WOMEN on MINING AND EXTRACTIVES (WoME)

RESEARCH

IMPACTS OF UN-RECLAIMED MINE LANDS ON WOMEN AND SMALLHOLDER FARMING HOUSEHOLDS IN KENEMA, KONO AND TONKOLILI DISTRICT.



Cover page: Un-reclaimed mine land at Masobri in Tonkolili district

REPORT

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ACKNOWLEDGEMENT

Although all information and views contained in this report are mine and as such solely responsible in case of any inaccuracies be it of omission or commission, the enumerators in the persons of Messrs. Sahr Joe in Kono, Samuel in Kenema and Sesay in Tonkolili, deserve special commendation for the supportive way in which they helped in collecting the relevant data and contributed to the results of this research.

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EXECUTIVE SUMMARY

Mining in Sierra Leone is an age-old activity that has not become obsolete. People have merely changed their ways of carrying out the mining activities by using modern extraction and processing technologies, thereby causing massive environmental degradation of previously available forests, soil fertility and water sources, leading to loss of agricultural livelihoods.

In the districts of Kenema, Kono and Tonkolili, due to increase in artisanal and small-scale mining activities over the past decades, pockets of hundreds of un-reclaimed mine lands each taking a space of not less than 5 hectares of both arable land and water catchment areas have been created and scattered indiscriminately across the districts. Women, who because of the gender roles, largely rely on their environment bear the brunt of the negative impacts of these abandoned dug-out mine fields. The legislature and policy framework has not provided adequate safeguards for the livelihoods of female smallholder farmers, for whom the presence of un-reclaimed mine lands does not just mean loss of lands and soils quality, but means lost food security, more unpaid care work, less income, worst health and less decision-making power. These women smallholder farmers often spoke about how they rely on common lands for fire woods, medicinal plants, animal grazing and indigenous foods to sustain their families and produce surplus for local markets, but they no longer do so because the abandoned mine pits have dispossessed them of their forests, and water sources, which they rely on for their farming activities and for domestic consumption.

A two-week long case study research to be conducted in 25 communities across Kenema, Kono and Tonkolili districts was, therefore, commissioned and scheduled to take place from the 13th to 27th July 2026 by Women on Mining and Extractives (WoME) - a woman-led civil society organization that has been in the forefront on initiatives to advance gender equality

in the mining sector, collaborating effectively with various partners. The research was designed to generate qualitative information on the social, livelihood and environmental impacts associated with un-reclaimed mine lands on women and smallholder farming households in particular, and the communities generally. The research population constituted of 300 (93 males and 207 females) randomly selected respondents, who were mainly women and smallholder farming households, opinion leaders, traditional leaders and NGOs.

Multiple qualitative and participatory methods underpinned the data collection process for this research. Data were collected using the following instruments: literature reviews, focus group discussions, household survey questionnaire, key informant interviews and field visits. However, household survey questionnaire served as the study's primary data source and it was used for all categories of respondents.

Key findings of the research obtained from both scholarly literature and field activities showed that both community members and foreign investors were involved in an unlawful artisanal and small-scale mining. In addition, findings discovered that both national mining agency and local authorities failed to properly implement, coordinate, and effectively manage mining laws, which had caused the rise in countless un-reclaimed mine lands at local level.

The research results further indicated that women and smallholder farming households used to produce a wide range of agricultural products from their lands, which provided them with essential income. This income was what helped them pay for their children to attend school. Therefore, to have these destroyed lands rehabilitated was their greatest concern.

In this regard, the research, thus, recommends the adoption of approaches that could help return the re-unclaimed lands to nearly their original state. And, such approaches must be

indigenous and should be based on what the affected communities think can work best for them, as they are the ones knowledgeable about their situations and possess invaluable knowledge, which could contribute to changing their life situations and perceive the approach as theirs and not merely as chartable efforts.

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TABLE OF ABREVIATION/ACRONYMS

1	**ASM**	Artisanal and Small-Scale Mining
2	**EIA**	Environmental Impact Assessment
3	**MS**	Micro-Soft
4	**NMJD**	Network Movement for Justice and Development
5	**SLA**	Sustainable Livelihood Assessment
6	**SPSS**	Statistical Package for Social Science
7	**UNICEF**	United Nations Children Educational Fund
8	**UNWCED**	United Nations World Commission on Environment and Development.

CHAPTER ONE

General Background to the Research

Re-unclaimed mine lands left behind from the operations of artisanal and small-scale mining was the primary focus of this research because of its devastating long-lasting effects on the natural resources such forests, soil fertility and water catchments, which have caused loss of agricultural livelihoods, contamination water sources and reinforcement in gender inequalities in land ownership, particularly in the rural population where these operations are carried out. Women, because of the gender roles, largely rely on these natural resources bear the brunt of the negative impacts. The legislature and policy framework had not been able to provided adequate safeguards for the livelihoods of female smallholder farmers.

