action Plans by building a positive policy context within ministries of mining needed to break the cultural beliefs that women cannot or should not be involved in diamond extraction and commercialization. Fortunately, the experience from previous USAID artisanal mining programs in the Central African Republic and elsewhere (USAID, 2009) were used to collaboratively design environmentally sensitive training programs in diamond exploration and extraction, site rehabilitation, and diamond valuation through targeted initiatives like a Women's Innovation Fund.

ACKNOWLEDGMENTS

The USAID AMPR management team acknowledges the generous contributions made by the women entrepreneurs to expanding their role in the ASM diamond economy and to the ongoing policy and programmatic support from the Central African Republic's Ministry of Mines and Geology and USAID. The opinions expressed here are those solely of the authors.

END NOTES

- 1 Kimberley Process Certification Scheme (KPCS) requires diamond-producing countries to implement safeguards on shipments of rough diamonds and certify them as conflict-free. For details, see KPCS, available at <https://www.kimberleyprocess.com/en/system/files/documents/KPCS%20Core%20Document.pdf>
- 2 The VSLA model creates self-managed and self-capitalized savings groups that use members' savings to lend to each other. For details see VSLA at <https://www.vsla.net/>

3 SMARTER Mining is the Sustainable Mining by Artisanal Miners Mining. It includes techniques for prospecting, exploitation, rehabilitation, and enhancement of depleted mine sites.

4 These women's networks aim at reducing inequalities in the mining sector. They integrate actions into the networks of reflection and alternative action on development, with the aim of exchange and communication aimed at promoting the dissemination of ideas and experiences on the conditions of women in the mining sector in the Central African Republic. AFESMICA is a member of the Association of Women in Mining in Africa (AWIMA) network.

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CASE STUDY #9

Credit: Mellkae Sinika, iStock

FOR WOMEN ENTREPRENEURS IN GHANA'S MINING COMMUNITIES, FINANCE IS GOLDEN

AUTHORS: Yaw Britwum and Boukje Theeuwes¹

AFFILIATED ORGANIZATION(S): ¹Solidaridad

INTRODUCTION

Kering—a world-class luxury group—has partnered with international NGO Solidaridad to enhance the economic independence of artisanal and small-scale women gold miners in communities in Ghana by focusing on access to finance for women in small-scale mining communities. Solidaridad delivered a pilot project that mobilized 130 women into five savings groups to test whether the introduction of a revolving fund to these savings groups would bolster the group members' ability to access more credit, in turn strengthening their mining-related and non-mining enterprises.

The revolving fund is the provision of external funding to be given out as loans. In this situation, it means that entrepreneurs who cannot access formal finance can access loans that once repaid will support another entrepreneur. The loans are low interest and often repaid in less than a year, generating high rotation of money. This case study focuses on the monitoring and evaluation of this revolving fund (Solidaridad, 2021) and highlights how development partners can contribute to SDG 5 target 5.a to undertake reforms to give women equal rights to economic resources including access to financial services that in turn enhance their access and ability to pay for social protection measures such as health insurance and economic resilience in times of household need.

Taking Village Savings and Loans Associations to the next level

The project supports 130 women in three gold mining communities in the Tarkwa and Bibiani area of Western Ghana. Started in July 2019, the project's goal is to improve the financial and social position of women through a combination of activities ranging from the introduction of Village Savings and Loans Associations (VSLAs); external funding for business support; engagement of women, men and key stakeholders on the role of women in households and businesses; and trainings in responsible mining, group dynamics, and leadership skills. For women business leaders this program might offer a path to financial independence and greater equality.

Solidaridad has made a gender-specific review of adverse impacts in the gold mining supply chain (Gender Responsive Due Diligence, 2021a). This review showed that women in Ghana's small-scale mining sector lack access to finance while also performing low-paid jobs. The underprivileged position of women in the gold mines is a reflection of their position in the communities, which hinders women in their economic and social development. They need access to finance, support in financial literacy, and access to the local business-supportive infrastructure. The project's focus is to pave the way for women to start businesses around the gold mines and in the communities. By focusing on this, the project tackles a systemic gender-based barrier in gold mining communities.

Following these findings, Kering's partnership with Solidaridad focused on increasing women's access to credit so that women can start or improve their businesses around the mines legally (Gender Responsive Due Diligence, 2021b). This has been achieved via establishing savings groups for women in the mining communities and then supporting these savings groups to increase the size of their loans via a revolving fund of \$15,000, provided by Kering.

Tracking implementation and results of the revolving fund (Gender Responsive Due Diligence, 2021c) has also been an important step for the project to understand how they can sustainably achieve their goal. They have done this in several ways:

- Developing indicators: Indicators were developed before starting so that everyone knew how success was being measured and how data would be obtained.
- Allocating budget: 6% of the total budget was assigned to monitoring and evaluation. This included the completion of an outcome evaluation to assess if the intended outcomes were being achieved.
- Real time monitoring: Field officers monitored the savings groups. They not only provided technical support to the savings groups but also collected data on loans made, repayment rates, and what the loans are funding.
- Consultation: The savings groups were consulted after nine months to understand the group's financial needs. This informed whether a revolving fund was needed, and if so, how it should be distributed between the groups.
- Research approaches: Solidaridad conducted extensive research into how a revolving fund would work, mindful not to disrupt savings groups, but instead enhance group capacity to provide business related loans.

Achievements

The project has made good progress implementing a gender-specific due diligence process, leading to the following achievements:

- 55% of women involved in the saving groups have secured credit from either the savings group or the revolving fund. Loans have contributed to business expansion and an increase in both profit and overall household incomes.
- The \$15,000 revolving fund has been given out to 72 individuals via the five savings groups, with 88% repaid to date.
- Trust has been placed in the women, they are responsible for managing the revolving fund and how it works, which has provided more

ownership and empowerment.

- The women have demonstrated short repayment times, indicating the funds are likely to revolve for a long time. This means high reach and impact for a relatively low investment.
- By continuously tracking the savings groups, it was apparent that while women could access finance through the groups, the finance available was not enough. This meant the revolving fund could be used to inject sustainable capital into the groups.
- Through continuous tracking, frequent adjustments could be made to improve how the revolving fund worked and a “how to” guide could be developed to ensure lessons learned from creating such a fund can inform future work.

Learnings and recommendations for others

- Keep reviewing your goal—the project’s goal was for women in small-scale mining communities to access finances. While the savings groups started to progress, the funds available were not enough. Kering and Solidaridad could see this from continuous tracking of the pilot and so introduced the revolving fund.
- Embedding a revolving fund within an existing group structure—such as a savings group that is registered and has guidelines and established

ways of working—will support the tracking of implementation and results as well as efficient use of the fund.

- The revolving fund should be complemented by loan criteria as well as a tool to help track loan allocations and repayments.
- Adequate financial resourcing is needed to effectively track implementation and results—make sure that you budget enough to do it well.
- To ensure that project participants have the confidence, skills, and knowledge to make good financial investments, such a fund should be complemented with training on group dynamics, leadership skills, business skills, and financial literacy.
- To support women to make informed decisions about what kind of enterprises to invest in, work with them to map the economic opportunities that exist in the area.

ACKNOWLEDGMENTS

Thanks to the funding partners and organizations involved: Solidaridad and Kering (note: Kering does not source directly from miners involved in this project. Its support is based solely on its commitment to support women empowerment and development in the area).

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CASE STUDY #10

Credit: mddphoto, iStock

UNEARTHING HOPE: A HOLISTIC APPROACH TO SUPPORTING GIRLS AND BOYS IN TANZANIAN MINING COMMUNITIES

AUTHORS: Alison Koler,¹ Levina Kikoyo¹ and Ramadhani Abdul²
AFFILIATED ORGANIZATION(S): ¹Pact, ²Ifakara Health Institute

INTRODUCTION

USAID Kizazi Kipya was a five-year project (July 2016 to December 2021) implemented by Pact and its partners and funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Agency for International Development (USAID). Across Tanzania, the project enabled orphans and vulnerable children (OVC)—children, adolescents, and young people orphaned and made vulnerable by HIV to utilize services for improved care, health, nutrition, education, protection, livelihoods, and psychosocial well-being. The project delivered services in areas with high HIV burden, including three district councils (DC) reliant on artisanal gold mining activities: Chunya DC and Songwe DC in the Southern Highlands, and Bukombe DC in the country's northwest. To meet the unique needs of children and their caregivers in these artisanal mining communities, Kizazi Kipya designed and piloted a tailored service package for this population. The project, in partnership with Ifakara Health Institute (IHI), conducted formative research to guide the design of the intervention and a cohort study to evaluate its effectiveness on health and well-being outcomes including HIV and sexual violence.

Formative research and baseline measurement

The project's formative research conducted in 2017 found that in the target communities, child labor is a significant challenge that affects both boys and girls, with children as young as 7 years old starting to work in the mines and younger children accompanying their mothers as they carry out mining-related work. Although both boys and girls are involved in mining activities, different tasks are assigned by gender. Boys are often involved in both underground and surface mining activities, while girls are mainly engaged in surface mining tasks, such as sorting and cutting stones and transporting materials for crushing and washing.

Girls are not typically engaged in washing and amalgamating gold, rather they are more likely than boys to work in food stalls near and in mining areas. The formative research also found that some girls were engaged in sex work, and there were reports of sexual abuse among children across mining sites (Metta et al., 2017; 2023).

This formative research informed the approaches and design of the package of interventions for children and their caregivers in mining communities. In consultation with the Department of Social Welfare under what was then the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDCGEC), the project expanded its enrollment criteria in these targeted mining communities to consider the harms and risks children face. Girls and boys ages 10–19 who work in direct contact with minerals, girls ages 10–19 who provide services at the mines, children under 10 years of age who worked in direct contact with minerals without caregiver presence, children living with HIV (CLHIV), and children who have been physically or sexually abused were all eligible for enrollment into Kizazi Kipya. Taking a family-centered approach, these children, along with their siblings (ages 0–19 years old) and caregivers, were offered enrollment in the project.

As part of the baseline measurement (December 2017 to April 2018), HIV testing services (HTS) were offered and 47 children were HIV positive, with eight

children (17%) being newly diagnosed. The overall HIV prevalence among the cohort was 4.9% with a slightly higher proportion of boys (5.4%) living with HIV compared to girls (4.3%). Of those previously diagnosed, 92% were already on antiretroviral therapy (ART). The baseline measurement revealed that 80% of children had experienced physical, emotional, and/or sexual violence in their lifetime. Children working in mining (i.e., direct contact with minerals, selling/preparing food, bar work, and sex work catering to miners) were more likely to ever have had sex, transactional sex, more than one sexual partner, and used alcohol compared to those not working in mining. Working in mining was also associated with a more than two-fold increase in sexual and physical abuse. Though the vulnerabilities were more pronounced among children engaged in mining, those living in mining communities still faced significant risks and had numerous unmet needs (Geubbels et al., 2018; Abdul et al., 2023).

Tailored service package

Based on findings from the formative and baseline research, Kizazi Kipya adapted its family-centered case management approach to children and their caregivers in mining communities. Given the multitude of vulnerabilities children in mining communities experience as well as the complexity that involvement in mining presents, the project opted to hire professional social workers rather than using lay volunteers as it did across other project sites. These social workers were trained to use standardized tools to assess vulnerability and offered direct health and social services during routine household visits based on identified needs. For services that could not be provided directly, social workers made referrals and linkages to appropriate service providers in the area. Social workers customized support based on family circumstances and children's needs and developed care plans that were monitored and updated on a regular basis.

With mining work being a structurally high HIV and violence risk environment, Kizazi Kipya focused on facilitating the transition of children away from mining work, redirecting them towards occupations with fewer health and safety risks or reintegrating

them back into school. To do this, the project implemented economic strengthening activities for older adolescents including linkages to project-supported savings and lending groups and vocational education scholarships and support. For children still eligible to return to formal school, social workers worked with school administrators and government officials to re-enroll children, and the project provided educational subsidies to children who returned to school. To reinforce the benefits of schooling as well as positive parenting more generally, the project provided parental education and positive parenting skill-building to caregivers. Given the heightened health risks associated with mining activities, the project also provided health insurance to families enrolled in the project.

Endline findings

The endline cohort measurement was conducted between December 2020 and January 2021. Out of the 961 children who took part in the baseline survey and received project services, 610 children (63%) participated in the endline survey.

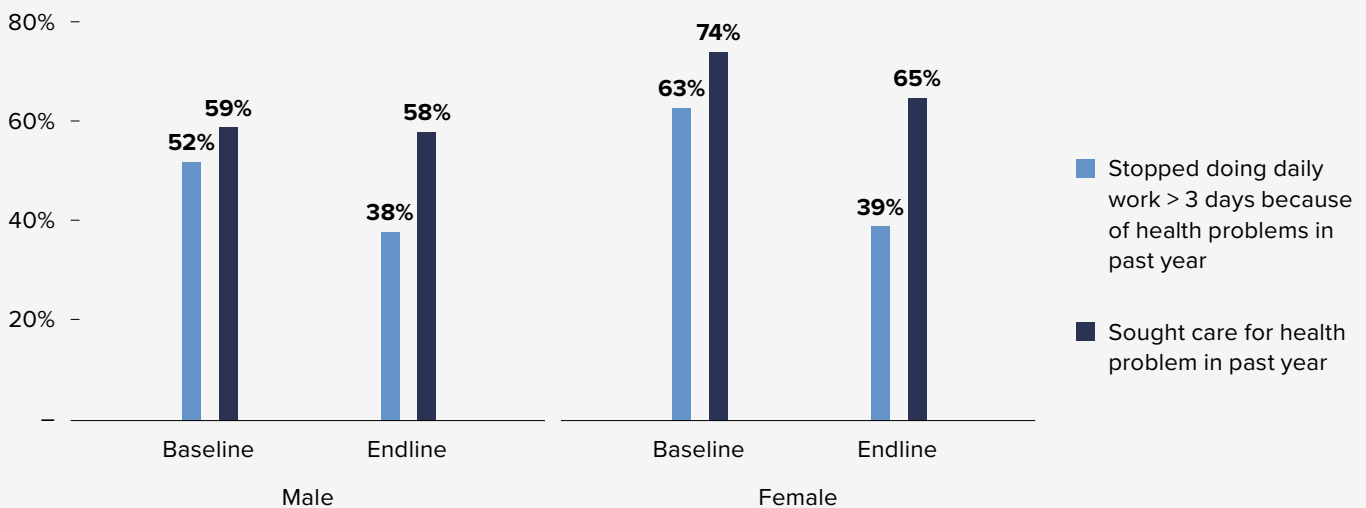
Between those who participated in the endline survey and those who were only part of the baseline, there were no significant differences in gender, baseline HIV status, or study site. However, the baseline-only participants were typically older and more frequently involved in mining activities.

Overall, the endline demonstrated positive effects for both boys and girls across health and social well-being domains.

HIV knowledge: Awareness about HIV/AIDS increased 22% and 23% for boys and girls, respectively. Of the children with awareness about HIV, 61% reported knowing how HIV is transmitted at baseline, which increased to 78% at endline. Initially, less than half of them could mention at least one way of reducing HIV risk at baseline, while two-thirds could do so at endline.

HIV risk behaviors: Children who became sexually active during the study period had a higher median age at first sex (age 16) compared to those who reported being sexually active at baseline (age 13). At baseline, 85% of boys reported a consensual first sex, whereas only two out of 10 girls had voluntary experiences, with the rest being coerced or deceived. At the endline, all newly sexually active boys reported voluntary first sex, and the percentage of girls with voluntary first experiences significantly rose from 20% to 58%. At baseline, condom use was at 21% and increased to 35% at endline, with a more pronounced effect among girls. Initially, a substantial proportion of girls (60%) reported having older sex partners (5 years older or more), which decreased to 48% by the endline. Transactional sex among children slightly decreased from 29% to 24% over the course of the study, primarily driven by a decline in transactional sex among girls.

FIGURE 16. Health Problems and Care-Seeking Behavior by Gender



HIV outcomes: A significant proportion of children referred by the project for HTS, based on the HIV risk assessment conducted by social workers, reported attending the clinic for HTS (87% of boys, 96% of girls). In total, more than 80% of children who were tested at baseline also reported undergoing at least one subsequent HIV test. Among CLHIV who participated in the endline, all newly identified HIV positive children achieved viral suppression while 75% of CLHIV with known status at baseline attained viral suppression during the study period or were already virally suppressed upon study enrollment.

General health: The baseline revealed that more than 50% of children reported having to halt their daily activities for three or more days due to health issues. At endline, there was a substantial reduction in this figure, with a decrease of 14 percentage points for boys and 24 percentage points for girls. At the same time, the endline also revealed a decrease in care-seeking behavior among girls when it came to addressing health problems.

Violence against children: At the endline, 70% of children reported experiencing violence in their lifetime, with the type of violence varying by gender. The most prevalent form was physical abuse, as reported by 67% of children, with a slight variation between boys (65%) and girls (68%). Emotional abuse was experienced by 30% of the children and was more common among boys (34%)

than girls (26%). It was reported that 8% of children experienced sexual abuse, with a higher prevalence among girls (11%) compared to boys (4%). At endline, of the children who reported experiencing violence, 76% noted a decrease in the frequency of such incidents once the project social worker began conducting household visits.

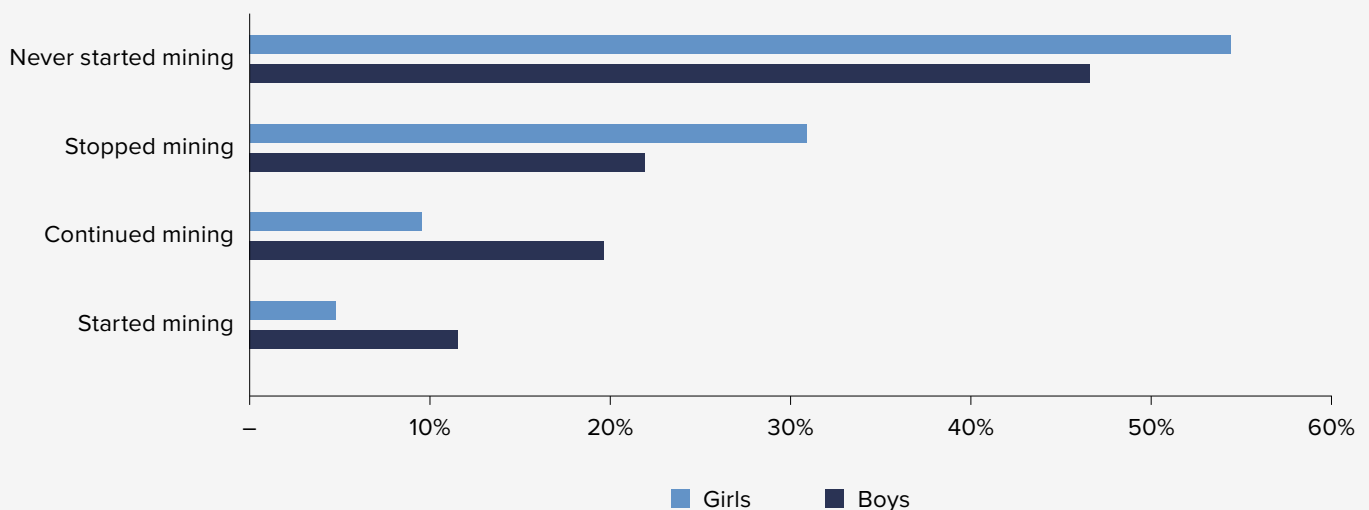
Involvement in mining: At baseline, 36% of children were involved in mining, and among those participating in the endline survey 65% had stopped mining activities. Significant differences by gender were observed, revealing that girls were more inclined than boys to discontinue or refrain from engaging in mining activities.

In addition to the decline in mining participation, there was a noticeable reduction in the number of children contributing to their family's income. The decrease was significant from 23% to 3% among 5–9 year olds, 68% to 30% among 10–14 year olds, and 83% to 66% among 15–19 year olds (Geubbels et al., 2021).

Discussion

Children in mining face a range of risks and vulnerabilities, including exposure to hazardous working conditions, increased susceptibility to HIV, elevated levels of violence, limited opportunities for education, and challenges in accessing essential services.

FIGURE 17. **Involvement in mining by gender**



Gender differences in mining roles and occupational exposures and the impact of gender norms more broadly contribute to observable variations in risks and vulnerabilities among children engaged in mining activities. To effectively address these challenges, the project's multi-pronged design, which prioritized the health, safety, education, and livelihoods of children and their families, was carefully tailored to be gender-sensitive and age-appropriate. The endline results demonstrated a positive effect across various health and social well-being domains, affirming the effectiveness of the project's approach.

A gender-sensitive and adaptable case management approach was utilized, tailoring support to meet the unique needs of each child. The involvement of professional social workers was crucial due to the complex nature of cases, particularly concerning high rates of sexual, physical, and emotional violence experienced by both boys and girls. Social workers were able to identify and be first responders to cases of abuse, and they also implemented parenting interventions to improve positive parenting skills and decrease harsh punishment. The endline assessment revealed that a significant majority of children who had disclosed experiencing abuse reported a notable reduction in the frequency of such abuse following the regular visits of the project's social worker to their household, underscoring the value of continuous support and intervention by social workers in safeguarding the well-being and protection of these vulnerable children.

Beyond child protection issues, social workers identified other needs and linked children to appropriate services including HIV services. Notably, there was high completion of HIV testing among children identified as at risk, and among CLHIV almost 80% were virally suppressed. By endline, there were observable reductions in HIV risk behaviors, including around sexual debut, condom use, and transactional sex. Among girls who became sexually active during the study period, a higher proportion of them reported a consensual first sex compared to those who were already sexually active at baseline. Despite these promising results, the prevalence and persistence of high-risk behaviors among sexually active children in the study is notable. With more than half reporting a

lack of condom use, and nearly one in four, primarily girls, engaging in transactional sex, these findings underscore the ongoing necessity for targeted risk reduction strategies among this population.

During the study period, there was a significant decrease in the number of children who reported having to discontinue their daily activities due to health issues. These findings highlight the positive impact of the intervention on minimizing health-related disruptions. The endline, however, revealed a notable reduction in care-seeking behaviors for health problems in the past year among girls, whereas no such change was observed among boys. At the same time, girls were more likely than boys to complete HIV testing if referred. This highlights the need for further exploration of gender-specific factors influencing care-seeking patterns.

Recognizing the high-risk environment faced by children engaged in mining activities, a pivotal strategy of the project focused on facilitating school enrollment, supporting school progression, and promoting alternative livelihood options. The endline demonstrated that more than half of children who were engaged in mining at baseline had ceased their mining activities. Notably, the effects were more pronounced among girls who were more likely to have stopped mining or never start mining in the first place, though there were still significant impacts observed among boys. This headway represents a crucial stride in breaking the intergenerational cycle of mining and serves as a model to facilitate access to alternative livelihoods and safer livelihood opportunities for these children.

Conclusion

The influence of gender has emerged as a crucial factor affecting risks, vulnerabilities, and the outcomes of the project, highlighting the complex interplay between societal norms, power dynamics, and individual experiences in Tanzanian mining communities. Gender disparities were evident in the different risk profiles, underscoring the necessity for targeted strategies that specifically address the distinct challenges experienced by boys and girls in mining communities. The research revealed that

interventions had varying degrees of effectiveness for certain outcomes depending on gender, which underscores the importance of continuing to emphasize a gender-responsive approach when designing and implementing future initiatives for this population. This approach is crucial in fostering meaningful change and ensuring that interventions effectively improve the well-being and empowerment of girls and boys in Tanzania's mining communities.

ACKNOWLEDGMENTS

The authors are grateful to the children, caregivers, and communities who participated in this research, sharing their experiences and insights that have contributed to a deeper understanding of the challenges and potential solutions in Tanzanian artisanal mining communities. Special thanks to IHI for our partnership and leading this important research. We extend our appreciation to Pact's local implementing partners, New Light Children Center Organization (NELICO) and Integrated Rural Development Organization (IRDO), for their dedicated efforts in implementing the project in mining communities. We are grateful for the guidance of the Department of Social Welfare under Tanzania's Ministry of Health and the support of local government authorities in Chunya DC, Songwe DC, and Bukombe DC under the President of the Regional Administration and Local Government (PO-RALG). We thank PEPFAR and USAID for their generous funding support of the USAID Kizazi Kipya project.

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CASE STUDY #11

Credit: BAN Toxics

EMPOWERING WOMEN IN PHILIPPINE ASM COMMUNITIES THROUGH COMPASSIONATE GOLD

AUTHORS: Jashaf Shamir Lorenzo¹ and Arleen Honrade¹

AFFILIATED ORGANIZATION: ¹BAN Toxics (Philippines)

INTRODUCTION

The Artisanal and Small-Scale Gold Mining (ASGM) sector in the Philippines is a significant provider of livelihoods with an estimated 500,000 miners being employed in the sector and millions more supported by it (Mayuga, 2017). These operations are largely informal and can be found in 40 provinces around the country (Simeon, 2016). ASGM is closely linked with extreme poverty, and miners, including women, engage in mining-related work due to the lack of educational and alternative economic opportunities available to them (International Labour Organization, 2019). These same conditions continue to lead to children working on mining sites, where they hope to earn money to help their parents (Human Rights Watch, 2015). It is estimated (International Labour Organization, 2019) that 18,000 to 20,000 women and children work in ASGM-related jobs in the Philippines. Women in ASGM face several challenges because of the absence of sustainable empowering opportunities and the continued silence of women's contributions to the sector.

In 2018, Philippine’s-based nongovernment organization BAN Toxics launched the Compassionate Gold Program (CG) to contribute toward the formalization of the sector (International Labour Organization, 2018). Among its objectives is to contribute toward gender equity in the sector through community organizing and advocating for increased institutional support. By providing women with valuable opportunities to participate in the sector more meaningfully, women can become more visible in roles that are aligned with their capacities and interests.

The Compassionate Gold program

BAN Toxics’ engagement with women in the small-scale mining sector comes from the need to address several inequities. As part of the CG program, a certification tool was developed to identify key issues in the sector. The tool is consistent with international standards, such as the CRAFT Code and the OECD standards, with modifications to fit the Philippine context (Lorenzo, 2020). The issues identified were further assessed through community knowledge and BAN Toxics’ continued

community organizing efforts for women in the sector. Key issues identified for women in ASGM are summarized below.

Under BAN Toxics’ CG Program, various activities have been conducted to contribute toward mainstreaming gender issues in ASGM. The CG Monitoring and Certification Tool helped identify key gender issues as well as potential actions that may address them in the context of formalization. In line with BAN Toxics’ multi-stakeholder approach to formalizing ASGM (World Bank, 2020), these activities target women’s groups, small-scale miners, and local government partners and may be grouped under two key categories: 1) livelihood development and 2) reducing gender-based violence.

The potential of different livelihoods to contribute to improving economic conditions for women were identified by the CG tool in the municipalities of Paracale and Labo in the province of Camarines Sur. Aside from mining-related skills (which also include crafts), agriculture was also seen as a key growth opportunity for women and one which dovetails well with ASGM whereby faster financial returns from mining can be invested in seeds,

TABLE 7: Summary of gender Issues in ASGM

Key Issue	Description
The double burden of work-home responsibilities	Women engage in both manual and administrative duties in the sector (International Labour Organization, 2020). Aside from this, women are still expected to perform gendered roles in the household, which often overlap with their responsibilities in mining. In conversations with communities, women have described their situations as akin to that of “unpaid house helpers.”
Perspectives on women’s incomes	The income received by women from mining is often perceived as “augmentative” in nature, e.g., only serving to contribute a small amount to the family income, which is still seen as primarily driven by the males in the household. This perspective is indicative of a lack of acknowledgement and assertion of women’s economic contributions in the household.
Gender-based violence	Gender-based violence is still common in some communities in the Philippines. For other communities, the absence of such violence points to two possibilities: 1) improved gender conditions leading to no incidences of gender violence, or 2) the lack of resources available for women to report and seek actions to address such incidences.
Lack of capacity to engage with stakeholders	In some cases, women were found to be provided with minimal or no consideration during the development and implementation of small-scale mining projects. This limits opportunities to shape their working environments and opportunities more broadly.

fertilizers, and tools, and improve household nutrition through subsistence farming. Through ASM formalization efforts and linking communities with government partners, women mining groups were provided with individual complementary livelihood starter kits and financial assistance worth more than 800,000 Philippine pesos by the Philippines Department of Labor and Employment. The project benefited a total of 51 families.

Ban Toxics facilitated the coordination between partner mining communities and government stakeholders such as the Philippines Technical Education and Skills Development Authority (TESDA) and the Cooperative Development Authority (CDA). These partnerships focused on providing skills training and business training for target women groups in the municipalities. Finally, the Department of Agriculture provided seedlings, farm tools, and equipment such as container drums and water hoses to 186 families who wanted to shift away from mining-related work and move to agriculture.

These activities served to legitimize women as independent and empowered skilled workers who can be primary economic contributors to the household income. Previously, women in the partner areas were thought to be incapable of providing substantive incomes, and these activities helped shift community perspectives and enhance the ASM community ecosystem they are a part of. The CG approach showed that involving women beneficiaries in the conceptualization and implementation of these activities provided them with valuable opportunities to access livelihoods based on their interests, capacities, and talents.

Contributing toward the reduction of gender-based violence

Under the CG program, BAN Toxics continues to conduct gender sensitivity training with partner mining communities such as Camarines Norte (Bicol Region in the northern part of the Philippine archi-

Livelihood development for women in ASGM



Credit: BAN Toxics

pelago) and T'boli, South Cotabato (Soccsksargen Region in the southern part of the archipelago). These activities focus on discussing the impacts of gender in shaping the social, economic, and political opportunities available to an individual in the mining sector enabling their participation in ASGM. Gender mapping is regularly conducted in these communities to provide accurate estimates of the number of women working in mine sites and to ensure that information on the status and condition of women in the sector are accurate.

Women in the ASGM sector are also accounted for in budgets and programs for gender equality through partnerships with the local government unit (LGU). This is accomplished through linking women's groups with the LGU's gender focal point through multi-stakeholder discussions and the establishment of formal partnerships.

Key learnings and recommendations

BAN Toxics' experience with gender issues in the context of formalization highlights several key learnings. First, gender is a cross-cutting issue and should be addressed through a multi-stakeholder perspective—the environmental, social, and political conditions that women miners are subjected to are shaped by several external factors, including other stakeholder groups' perspectives of women.

Second, there is a continuing need to educate both women and men regarding gender perspectives in the context of ASGM. Likewise, government stakeholders should be made aware of these issues. As NGOs, our roles are to facilitate discussions and partnerships between these groups and to ensure that women are represented in LGUs, which should continue to implement gender-sensitive programs.

Third, there is a need to emphasize the importance of conducting social research on the status of women in ASGM and ensuring that gender is integrated in data collection and analysis. Tools such as the CG Certification and Monitoring Tool have provided communities with valuable opportunities to understand the role and status of women in the sector, especially as they face issues unique to

them. This in turn can inform project development, planning, and implementation to ensure that women are provided equitable access to opportunities.

Last, affirmative action programs need to be developed and implemented to address gender inequalities and allow women to advance. Community organizing plays an important role in providing women with a voice. Furthermore, this can contribute greatly toward identifying potential solutions to community problems. As an example, the CG program's livelihood components contributed toward changing community gender dynamics and women are now able to participate in critical and profitable points in the gold mining process and enhance their economic contributions.

In conclusion, ensuring that women can participate in key community processes and training them to become independent skilled workers, who show what is possible by leading by example, should remain a priority. BAN Toxics' continuing experiences with the Compassionate Gold program reiterates the importance of participation in ensuring the rights of women in ASGM are protected and valued.

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ACCOUNT FOR GENDERED DIFFERENCES IN OCCUPATIONAL HEALTH AND SAFETY EFFORTS AT MINE SITES

AUTHORS: Dingani Moyo,¹ Josephine Singo,² Marie-Rose Bashwira,³ Michael Akilimali,³ Nellia Mutemeri,¹ Ege Tekinbas,⁴ Marion Langlois,⁴ Nydia Ponnas⁵

AFFILIATED ORGANIZATION(S): ¹University of the Witwatersrand, ²University of Munich, ³International Institute of Social Studies, ⁴International Institute for Sustainable Development, ⁵MutConsult

SDG 5 Targets	SDG 5 Indicators
<p>5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation</p>	<p>5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age</p> <p>5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence</p>
<p>5.3: Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation</p>	<p>5.3.1 Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18</p> <p>5.3.2 Proportion of girls and women aged 15–49 years who have undergone female genital mutilation/cutting, by age</p>
<p>Target 5.6: Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences</p>	<p>Indicator 5.6.1: Proportion of women aged 15–49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care</p> <p>Indicator 5.6.2: Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education</p>

KEY FINDINGS

- **Women in ASM are being exposed to an increasing number of negative environmentally related health impacts.** Over one-third (34%) of miners participating in the Mine Site Questionnaire reported an increase in negative environmental impacts on women in ASM in recent years (651 out of 1,897 participants), with only 13% (249 participants) noting a decrease.
- **There is limited availability of maternal health and sexual health and reproductive care near mine sites and mining communities.** Over one-third of participants (34% or 647 out of 1,881) report that maternal and sexual health care is not available near the ASM sites where they work.
- **Girls are at a disproportionately higher risk of child marriage in ASM communities than boys.** Significantly more women than men were married under the age of 18 compared to men. The Mine Site Questionnaire found that, compared to men, 11 times more women reported being married under the age of 18 (58 women to five men).

Occupational health and safety (OHS) is the practice that deals with the safety, health, welfare and well-being of people when they are at work.

Overview

The 2020 State of the Sector report found that “investments in health and safety are urgently needed for ASM, since improved OHS [occupational health and safety] is a collective responsibility which is both feasible and beneficial to all” (World Bank, 2020a). To help fill the gender ASM data gap on OHS—the practice that deals with the safety, health, welfare and well-being of people when they are at work—this section of the 2023 report considers the gendered needs and impacts on women.

Mines are one of the most dangerous workplaces in the world due to the number of people who are exposed to the inherent risks associated with mining (Baghaei Naeini and Badri, 2023). Mining involves complex multidisciplinary processes under dynamic conditions that frequently expose miners to a wide range of occupation health risks. Even though formal industrial mine operators are duty-bound to international, regional, and national laws, corporate standards, and industry safety protocols, mining still produces significant OHS risks every day. In its Safety Performance Report (ICMM, 2023), the International Council on Mining and Metals (ICMM), a leading industry body accounting for one-third of the global metals and mining sector, recorded 45 fatalities and 7,355 injuries across their large-scale mining members in 2021. Conversely, ASM is characterized by informality, limited government oversight and enforcement, and ASM operations are known to be seasonal with high mobility trends in remote and hard to reach areas that have poor or no access to health services. As a result, the risk of accidents in ASM is believed to be six to seven times higher than that of large-scale miners (Ajith, Ghosh and Jansz, 2020). Moreover, the risk of fatality in ASM is an order of magnitude higher; using the best available data from a range of sources, the 2020 State of the Sector report estimated that worldwide there could be upwards of 30,250 fatalities in ASM annually (McQuilken and McFarlane, in World Bank, 2020a). Even more alarming, is that women and children are 90 times more at risk of death than their male counterparts (Ajith, Ghosh and Jansz, 2020).

However, as ASM is perceived as a male-dominated industry, and women are often not regarded

as miners, women's OHS has garnered limited academic attention or consideration in policy formation. With an increasing number of women joining the global labor force (ILO, 2023), more work needs to be done to consider gender differences in OHS.

Against this context, the third section of the 2023 report builds on findings of the 2020 State of the Sector report by extending the review of OHS in ASM through a gendered lens, demonstrating an urgent need to address the socioeconomic and cultural marginalization that contributes to the specific OHS risks confronting women in ASM.

Gender inequalities in occupational health and safety

Women, men, and children that participate in ASM are exposed to numerous OHS hazards. The gendered division of labor, biological differences, employment patterns, cultural beliefs, societal roles, expectations, and responsibilities contribute to gender-specific patterns of occupational hazards and risks with women being differentially more exposed. Gender inequalities in OHS can be related to both socio-cultural and biological differences (Sorrentino et al., 2016). Gendered norms, authority, and power relations frequently disadvantage women in ASM zones (Buss et al., 2017). Some of the many challenges women face in ASM include a lack of land rights and ownership, restricted participation in decision making, limited access to leadership positions, a lack of access to finances, equipment, and technologies, and unsafe work conditions—resulting in a heightened incidence of gender-based violence, including sexual harassment (World Bank, 2022b; IGF, 2018).

Physical changes associated with pregnancy pose challenges to fitness for duty for women in safety-sensitive work such as in confined or high spaces, or where precision and exactitude are required. Physiological changes due to menstrual cycles and pregnancy result in greater exposure to OHS hazards when compared to their male counterparts. The increase in respiratory rate, glomerular filtration rate,¹ and other physiological changes result in increased uptake and distribution

of chemicals thereby increasing toxicity to body cells, tissues, and organs (Hoskins, 2003). Many women of childbearing age are employed in ASM leading to many pregnancies potentially being exposed to OHS dangers (Selander, 2016; Biswas et al., 2021). Poor sanitation and hygiene, lack of decent shelter, and the harsh working conditions in ASM disproportionately affect women's health. These physiological factors prejudice and constrain women from fully participating in ASM activities. As a result, women are often relegated to lower-earning peripheral roles where their contributions to the sector are not significantly recognized, even though they undertake important labor-intensive and hazardous jobs along the ASM value chain.

Occupational health and safety risks for women in mining

Women in ASM are uniquely exposed to a multiplicity of OHS hazards due to anatomical, physiological, socioeconomic and sociocultural factors (Geenen, et al., 2022). To highlight the gender-differentiated OHS risks and the way they manifest in ASM, this section explores common risks women in ASM experience according to the five categories in Table 8.

PHYSICAL AND BIOMECHANICAL

Due to social norms and traditional beliefs, women usually occupy low-earning roles along the ASM value chain and as a result suffer from a limited access to finance. With limited financial capacity, women struggle to afford equipment and technologies to improve the productivity and safety of operations such as the use of fume hoods and a mercury retort or the use of mercury-free technologies, or take protective measures such as purchasing personal protective equipment (PPE). Two studies from Ghana found that it was less probable for female miners to wear PPE compared to their male counterparts; the women miners that were studied did not wear PPE as they were not paid enough to afford PPE and companies did not provide women with PPE, as the roles women performed were not 'dangerous' enough to warrant providing women miners with PPE (Dinye and Erdiaw-Kwasie; 2012;

TABLE 8. OHS exposure and related health implications in ASM

	OHS Exposures	Health Implications
Physical and Biomechanical	Landslides; flooding and mine collapse	Injury, or sometimes death
	Uncomfortable, non-ergonomic working positions	Musculoskeletal injuries and disorders
	Lack of PPE	Accidents and injury
	Lack of ventilation	Respiratory issues
	Lack of equipment or use of inappropriate equipment	Physical harm and injuries
Chemical	Use of hazardous chemicals	Heavy metal intoxication or poisoning (Hg, CN, As, Pb)
	Exposure to hazardous chemicals	Developmental and neurological risks to unborn and breastfeeding babies
Psychosocial	Hard manual, repetitive labor; long working hours	Fatigue, stress and low libido
	Poor nutrition	Malnutrition, low immunity
	Casual and unpaid labor	Poverty
	Limited support and/or coping mechanisms	Alcohol and substance abuse
Biological	Limited to no water, sanitation and hygiene facilities	Water-borne diseases, gastrointestinal disease and urinary tract infections
	Dust exposure	Silicosis, Tuberculosis, Pneumoconiosis and other respiratory diseases
	Harsh weather conditions without shelter; standing in cold/polluted water for long periods of time, and poor waste management	Bacterial diseases, skin diseases, water-borne diseases and malaria
	High risk behavior; lack of sexual and reproductive health care	Sexually transmitted infections and diseases
	Unsafe work conditions	Gender-based violence
Environmental	Diversion and use of water sources	Water pollution, diversion and siltation of water sources
	Use of chemicals for mineral processing	Chemical contamination of water sources, food sources and livestock
	Removal of the substrata without restoration	Erosion, sinkholes, deforestation and the loss of biodiversity
	Processing and storage of tailings or mine waste	Acid mine drainage and contamination of soil, ground and surface water

Source: World Bank, 2020a

Aram et al., 2021). Women remain more vulnerable to the health impacts of ASM as a lack of capital is one of the dominant disabling factors contributing to compromised workplace protection in ASM (Singo et al, 2022b). Furthermore, the PPE that is available is designed with men's physiology in mind—tailored PPE that fits women's bodies comfortably and correctly to provide adequate safety protection is needed to ensure their equal participation in ASM.

CHEMICAL

As women are often perceived to be unsuited to perform mineral extraction, they tend to be found working in the processing stage of the ASM value chain. Women are primarily involved in crushing, sluicing, washing, panning, sieving, sorting, mercury amalgamation, and amalgam decomposition (IGF, 2018). In many countries, women are responsible for chemical processing. In Burkina Faso, Kenya, Myanmar, and the Philippines, for example, women conduct the mercury amalgamation on vaporization aspects of gold processing inhaling toxic fumes where mercury easily enters the bloodstream, and it is also common for women processors to use their hands to manually mix the mercury-gold amalgam (Kaboré and Ariyaratne, 2020; WHO, 2016; McFarlane and Villalobos, 2019, Sturmes, 2020). Oftentimes, amalgam decomposition occurs in the homes of women miners who typically use their cooking stoves to vaporize the mercury—sometimes in the presence of children and other family members (Hinton, Viega and Beinhoff, 2003). While toxic mercury affects us all, women and children are disproportionately impacted by mercury use. Mercury is a powerful neurotoxin, and women of childbearing age exposed to high levels of mercury, especially occupationally, can transfer mercury exposure to the developing fetus through the placenta. Maternal exposure to mercury can cause adverse birth outcomes, spontaneous abortions, low birth weights, and preterm births (Nyanza et al., 2020). Children living in mercury-contaminated areas are at risk of mercury poisoning and contain significant amounts of mercury in their hair, blood, and urine (Bose-O'Reilly, 2018; Bose-O'Reilly et al., 2008). Elevated levels of mercury exposure also produce longer-term impacts for the next generation, as children living near ASM

sites suffer from reduced cognitive functioning and score almost five IQ points lower than their peers (Reuben et al., 2020). To make matters worse, many women miners and processors are unaware of the dangers posed by mercury or about safe chemical use (WIM Ghana, 2023).

PSYCHOSOCIAL

Women can be deprived of access to, use of, and control of land and productive resources (IGF, 2018). This judicial and cultural constraint has relegated women to labor-intensive, unmechanized, hazardous roles along the value chain. Women manually sort through ore; manually grind the ore sometimes only using rudimentary tools such as a pestle and mortar or merely a large rock; they also physically haul the ore to different locations for processing, and without access to primary mining deposits, many women are forced to sift through mine waste to look for residual minerals. In addition to the heightened exposure to injuries and disease, this level of physicality can have various psychosocial² impacts. Women miners experience fatigue not only as a result of the arduous work they perform but also due to the domestic demands of home life that they are also traditionally charged with (IGF, 2018). The physically demanding work can lead to miners abusing over-the-counter drugs to combat fatigue, exhaustion, and chronic pain with a range of studies showing how drug and alcohol use is commonly used by artisanal and small-scale miners as a coping mechanism (WHO, 2016; Hinton, Viega and Beinhoff, 2003; Schwartz, Lee and Darrah, 2021).

Hunger and malnutrition have also been recorded in ASM areas (Zhang et al., 2020; Nordhagen, 2022; MSF, 2022). This is specifically pertinent because women are traditionally and culturally linked to food and social norms around the world dictate that women are responsible for the preparation and cooking of meals in the home. Even when women are engaged in mining full time, they are still expected to come home and prepare meals, which for many is a difficult task to find food stocks after work and many children are forced to wait until their mothers return to eat (Stokes-Walters, 2021). Moreover, many mothers are dependent on the money made from mining and are forced

to return back to work early after giving birth. In order to do this, newborns as young as two weeks old are weaned off breastmilk and are fed solids such as porridge made of cassava or sorghum with added sugar, which contains little nutrients (Geenen et al., 2022). Early weaning prior to the WHO's recommended age of six months can result in the increased risk of chronic disease such as islet autoimmunity (a condition that can progress to type 1 diabetes), obesity, adult-onset celiac disease, and eczema (Kuo et al., 2011). Another worrying trend is women bearing the brunt of food insecurity, since they are known to eat last or least and skip meals to ensure other family members have access to food (Fuhrman et al., 2020).

BIOLOGICAL

Mining has historically been considered “men’s work” requiring a level of physical and mental capacity that many believe women do not possess. This false premise has created harmful social norms, cultural beliefs, and stereotypes that have been used to exclude women from mining activities. Cultural barriers prohibit women from entering mine sites around the world and restrict women’s access to, use of, or control over mineral-bearing land and other productive assets. In ASM, gender inequality is deeply engrained and evident along value chains, where women are typically found performing ancillary lower-earning jobs (IGF, 2018). It is also apparent in the exclusion of women from decision making, or their inability to exercise universal land rights. These socially constructed patriarchal structures have reinforced prejudicial gender roles and subjugated women and girls resulting in rampant gender inequality.

ENVIRONMENTAL

The ASM life cycle is the cause of various environmental impacts, namely land degradation, deforestation, water and soil pollution, changes in landscape structure, destruction of vegetation and agriculture, and the loss of biodiversity in a number of ASM-hosting countries (Ofuso et al., 2020; Macháček, 2019; Hilson, 2002; Ingram et al., 2011; Bansah et al., 2018; Agwa-Ejon and Pradhan, 2018). A large proportion of ASM activity

occurs in rural communities where agriculture is the primary livelihood activity (Ofuso et al., 2020). ASM and agriculture have a particularly complex relationship. Although revenues from ASM can fuel agriculture and vice versa, they often compete for the same inputs, namely land, water, labor, and capital (Hilson, 2011; Ofuso et al., 2020; Hilson and Garforth, 2012; McQuilken and Hilson, 2016; Mitchell and McQuilken, 2019). Due to the interdependence between the two rural economies, the negative environmental impacts can have dire consequences for agriculture. Land degradation caused by pitted land and unearthed substratum causes soil to become infertile; deforestation caused by forest clearing and bush burning reduces livestock grazing areas; the appropriation of farmlands for mining activities decreases the availability of land for agricultural production and disrupts crop cultivation; water diversion for mineral processing and pollution due to the discharge of cyanide, mercury, and other heavy metals into water sources renders water unfit for human and animal consumption and for the irrigation of farmlands (Ncube-Phiri, Mucherera and Ncube, 2015; Boadi et al., 2016; Mujere and Isidro, 2016; Mudyazhezha and Kanhukamwe, 2014; Ofuso et al., 2020).

The adverse environmental impact of ASM on agriculture is particularly concerning for women for several reasons. First, women comprise a significant portion (42%) of the global agricultural labor force, are important producers of staple cereal and root crops, and play an important role in ensuring that their households are adequately provided with macro- and micronutrients—therefore negative environmental impacts that impede agricultural production can impact women’s livelihoods and food security (FAO, 2011; Doss et al., 2018). Second, due to cultural norms, women and girls are primarily responsible for food preparation and provision around mine sites and in nearby mining communities and are more likely to work at food stalls. ASM activities that negatively impact local agricultural production due to environmental destruction and degradation in turn affect the type of food that women can provide, thereby impacting the quality, quantity and nutritional value of the food available in ASM areas.

Insights from the 2023 State of the Sector Survey

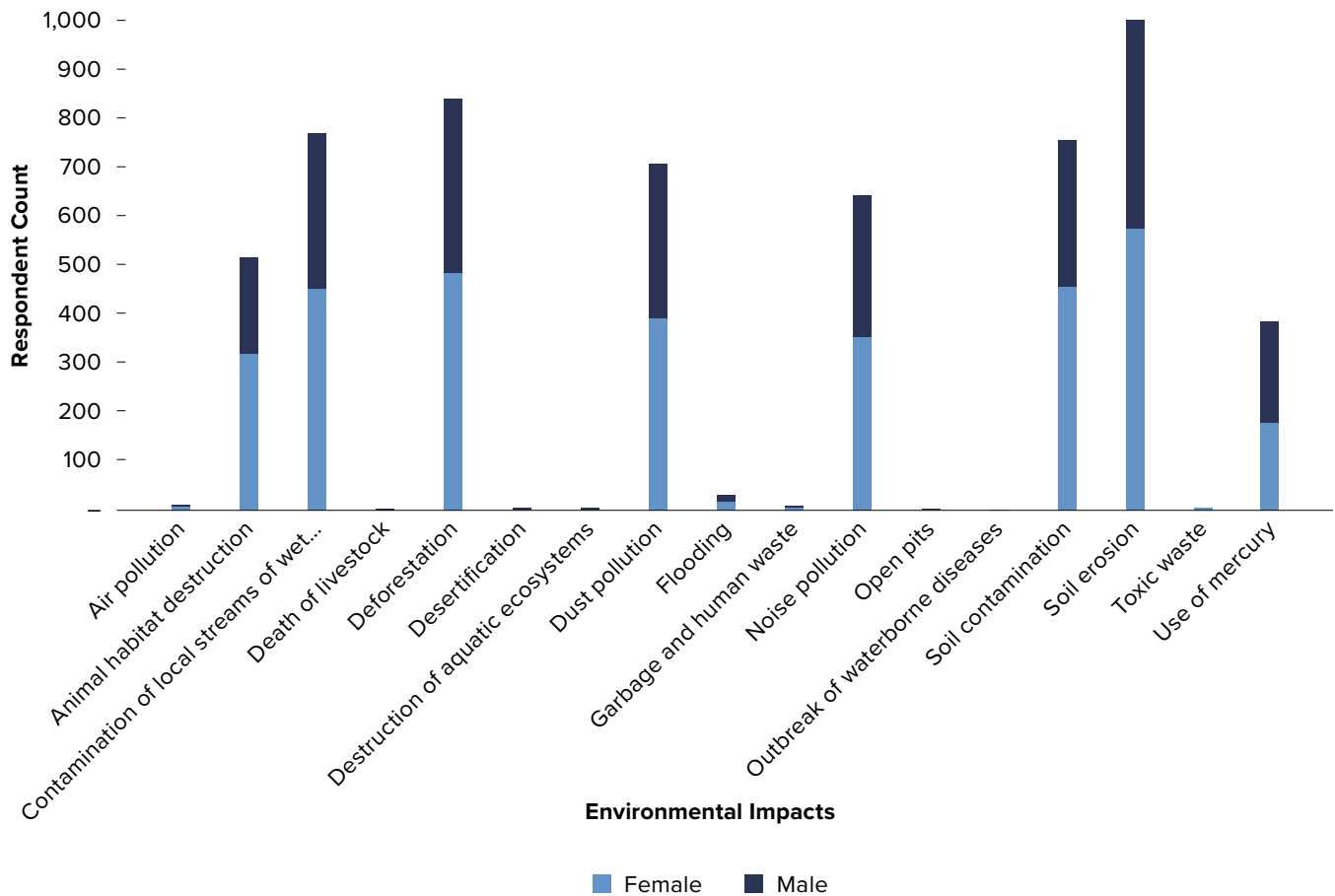
ENVIRONMENTAL IMPACTS IN MINING SITES

Adverse environmental impacts are a result of significant geomorphic changes to the earth. The negative impacts of ASM through the extraction and processing of minerals using dangerous chemicals, improper mine waste management, poor restoration, remediation and rehabilitation activities, not only impact the natural environment but also pose a risk to human health.

The 2023 State of the Sector Survey confirms multiple environmental impacts of ASM, many of which are linked to negative health impacts on ASM populations and local communities. Soil erosion, deforestation, contamination of local streams and wetlands, soil contamination, and dust pollution

are the most reported environmental impacts from the Mine Site Questionnaire. Soil erosion is the most observed environmental impact resulting in soil degradation, which leads to a reduction in soil fertility negatively impacting agricultural production and food security (Macháček, 2019). Soil erosion also increases the amount of dust carried by the wind, so it is unsurprising that dust pollution is also highly reported in the Mine Site Questionnaire. Dust pollution is associated with a range of health impacts including lung cancer, bronchial asthma, chronic bronchitis, pneumoconiosis, pulmonary tuberculosis, occupational asthma, chronic obstructive pulmonary disease, dust-related fibrosis, cardiovascular disease, cerebrovascular disease, and gastric cancer (Duarte et al., 2022). This finding is corroborated by a range of studies, including those on countries that participated in the survey. For example, In Kimberley, South Africa, Rose and Allen-Spies (2023) recorded an elevated rate

FIGURE 18. Which of these environmental impacts have you observed on the mining site? (Mine Site Questionnaire)



of respiratory disease among ASM operators. In Ghana, Rajajee et al., (2017) found increased pulmonary malfunction among an ASGM community, and additional research has shown that women are disproportionately exposed to and affected by air pollutants (Balakrishnan, Cohen and Smith, 2014; Hemshekhar et al., 2022).

The participants of the Mine Site Questionnaire reported deforestation as the second most observed environmental impact at an ASM site. Mining is one of the top drivers of deforestation globally (World Wildlife Fund, 2023). Deforestation is associated with an increase in the spread of life-threatening zoonotic diseases such as malaria and dengue fever (Robbins, 2016). Malaria epidemics in the ASM gemstone mining regions of Cambodia, Myanmar, and Thailand and the alluvial gold mining regions of Brazil, Colombia, French Guyana, Peru, and Suriname have been directly linked to the occurrence of ASM activities in ecologically disturbed landscapes made worse by having a highly concentrated vulnerable population without access to health care. Additionally, the malaria was then spread when the highly mobile artisanal and small-scale miners returned home (Shanks and Wongsrichanalai, 2022). Most global malaria cases worldwide occur in Africa, where ASM prevalence is at its highest and children under five and pregnant women are the most vulnerable to the disease. Malaria during pregnancy can contribute to premature and still births and contribute to perinatal and neonatal mortality (Imboumy-Limoukou, et al., 2020).

The contamination of water systems by ASM activities also ranked as a noticeable environmental impact by the participants of the Mine Site Questionnaire. ASM activities are often carried out along or near water sources, and local water systems are used during the extraction and processing phases. In addition, miners often discharge their waste back into rivers, streams, and dams. The effluent water is often comprised of sediment, heavy metals, and other chemical contaminants such as mercury and cyanide that can significantly reduce water quality and adversely impact local ecosystems, agriculture, livestock, human health, and food quality. The adverse effect of ASM on

fluvial processes has been noted in many of the countries including in the 2023 State of the Sector Survey, including Ghana (Macdonald, Lund and Blanchett, 2015), Colombia (Corredor et al., 2022), the Philippines (Espiritu, Claveria and Bernadas, 2022), Mozambique, and Zimbabwe (Mujere and Isidro, 2016). This is important for women in ASM communities as poor water quality disproportionately impacts women and girls. In many countries, women and girls bear the primary responsibility for water collection and cumulatively women and girls spend 200 million hours each day collecting water (UNICEF, 2016). Poor water quality means they are additionally exposed to hazards when fetching water from polluted waterways and/or are forced to travel longer distances in search of clean water, allocating time away from income-generating activities or school to collect water (Global Water Partnership, 2022).

From a gendered perspective, the Mine Site Questionnaire also found that the negative environmental impacts women in ASM are exposed to are increasing. Over one-third (34% or 651 out of 1,987 participants) of miners participating in the Mine Site

FIGURE 19. In recent years have the negative environmental impacts to which women are exposed changed? (Mine Site Questionnaire)

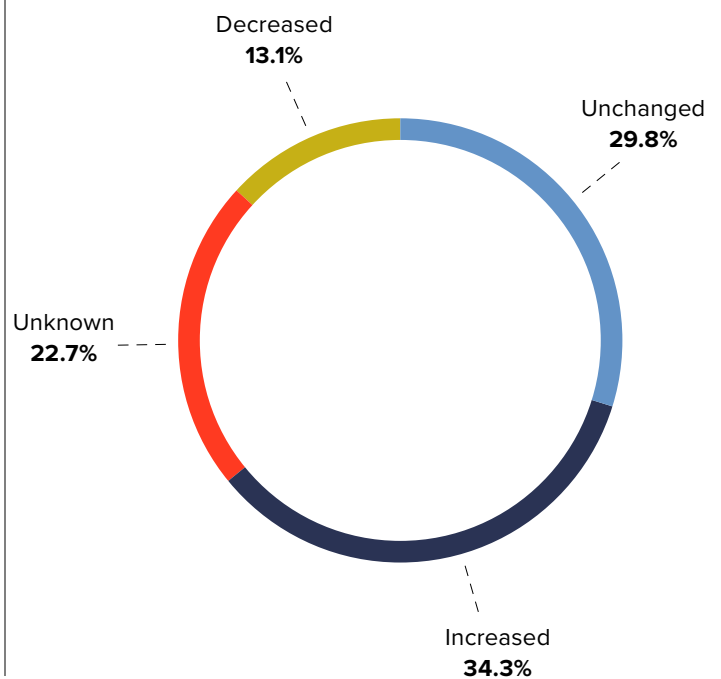
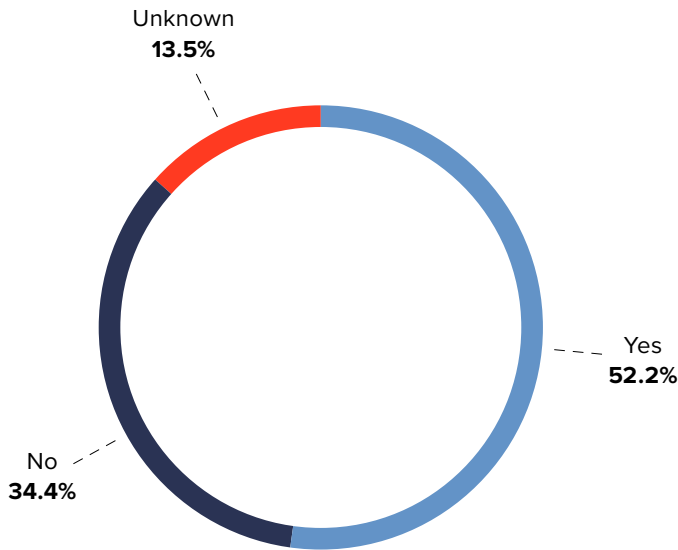


FIGURE 20. Is maternal health and sexual health and reproductive care available near or at the site? (Mine Site Questionnaire)



Questionnaire reported an increase in environmental impacts on women ASM in recent years, with only 13% (249 participants) noting a decrease.

ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH CARE SERVICES

ASM occurs in isolated, remote settings, often with “limited to near absent” access to any form of health care (Singo et al., 2022a). ASM operators are generally migratory and often engage in high-risk behaviors that can result in unwanted pregnancies and facilitate the spread of sexually transmitted infections and diseases (2016). In Tanzania (Cliff et al., 2003) and Mali (Sagaon-Teyssier, et al., 2017) for example, a high prevalence of HIV has been recorded among ASM communities. Women in ASM are more vulnerable and are particularly at risk of contracting sexually transmitted infections and diseases and incurring the costs and responsibilities of unwanted pregnancies (IGF, 2018; Landrigan et al., 2022). As the body of knowledge focusing on sexual and reproductive health (SRH) in ASM communities is limited, the Mine Site Questionnaire was used to gain some insight into this area. This questionnaire found that the majority (47.9%) of the 1,881 participants stated that they either did not have access to (647) or did not know if they had access to (253) to SRH services near or at the ASM sites they work.

At a country level, access to maternal and sexual health was reported high in Guyana and Bolivia, while in Mongolia, most participants were uncertain about whether they had access to SRH. In Zimbabwe, the difference in those that reported having access was minimally higher than those that reported lacking access. In Sierra Leone, the majority of participants reported not having access to SRH services.

Regarding informed decision making on sexual relations, contraceptive use, and reproductive health, 64.2% of women surveyed in the Mine Site Questionnaire (518 out of 808) responded that they believed they were making informed decisions on reproductive health. A high proportion of women in Bolivia, Guyana, and Zimbabwe believed they were making informed decisions on the use of contraceptives and reproductive health. Whereas the majority of the participants from Mongolia indicated that they were uncertain. Sierra Leone had the highest percentage of women who responded that they did not believe they were making informed decisions regarding sexual and reproductive health, however the difference between those that answered affirmatively was minimal.

FIGURE 21. Do you believe you are making informed decisions regarding sexual relations, contraceptive use and reproductive health care? (Mine Site Questionnaire—women only)

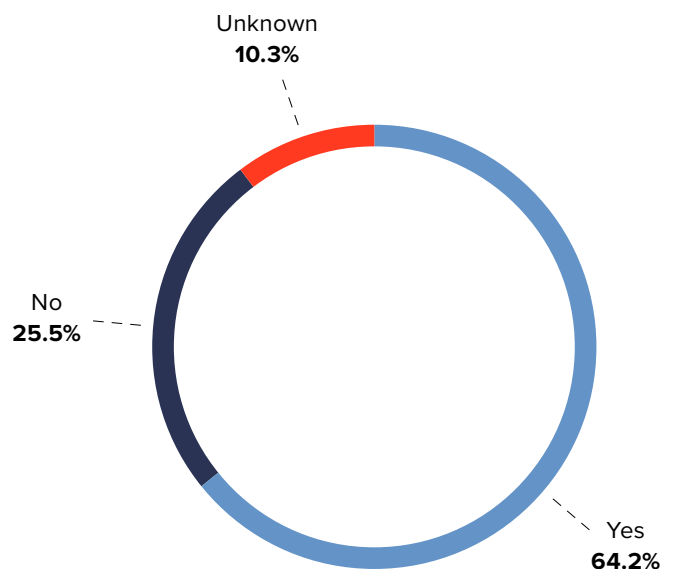
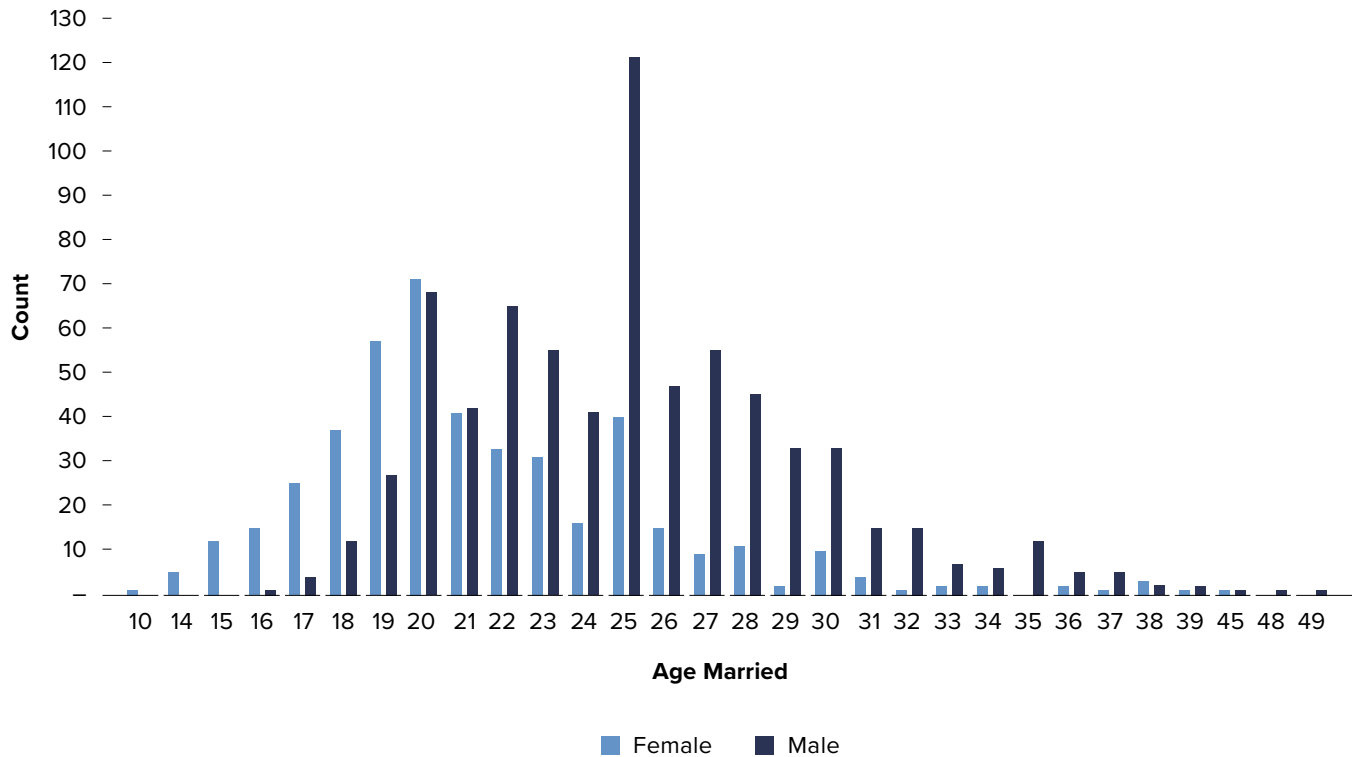


FIGURE 22. At what age were you married? (Site Questionnaire)



EARLY MARRIAGE

The Mine Site Questionnaire shows a concerning data point regarding early marriages in ASM. Modern slavery is sometimes experienced by women in the form of early marriage, contracted at an age below 18 (or forced marriage). The phenomenon of early marriage is, according to ILO, (2015) a source of domestic slavery. In the Mine Site Questionnaire, the data shows a small but significant number of women participants were married under the age of 18. Although this does not necessarily imply slavery toward women, the data shows that 11 times more women than men were married under the age of 18 (58 women to five men). This finding is concerning as it may suggest that girls of working age and women in ASM are of greater vulnerability to child, early, and forced marriage simply as a risk of working in mining than they would in other rural livelihoods that are not as male dominated and where additional community and social protection measures may be in place.

Insights from the case studies

Chapter 3 features three case studies that demonstrate the need to ‘account for gendered differences in occupational health and safety efforts at mine sites’. These differences include socio-cultural factors such as perceptions around women working in ASM that can confine them to what might be considered ‘safer’ but lower-paid roles such as breaking rocks and panning as well as ensuring that organizational structures, infrastructure, and safety equipment at mines are suited to women’s physiological and biological needs and caregiving responsibilities.

Summarizing the findings of in-depth research with women miners in the DRC, the 12th case study titled “The Women Who Age Too Fast” by five academic institutions in the DRC and Belgium highlights key gendered OHS issues affecting women in ASM. These issues include early aging, fatigue, sleep disturbances, respiratory disease, a loss of libido, and poor eating habits. With far-reaching consequences on the physical and mental health, work and home lives

of women engaged in ASM, the authors argue that a multi-stakeholder and holistic understanding of the lives of women miners is needed to address the acute, specific, and differentiated OHS challenges women miners face. This includes a consideration of the women's socioeconomic needs, the socio-cultural environment, and the environmental dimension. The intervention in Kamituga took a multi-pronged approach: the women miners were provided with sensitization on the specific OHS risks they face; targeted training was provided to health staff and technical government services; and a comic strip was circulated to educate the broader community about gender discrimination in mining.

The 13th case study by Women in Mining Ghana (WIM Ghana) outlines a collective approach to improving the OHS of women in ASM. The Tinga Project is a collaboration between WIM Ghana and The Social Investment Consultancy Africa (TSIC), with support from the World Bank's Extractive Global Programmatic Support (EGPS) Emergency Response for Artisanal Mining Communities Impacted by COVID-19. During the project, a range of OHS risks were identified among women miners including limited access to health care facilities, potable drinking water, poor general knowledge of mining-related health issues, mercury dangers, and no use of PPE. Relatedly, mercury intoxication, respiratory diseases, and poor nutrition were all recorded among women miners and their communities. To help address these systemic health issues, government departments, universities, and NGOs worked with the women miners to develop a training curriculum that focused on their self-defined needs and gaps in OHS knowledge. The training methods included body mapping exercises and role playing and used local dialects during teaching. This approach allowed the project to educate the women miners on both OHS and responsible mining techniques, accounting for their differentiated impacts and needs.

The final and 14th case study of the report by Pact and Rwanda Women In/And Mining Organization (WIAMO) looks at the gendered impacts of poor lighting on the OHS and participation of women in Rwanda's ASM sector. Through in-depth research by the Illuminating Small-Scale Mining in Rwanda (ISMR)

project, implemented alongside the Rwanda Mines Petroleum and Gas Board (RMB), it was found that women are disproportionately negatively affected by poor lighting conditions in mining areas, creating a gender wage and safety gap. Poorly lit tunnels that require crouching and use of poor-quality handheld torches limits women's full and equal participation in ASM due to increased vulnerability to sexual and gender-based violence and perceptions of their personal safety working underground. Additionally, women interviewed during the research expressed fear of commuting to and from the mines in darkness, which restricts their options for shifts and job opportunities. The study found that in the over 40 mines surveyed, only two women were engaged in underground mining. Improving lighting in small-scale mines is an important part of formalizing ASM activities globally and key to ensuring the full participation of women in ASM. To address these development challenges, ISMR is now working with private sector partners to introduce quality affordable head torches, financing models, and solar power for recharging. ISMR aims to ensure more resilient, sustainable, and responsible mining communities and promote the green energy transition, while, crucially, improving OHS and enabling women to fully participate in the ASM sector.

Conclusion

Social norms, cultural beliefs, gendered labor structures, biological differences, societal roles, and the domestic responsibilities of women have rendered women at higher and differentiated risks of negative OHS impacts in ASM. The sustainable development of the ASM sector has the potential to bring about positive change, when conducted in an inclusive manner—through the creation of suitable legal frameworks and the implementation of interventions that increase access to finance, credit, markets, training, capacity building, and through the formation of associations. An inclusive gender-responsive version of sector development can address the various OHS challenges that women face in the sector. Through the development of legislation that enhances women's access to and ownership of land, women in ASM will be empowered to actively and mean-

ingly participate in the sector without fear. The sustainable development of ASM can also support gender equality through interventions that create conditions for women in ASM to graduate from hazardous lower-earning peripheral jobs, which has constrained them from participating in deci-

sion making. By elevating the position of women in ASM, development approaches could in effect disrupt the gendered social norms and cultural barriers that have allowed for the acceptance and pervasiveness of gender discrimination and GBV in ASM communities.

END NOTES

- 1 Determined through a blood test, the glomerular filtration rate is the flow of plasma from the glomerulus into Bowman's space over a specified period of time and is a measure used to assess how well the kidneys are functioning.
- 2 Psychosocial impacts relate to the influence of social factors on an individual's mind or behavior, and the resulting interrelation of behavioral and social factors.

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CASE STUDY #12

Credit: Sara Geenen

THE WOMEN WHO AGE TOO FAST: EMBODIED EXPERIENCES IN THE DEMOCRATIC REPUBLIC OF CONGO

AUTHORS: Sara Geenen,^{1,2} Fiz Mussa Bashizi,¹ Gracia Kabilambali,¹ Gabriel Aganze Muhanzi,¹ Bossissi Nkuba,^{1,2} Elisa Vanlerberghe,³ and Franck Mugisho Zahinda¹

AFFILIATED ORGANIZATION(S): ¹Centre d'Expertise en Gestion Minière (CEGEMI), Université Catholique de Bukavu, DR Congo, ²Institute of Development Policy, University of Antwerp, Belgium, ³University of Ghent, Belgium

INTRODUCTION

“We look like old women and yet we are not old,” one female worker moaned during a focus group discussion. Other women agreed that their work exhausts their bodies, they become “skinny” and “tired.” In 2021, we started an action research project on artisanal and small-scale gold mining (ASGM) and health in the east of the Democratic Republic of Congo (DRC). A multidisciplinary team with backgrounds in agronomy, biology, medicine, public health, economics, and anthropology collected qualitative data from 23 focus groups and 154 individual interviews during two one-week stays in the gold mining town of Kamituga. The research is embedded in the Centre d'Expertise en Gestion Minière's (CEGEMI) ongoing engagement with the mines in the region, which not only includes data collection, but also training sessions, science communication, and sensitization (Geenen et al, 2022a; Geenen et al, 2022b; Nkuba et al, 2022).

In the past decade, the role of women in ASGM has been more widely acknowledged, both in academic research and in policy. However, very few studies focus specifically on the health and safety of women (Lynas, 2018; Cossa et al, 2021), and if they do, they tend to single out the reproductive problems caused by mercury. We used qualitative research methods to collect data about women’s embodied experiences. We argue that ASGM has gendered effects on the workforce’s health, and that to better protect female workers we need to take a holistic approach to their health problems and address structural constraints such as women’s socioeconomic and cultural marginalization.

How women’s bodies are affected

It is important to understand the specific tasks women carry out in particular mines, from stone sorting and washing to manual grinding and transportation. These all lead to different embodied experiences. The “mamans minyangala” or stone sorters (from the French “maman” referring to

woman or mother, and the Swahili “minyangala” for waste) spend their days sitting in, often polluted, water to sort mineralized from non-mineralized stones. They complain about urinary infections. “Mamans twangaises” or manual grinders (from the Swahili verb “kutwanga” for pounding) run the risk of injuring their hands and are constantly exposed to silica through dust. Women transporting stones to the ball mills are at risk of being injured by these machines or the heavy loads they carry on their backs and shoulders. We have summarized the main health risks and their causes in Table 9.

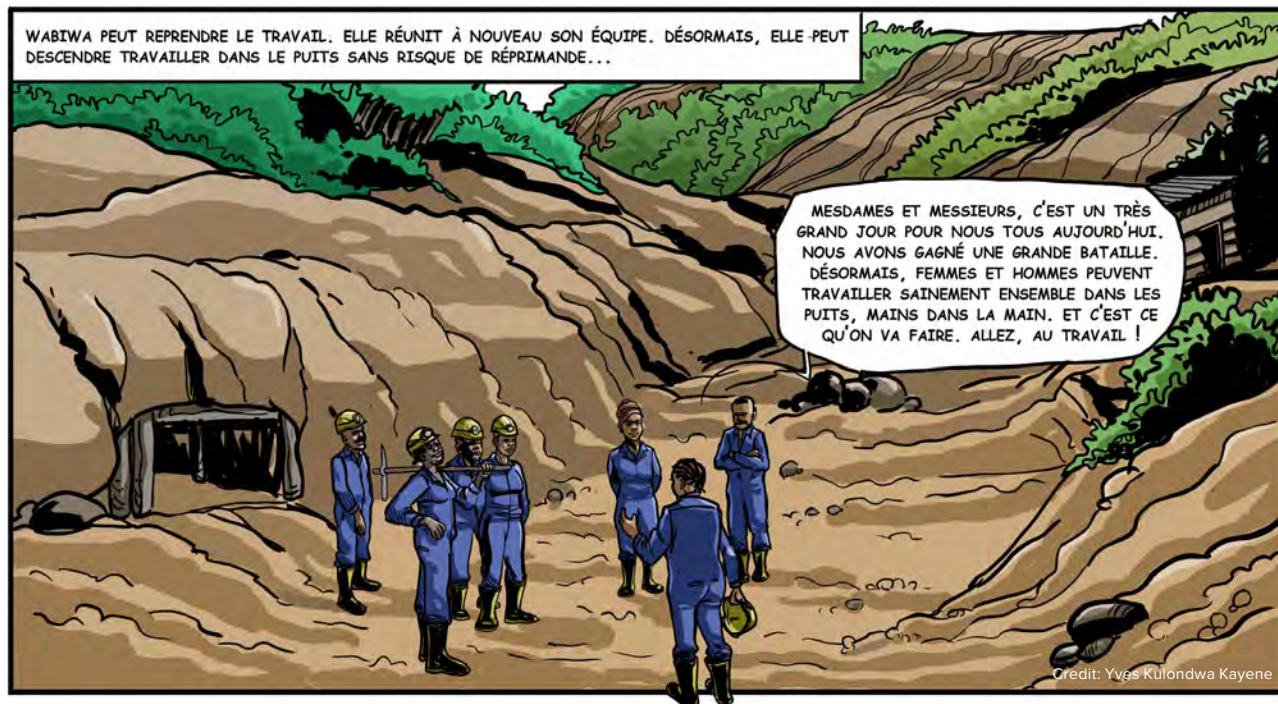
Apart from the specific risks mentioned above, poor nutrition and sanitation, hard physical work, and discrimination negatively affect the health of both the female workers and their families. As an example, mothers have no choice but to get back to work very soon after giving birth, leaving infants under the care of older siblings. Weaning starts very early and puts the children’s health at risk. The porridge they are fed, made of cassava or sorghum with added sugar, contains little nutrients. One woman testified: “At two weeks old, I prepare cassava porridge in hot

TABLE 9. Pathologies and specific health risks faced by female workers

Causes	Risks
Lack of clean water	Diarrhea
Poor sanitation and hygiene	Typhoid fever, schistosomiasis and malaria Urinary infections Skin diseases
Poor nutrition and weaning	Undernutrition Weakened immunity Health and development consequences
Unprotected sex Unavailability and misinformation of (free) contraception	Sexually transmitted infections
Hard physical work Unprotected use of machines	Physical trauma (sore, hardened palms and split nails) Injuries from using machines Fatigue and muscular pain Pregnant women: spontaneous abortion Silica exposure from manual grinding and ball mills (increasing the risk of tuberculosis)
Discrimination (Domestic) violence	Psychosocial trauma

FIGURE 23. Comic strip

Translation: **Wabiwa** [the main female character who manages an underground pit] can get back to work, without fear of being obstructed. She gathers her team. “Ladies and gentlemen, this is a big day for us. We have won a major fight. From now on, women and men can work together in the pits, hand in hand. And that’s what we will do. Let’s get to work!”



water and give it to my children either once or twice a day, depending on what I have found.”

One “maman twangaise” told us that she has sleeping problems because she continuously repeats the same movement in her sleep: “You arrive home too tired because the work is too heavy. You will even prepare the food and you will have no appetite. During the whole night you will be remembering the “mutwangiyo” (stick they use to pound, from the same verb “kutwanga”). This will disturb your sleep and affect your health.”

The physical exhaustion also has wider consequences. Many women shared stories about how this fatigue impacts their libido and sexual performance, leading to disputes at home. Some say their husband will not understand and “beat you when you refuse to sleep with him.” To fight against this fatigue, many workers take drugs they buy from local pharmacies. However, these pharmacies are often run by

untrained staff that do not always provide appropriate advice. One woman explains: “These medicines will help you for one or two days, but after that you will still feel tired so you will have to take more.”

Many women we interviewed suffer from psychosocial trauma. The stigma attached to their gender, the lack of respect, and the feeling of inferiority affect their mental health. As one interviewee explained: “Because you are a woman, you have no value in front of the men here.” However, we also found instances of women who suffer from repeated domestic violence, and for whom the workplace becomes a refuge: “Personally, I feel better when I am at work than when I am with my husband, I often don’t like to go home and stay with my husband.” This should draw our attention to the fact that some of these women accept the work in the mines as the “best of the bad choices” and should not be treated as mere victims. Every day they make remarkable efforts to provide for their families.

How women's bodies can be better protected

We argue for a holistic approach to understand and address the health problems of female workers. Our analysis covered different aspects of women's well-being. We observe that the health dimension is very much entangled with the socioeconomic dimension (lack of alternatives, need for family survival), the sociocultural dimension (discriminatory norms, violence against women), and the environmental dimension (polluted air and water). These impose significant constraints, resulting in insufficient protection of these women in the workplace. Strategies for better protection need to take these different dimensions into account. Otherwise, proposals risk being unrealistic or ill adapted to the local context. For instance, many development practitioners have come up with alternative livelihood programs to lead women out of the mines. Such programs have had some success when adapted to local socioeconomies, but many have failed to provide realistic and attractive options (Boateng, 2017; Ofosu et al., 2022; Perks, 2011; Siegel and Veiga, 2010; Stoop et al, 2016). This depends, of course, on factors beyond these specific interventions, such as a structural neglect of the agricultural sector or a lack of transport and market infrastructures.

In the Kamituga context, we find that a combined approach is important to sensitize women about the specific health risks they face, as well as to organize more targeted training for health staff and for technical government services. It is also crucial to

sensitize the broader population about the harmful effects of discriminatory norms. In this research we have produced a comic strip to do so, as shown on Figure 23. Yet, some women do challenge discriminatory norms and stand up for the rights of other women. One important effort we can make is to support these women in their collective struggles, starting with their recognition as important actors in the gold production system.

ACKNOWLEDGMENTS

Our gratitude goes out to the people of Kamituga, including all interviewees and participants in the focus group discussions giving us their time and trust, as well as to local authorities facilitating access and medical staff helping us understand health issues. Special thanks also goes to the other members of the research team.

Funding was provided by the Flemish Interuniversity Council (VLIR-UOS) under the Global Minds program of the University of Antwerp, and Research Foundation Flanders (FWO) under grant G056718N.

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CASE STUDY #13

Credit: WIM Ghana

IMPROVING HEALTH AND DEVELOPMENT OUTCOMES IN FORMALIZED ASM OPERATIONS THROUGH PROMOTING RESPONSIBLE MINING PRINCIPLES

AUTHORS: Georgette Barnes

AFFILIATED ORGANIZATION(S): Women in Mining Ghana

INTRODUCTION

The “Promoting responsible and sustainable artisanal and small-scale mining (ASM) among women in Northern Ghana” project focused on women because they are the most economically and socially disadvantaged group in the mining community.

Co-developed with the World Bank’s Extractive Global Programmatic Support (EGPS) Emergency Response for Artisanal Mining Communities Impacted by COVID-19 program, the project adopted a multi-disciplinary and multi-stakeholder collaborative approach drawn from more than 40 different stakeholder organizations from Ghana’s mining sector, including government, private, and civil society at the local/community, national, and international levels.

The project had two main interrelated objectives:

1. Research for policy advocacy.
2. Capacity building to promote responsible mining to bring about greater health, social, economic, environmental, and, therefore, better community development outcomes derived from mining.

Why is promoting responsible mining in Ghana important?

“Responsible mining” is the internationally accepted standard of mining, which “respects and protects the interests of all stakeholders, human health and the environment, and contributes clearly and fairly to broad economic development to the country and to benefit local communities while embracing best international practices and upholding the rule of law of the land.” (Arvanitidis et al., 2017)

Irresponsible mining practices, such as those observed in this project, have negative impacts on land and water, which are vital for agriculture, food security, and safe living environments. This can lead to contaminated resources, poor health and well-being, rising food prices, and food insecurity. Therefore, there is an urgent need for interventions to address the negative effects of mining on affected communities and safeguard the ecological integrity of their surroundings. This can only be done by educating the ASM community, along several dimensions, to make the transition to responsible mining practices. Furthermore, women can be significant beneficiaries of such interventions given that this population group often lacks skills and education.

Among the women who participated in this project: 96% did not have any professional skills, 93% did not attend school.

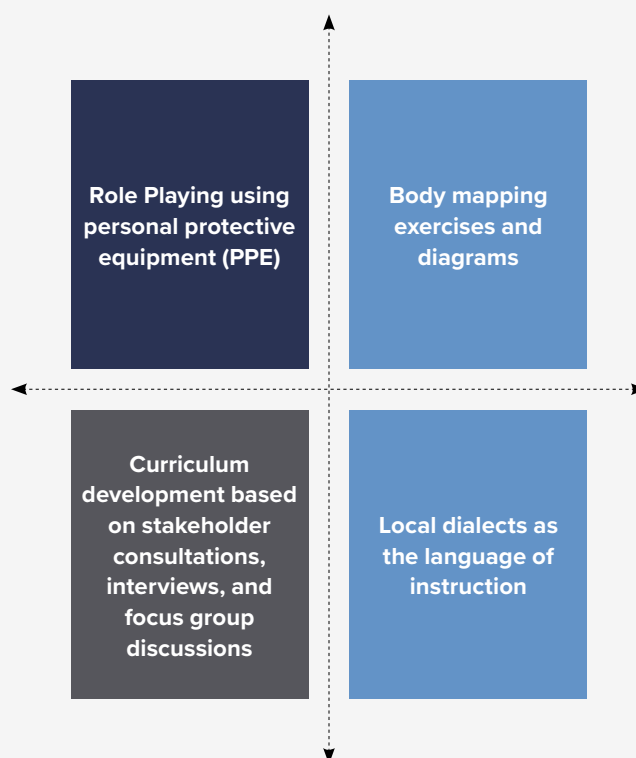
– WOMEN IN MINING GHANA, 2021

Working with local stakeholders to realize developmental and health outcomes

From December 2020 through May 2021, the project conducted several interrelated research and training activities. Through stakeholder interviews and focus group discussions, the project developed a curriculum with training aimed at filling the identified gaps in women’s general and technical knowledge along the themes of key responsible mining principles, namely, health, environmental, social, and economic impacts. The broad range of gaps required working with several different local stakeholders.

In collaboration with the government regulator, the Minerals Commission (MiniCom), the project team opted to initiate the project in the Bole district, the sole district in Northern Ghana included under the Community Mine Scheme. The Community Mine Scheme is one of the three primary government programs developed to tackle the growing challenges in the sector such as environmental degradation, illegal mining, water pollution, and other issues

FIGURE 24. Training methods used on the project



that affect human health and safety. The Wenchi cooperative mining site in the Tinga mining area was identified by the MiniCom as it is one of the six licensed small-scale mining sites in the north of Ghana. Subsequently, the project worked closely with the concession owner and chair of the Tinga Mining Association to facilitate project implementation.

In collaboration with the MinCom, the Environmental Protection Agency (EPA), and the Water Resources Commission (WRC), the training included principles of mining responsibly and sensitization sessions on the process of acquiring mining, water and environmental licenses as well as on the impact of mining on the environment. Unfortunately, the nearest EPA and WRC offices to the site are at the regional level, limiting the number of site visits for enforcement or sensitization.

On mining-related health issues

During the project, it was established that mining-related illnesses are the primary cause of health problems. Of the problems identified, mercury exposure-related illness, followed by respiratory diseases and poor nutrition are the most harmful to the health of the women in the group.

The nearest hospital from the mining area is at the district level in Bole, about 60 km away. Interviews with the community nurse surfaced a trend of malnutrition among the young babies of ASM women. The project team observed limited options for food on-site as there were few food vendors and the sites were quite far from the main town areas. The concession owner also noted limited access to potable drinking water, which was also made worse by poor access roads to the town. The workers generally drank a lot of energy drinks with low nutritional value and high sugar content, which contributed to poor nutrition.

MERCURY USE WAS THE STANDARD ON THE SITE

Focus group discussions revealed that 100% of the women had no prior knowledge of the extent of the dangers posed by mercury. The women, known as “bushers”, were handling mercury while

working, exposing them to significant health risks. They manually mix the black sand, which contains gold concentrate, with mercury to improve gold recovery, and then burn the resulting amalgam for a period. The women stated that they rely on touch to determine if all the gold has been trapped in the black sand, and they burn the amalgam in an open area and keep a distance due to the harmful fumes.

The project team was joined by Firm Health Ghana to provide sessions on the effects of mercury and mercury-free processing in compliance with the Minamata Convention on Mercury. Additionally, WIM, in collaboration with Professor Richard K. Amankwah of the University of Mines and Technology, conducted metallurgical studies on Tinga Community Mine samples to determine the optimal conditions for maximizing profit, safe mercury usage in gold processing, innovative mercury-free techniques, and the miners’ exposure to the hazardous effects of mercury. WIM also collaborated with Dr. Amadu Cashmed of CK Tadam University of Technology Applied Sciences to offer sessions on basic geological knowledge to enhance mineral extraction.

LIMITED ACCESS TO COVID-RELATED HEALTHCARE FACILITIES MAKES COVID IMPACT DIFFICULT TO ASSESS

As confirmed by the Ghana Health Service from the neighboring community, there were only four reported cases of COVID-19 during the project period. They also stated that testing was only available at the regional level in the capital of the Northern Region in Tamale, which is 240 km away. Consequently, this is likely to be the main reason for the low case count. Another major factor for the low COVID case count could be the expenses related to hospital care. Among the women, 85% said that it was too expensive to go to the hospital, so the majority (55%) go to the pharmacy or clinics (24%) instead if in need of some type of care. The project engaged the Ghana Health Service (GHS) in the Sawla-Kunla community to provide training on common COVID-19 and non-COVID-19 health issues in mining environments.

The negative impact of COVID-19 was found to be more on financial and other non-health aspects of

the women's lives. Thirty-two percent of the women said that COVID has disrupted the children's school life, consequently impacting the women's work-life balance. Next, 20% said they had seen a drop in income during this period, and 16% cite "a decrease in gold prices". However, according to the Ghana Chamber of Mines, unlike oil, one of Ghana's other main commodities—which saw prices plummet, the gold price increased significantly during the COVID period. Another way in which COVID impacted their lives was through the closure of borders: 16% said that "the buyers were not coming." According to the women, these buyers typically come from neighboring countries such as Burkina Faso.

KNOWLEDGE OF HEALTH AND SAFETY MEASURES AND EQUIPMENT WAS NEGLIGIBLE ON THE SITE

During work, none of the women wore any personal protective equipment (PPE). Moreover, there was no provision of a first aid kit on-site, which could be crucial in case of accidents or emergencies. The concession owner complained of the prevalence of snakes on-site and subsequently snake bites. Indeed, just before the project team arrived on-site, a young man had to be rushed to the hospital for treatment from a snake bite. It also meant that, for the miners to protect themselves, any wildlife would most likely be killed and not protected or returned to a protected area.

As on-site risks and hazards are numerous, the project team arranged for the Ghana Ambulance Service in Tinga to provide first aid training to the women and selected leaders of the Tinga mining community.

Conclusion

With the understanding that health and environmental reasons alone are not enough to change behavior, the project used the COVID emergency and government's desire to improve formalized operations to deliver a holistic multi-pronged approach that improves both health and business outcomes. A custom curriculum, based on a first-hand understanding of the knowledge gaps of the women, versus a standardized top-down approach,

allowed the project to provide education and training specific to the needs of the group.

The project also facilitated an opportunity to work closely with the government regulator MinCom on gender issues. Among the recommendations made coming out of the project was the need to highlight gender issues and women's participation in the policy, legal, and institutional frameworks related to ASM. The project team also pointed out that the existing governance framework for the ASM industry in Ghana inadequately accounts for gender-related aspects. Although the establishment of a gender desk at the MinCom headquarters is a positive step, the present framework falls short in effectively addressing and enforcing concerns involving gender in the ASM sector.

Our call to action

More effort is needed to support women miners. This should involve a multi-actor approach including miners associations, civil society, nongovernmental organizations, and government at the local and national level including its various agencies.

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CASE STUDY #14

Credit: James McQuilken

ILLUMINATING SMALL-SCALE MINING IN RWANDA

AUTHORS: James McQuilken,¹ Aline Providence Nkundibiza,² Laine Munir, and Idephonse Niyonsaba¹

AFFILIATED ORGANIZATION(S): ¹Pact, ²WIAMO, ³Arizona State University, and African Leadership University

INTRODUCTION

The Illuminating Small-Scale Mining in Rwanda (ISMR) program (2022–ongoing) shines a light on some of the world’s most marginalized and hidden mining workforces. ISMR does this by addressing key market system failures that leave many of Rwanda’s approximately 57,000 small-scale mining workers¹ (NISR, 2021) without affordable and appropriate lighting needed to work below and above ground safely, efficiently, and productively.

BOX 4. Livelihood and economic dynamics of mining in Rwanda

- **34,000–65,000 people** directly work in ASM.
- **1.1 million people** (8.7% of the population) rely on ASM.
- **Women comprise 11–20%** of the ASM workforce.
- Most miners are paid based on production, but some are salaried, earning **\$1.75–2.50 per day**.
- ASM contributes **1–2% of GDP** each year.
- In 2019, ASM generated **\$169 million** to GDP.
- Pact’s research estimates in 2015, artisanal miners contributed **\$39.5 million** to local economies through their expenditures.
- Most mining in Rwanda is ASM with few industrial operations.
- 2019 Rwanda mineral export revenue:
 - **Tin ore \$71.2m** (5.2%)
 - **Tantalum ore \$61m** (4.5%)
 - **Tungsten ore \$18.3m** (1.36%)
- **3T minerals** from ASM in Rwanda are in global electronics supply chains— including headtorches.

Through seven months (November 2021 to May 2022) of desk and field research, the international development organization Pact, local women-led NGO Rwanda Women In/And Mining Organization (WIAMO), and the government agency responsible for mining, the Rwanda Mines, Petroleum and Gas Board (RMB), mapped the mining and lighting market system in Rwanda. This included a quantitative and qualitative survey with 454 stakeholders across 39 small-scale mining sites, culminating in a multistakeholder workshop in Kigali.

This case study outlines ISMR’s research findings to introduce affordable, rechargeable helmet-mounted headtorches and close the gender wage and personal safety gap at mines by enabling women to take on night shifts, feel safer to enter deep tunnels, and improve their personal security.

Pact’s research estimates 15-30 million disposable batteries are used by Rwanda’s small-scale miners annually and are improperly discarded causing pollution.



Credit: James McQuilken

Improving lighting to formalize small-scale mines

Improving lighting in small-scale mines is an important part of formalizing ASM activities globally and key to ensuring the full participation of women in the sector to achieve SDG 5. As ISMR shows, better lighting can help improve SDG indicators 5.2.2 “...violence against women from persons other than an intimate partner” and 5.5.2 “...proportion of women in managerial positions.”

Women are estimated to comprise 16–20% of Rwanda’s mining labor force (NISR, 2023). Through RMB’s 2022 Gender Strategy for the mining sector (RMB, 2022), the government of Rwanda has resolved to protect women’s rights and increase their participation to 30% by 2027. The strategy includes measures such as “ensuring proper development of mines for tunnels, pits and shafts to become women’s convenient working environment” and upgrading to “modern equipment which can be easily manipulated by women.” Additional advisory measures include installing separate changing and washrooms and facilities for pregnant and breastfeeding women.

Rwanda has some of the most gender-sensitive legislation in the world: the 2003 Constitution (GoR, 2015) sets a minimum quota of 30% women, which in 2022 was exceeded with 61% of seats in parliament being held by women (Sharma, 2022); the Gender Monitoring office and the National Women’s Council was established to ensure the implementation of constitutional principles on gender equality; and Rwanda has a national gender policy updated in 2021 (MIGEPROF, 2021).

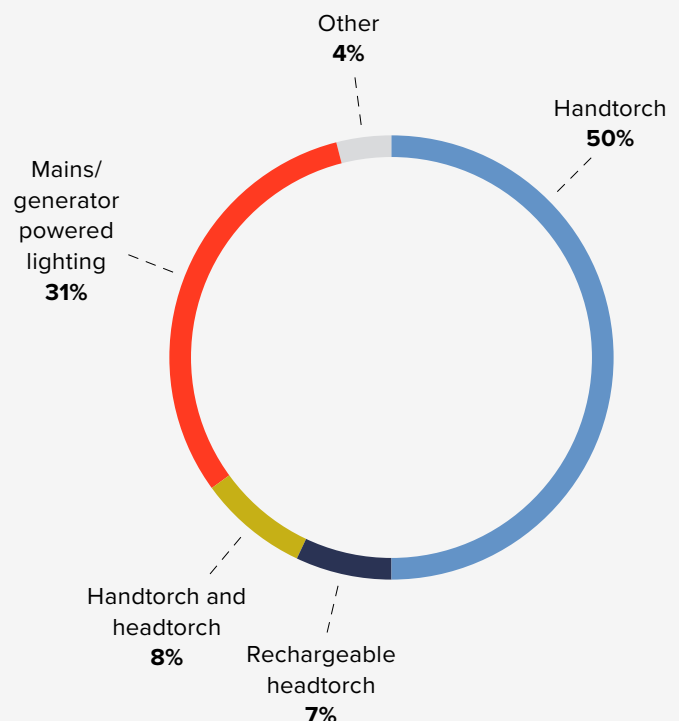
To operationalize this conducive policy environment, interventions are needed to increase women’s full participation in Rwanda’s mining sector. One area of formalization that could improve women’s participation in ASM is better lighting. As far back as 1987, the World Bank (Noetstaller, 1987) identified inadequate lighting as a pressing health, safety, and productivity challenge in the sector, but the majority of ASM sites, including underground mines, do not have access to adequate lighting.

With better lighting women can increase their participation in ASM

Our research found that most mines (50% surveyed) use poor-quality plastic hand torches that break easily, are often shared between two people, and generate little light. The torches are powered by disposable “Tiger Head” batteries lasting one to two days, after which they are discarded improperly causing pollution. Based on the assumption of ~57,000 miners using one or two batteries per day in one hand torch, we estimate 15 to 30 million Tiger Head disposable batteries could be used each year by miners in Rwanda.

The second most common lighting at mines was mains or diesel generator-powered overhead lighting (31%). But these mines still use hand torches as a backup during power outages as they are more reliable in damp and deep tunnels and for individual miner safety. The remaining mines (15%) use hand

FIGURE 25. Lighting use at surveyed mines shows hand torches are main source



torches and/or head torches. These sites are more professionalized ASM sites demonstrating there is awareness of alternatives to hand torches and the potential to change if market conditions allow.

Reliable, affordable, and practical lighting from helmet-mounted rechargeable headtorches—the same as those used in large-scale mining—is needed to help miners easily identify mineral deposits and work effectively, efficiently, and safely as well as improve security.

We found that women in mining are disproportionately negatively impacted by poor lighting than men. Our research shows better quality lighting can help close the gender wage and personal safety gap at mines by enabling women to take on night shifts, feel safer to enter deep tunnels, and improve their personal security. Women feel unsafe working underground with poor lighting and may be more easily harassed in the dark and are worried about their vulnerability to gender-based violence (GBV). This issue is compounded when small, poorly lit tunnels necessitate crawling and crouching. The women interviewed during the research also stated they fear traveling to and from mines in the dark, meaning they are limited in the shifts and jobs they can work.

“Good lighting ensures the health and safety of miners, but it is also good for women to work in mining. Now, of 40 miners, we only have two females who go underground (which is better paid work). Others work on the surface because they fear entering tunnels because it is dark.”

(MINE MANAGER)

Conclusion

In partnership with RMB and WIAMO, Pact’s ISMR program is now piloting the introduction of rechargeable headtorches to replace disposable battery-powered hand torches with the aim of improving occupational and personal safety, security, efficiency, and productivity of Rwanda’s mining sector.

By introducing **helmet mounted headtorches** recharged by solar energy or through the national grid connection, ISMR will help achieve the twin program goals of:

1. Improved, **more resilient livelihoods** for miners and communities.
2. More **sustainably and responsibly-mined tin, tungsten, and tantalum (3Ts)** that are key minerals for the manufacture of consumer electronics and clean energy technologies needed for the just energy transition.

ACKNOWLEDGMENTS

The authors of this case study would like to thank the Rwanda Mines Petroleum and Gas Board (RMB) for their partnership and support with the project, fieldwork, and expertise. Thanks also to all national and local government agencies and private sector companies and other project stakeholders for their participation in the research, guidance, and support. A special thank you also goes to the mine owners, miners, and communities for their time and sharing their experiences of work in mining. Funding for the ISMR research and project is provided by IKEA Social Entrepreneurship.

END NOTES

- 1 The 2018 Rwanda Mining and Quarrying Law removed the artisanal license category, leaving small-scale, medium-scale, and large-scale mining license categories to promote

the professionalization of the sector. The term “small-scale mining” (SSM) is therefore used in this case study as defined by the national law.

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CONCLUSION

As evidenced in the 2023 State of the ASM Sector report, the obstacles confronting women in ASM are formidable: spanning legal, social, and economic domains. Gender discrimination in ASM takes root first and foremost in the legal frameworks governing the mining sector and more generally in economic ways of life. Therefore, as argued more generally for advancing SDG 5, reforms to the legal frameworks concerned with mining is critical to recognizing and therefore protecting the rights of women in ASM. But as has also been shown in the report, legislative amendments are not that easy to tackle given the relative dearth of data (and therefore understanding) of women's contribution to the sector. Most often, women's work happens around the mine site, perhaps out of view, and the international community has yet to narrow the tremendous gaps in gender-specific research required to paint a much more accurate picture of women's labor in ASM. The result is that without a clear understanding of women's needs, it is incredibly difficult to ensure meaningful legislative reforms to improve their standing in ASM. Moreover, the ongoing lack of specific gender data leads to development interventions that are often gender blind.

In the 2023 State of the ASM Sector report, the issue of gender-specific ASM data was tackled head on. Drawing on a review of mining and legal frameworks in 21 countries and a survey with over 1,900 participants from government, women in mining groups, and miners themselves, the 2023 report seeks to make women’s work in ASM more visible, and by consequence, to contribute to the

much-needed body of literature on gender in ASM. The findings of the qualitative and quantitative methods were structured according to three main domains: i) ASM legal frameworks; ii) social protections at work and home; and iii) gender differences in OHS. Key recommendations leading to improved SDG 5 outcomes in ASM are summarized here below.

Recommendation	Description
<p>Make mining legal frameworks gender inclusive</p>	<p>To establish gender parity in the ASM sector and surmount these barriers, it is imperative to proactively promote and bolster gender equality within mining laws. This requires a comprehensive reevaluation and amendment of gender-blind or gender-neutral mining codes and national mining policies to ensure the acknowledgment and safeguarding of women miners’ rights. Specifically, the forthcoming abrogation of the ILO Underground Work (Women) Convention 1935 (No. 45), which bars female employment in underground mine work, provides a clear catalyst for dialogue and reforms to be built upon. Furthermore, reinforcing legal frameworks that shield women from discrimination and detrimental practices is vital for fostering a more inclusive and equitable environment.</p> <p>In the sphere of land rights and resource access, a fundamental transformation of both statutory land ownership systems and customary tenure arrangements is essential. This transformation enables women to transition from peripheral roles in the ASM value chain to ownership, thereby guaranteeing they receive the same economic benefits as their male counterparts. Ownership enables women to access capital and credit to grow their operations, buy equipment, and invest in technology to generate higher value from mining and lead the decision making regarding operational and financial management for the benefit of both women and men.</p>
<p>Advance women’s social protections at the mine and home</p>	<p>Advancing social protections for women in ASM provides a critical mechanism to support gender equality and women’s empowerment in ASM. Women in ASM are faced by a multitude of socioeconomic challenges beginning from childhood—young girls face barriers in accessing education; in adolescence, many are forced to leave school early and some are at risk of early pregnancies; and then in adulthood, women are faced with unequal treatment and precarious and unsafe working conditions, including sexual and gender-based violence (SGBV) at mines and at home. Governments and civil society organizations must partner to develop programs and interventions that facilitate greater access for women to educational and livelihood training programs to realize decent work, financial literacy programs that can build economic resilience and independence, and comprehensive sexual and reproductive health support, including access to education, contraceptives, medication, and unrestricted abortion services.</p> <p>Tackling SGBV in ASM through social protection measures is imperative. Robust legal frameworks and specific mine site measures to safeguard the safety and well-being of women are fundamental to their inclusion in ASM, while the deeply ingrained culture of masculinity in mining and ASM also needs tackling through awareness campaigns and education.</p>
<p>Account for gendered differences in occupational health and safety efforts at mine sites</p>	<p>Gender inequalities in OHS result in women being differentially and more greatly exposed to risks in ASM. The differences are due to socio-cultural beliefs that may prevent women’s full and direct participation in mining activities and confine them to certain roles such as breaking rocks, carrying heavy loads on heads, panning, and mercury use in gold amalgamation. These roles have heightened risks of repetitive and muscular skeletal injuries and exposure to chemical toxins, especially for pregnant and breastfeeding women. Mine site organization, infrastructure, and PPE designed with men in mind also adversely impacts women in ASM. A lack of separate changing and washing facilities, no childcare options, and poorly fitting PPE can prevent women’s equal participation and endanger their lives and that of their children they may have to bring to the mine. To address these issues and achieve gender equality in ASM, an in-depth understanding of the specific risks and needs women in ASM face is needed with which to design ASM sites and PPE that account for gendered differences, train and sensitize miners, government, and development partners to enable women’s equal and safe participation in all roles.</p>

Conclusion

In advancing these actions and achieving reforms, the role of professional mining groups like Women in Mining cannot be understated. Their role as key interlocutors for government in the development of interventions and as an advocate to represent the interests of women in mining has been well validated through the report's survey and case studies. Governments must continue to empower, legitimize, and professionalize these gender-specific groups in order to improve women's visibility in ASM and advance gender equality.

Overcoming the barriers faced by women in ASM demands a comprehensive approach, from

revising gender-blind mining laws to challenging cultural and societal norms. It is critical to prioritize gender equality in the ASM sector and collaboratively create an environment where women can fully participate, flourish, and enjoy their rights without discrimination or hindrance.

END NOTE

1 The survey includes three questionnaires with 1,935 participants from 22 countries, including government officials (Government Questionnaire, 54% women), leaders of Women in Mining (WIM) groups (WIM Questionnaire, 100% women) and artisanal and small-scale miners

(Mine Site Questionnaire, 79% women). A total of 16 local partner organizations undertook the data collection, 11 of which were women in mining groups. The 14 case studies cover 12 countries: two on Latin America and the Caribbean, eight on Africa, and two on East Asia and Pacific.