Across the research districts, stories were heard about women being cut out of decision-making regarding land and a significant growth in the number and size of un-reclaimed mine lands. Stories were told about deterioration in the quality of life due to reduced food security, health risks from toxic run-off and competition over remaining arable land and fresh water. These situations had been keeping women and smallholder farming households constantly trapped in the cycle of poverty.

Conceptually, as drawing from scholarly literature, “Un-reclaimed mine lands”, is a term that is viewed differently by different people in different contexts. Therefore, this research sees it necessary to start by exploring these views so as to find commonalities and strong connection between them. Firstly, Oberle et al (2020) referred to it as a legacy site, and described it as a former mining area where the rights or titles have expired, leaving no party accountable for rehabilitation. Such sites often comprise abandoned or orphaned mines and residual waste facilities. The term “Orphaned” is employed when no owner can be identified,

while “Abandoned” applies when the owner is known, but lacks financial means or willingness to undertake rehabilitation work (Oberle et al, 2020). While, Bennet and Kim (2016) referred to the concept as derelict or ownerless mines, applying to those that have ceased operations, lack safety management and areas affected by former mining activities for which no individual, company or organization can be held accountable for rehabilitation. Secondly, the Good Samaritan Remediation of Abandoned Hardrock Mines Act of 2024, spoke about a new legal definition for abandoned mines, classifying them as sites deserted before 11 December 1980 (Fowler-Puja and Barbanell, 2025).

However, for the purpose of this research, the term “un-reclaimed mine land” refers to mine sites that have been closed or abandoned for the past ten years, and the responsibility for reclaiming them now rest wholly and solely with the affected communities. And these un-reclaimed mine lands had caused negative environmental impacts. Most of these un-reclaimed lands covered over 5 hectares of arable land space, containing hazardous pits, contaminated soils and polluted or dried up water sources and loss of biodiversity, which had been limiting farming activities, particularly for women and smallholder farming households. There had been an erosion of access to shared resources such as forests (which are utilized for firewood, hunting, and medicinal plants), grazing areas, fishing zones, and destruction of pathways that connect farmers to water sources for their domestic and farming uses. More of a concern, also, is that the existence of the un-reclaimed mine lands has permanently made lands that were passed down through generations inaccessible, which if not rehabilitated would undermine the potential for future generations to maintain their livelihoods. An elderly woman in Kono aptly affirmed the situation with this statement “*We look at the earth and its resources not only as an investment opportunity but as a trust passed to us by our ancestors for our benefit and to be preserved for future generations”*.



The foregoing statement underscores the need to view land as an intergenerational asset with cultural, economic, and environmental implications that extend well beyond the present.

What had exacerbated the situation was that the original operators of these dug-out pits are either no longer exist, cannot be traced or lacked the financial capacity to take responsibility for their actions. Because of these, coupled with communities' inability to reclaim the lands, there had been continued cases of long lasting environmental hazards such as decreased soil fertility, surface instability, obviating of useful future land use to the detriment of the ecosystem functioning and human health and prosperity (Robertson & Shaw, 2005). These consequences, along with others, are completely opposed to the tenet of sustainable development often defined (Povlovskata, 2013) by its original coining in the Brundtland Report as: "Meeting the needs of the present without compromising the ability of the future generations to meet their own needs" (UNWCED, 1987).

Currently, what is urgently needed is to return these degraded mining lands to nearly their original state so that they can be used for a range of other vital industrial uses such as

agricultural production. In respect of the foregoing, Joseph (2025) commented that "ensuring that environmental harm caused by extraction is effectively handled and that degraded landscapes are restored for future use".

NMJD's SLA draft report (2006) also mentioned a pattern of oppression and violence against women in local communities. According to this report, artisanal and small-scale mining is an informal and illegal industry, largely unregulated, uncoordinated, mismanaged and highly politicized, therefore any attempts to query their operations would be met by a lot of challenges. The reported further stated that exploitation and oppression of women is an integral part of the capitalist logic by which the ASM industry operates These power dynamics had made women become so vulnerable to the extent that they are forced to compromise their freedom to participate or even express their views and opinions about issues that affect their lives (NMJD's SLA draft report, 2006). These and consonant with many other challenges, necessitate the conduct of this research.

JUSTIFICATION OF THE RESEARCH

There were two reasons that influenced this research:

a) **WoME's desire to get a first-hand data on the impacts of ASM operations at community level.**

The desire to undertake this research was, however, influenced by the reality of the existing local context which depicts that knowledge about the impacts of ASM activities in rural communities has rarely received any in-depth and systematic research attention by most of the organizations whose mandates focus on mining and other extractives. As a result, literature on the subject matter remains somewhat under-developed and the organization often faces challenges. Even where studies may have been carried out, the focus had been on how projects have been implemented and how donor funds were utilized. Organizations

had not adequately analyzed and documented in detail the local context related to the perceptions, experiences and opinions of the affected communities. Much of such studies, however, had been carried out by external consultants, who worked in strict adherence to terms of reference earlier prepared by their donor agencies. Most often, local experts who understand the local context had not been part of such research process.

b) WoME's desire to make informed analysis about the impacts of un-reclaimed mine lands originating from ASM operations on women and smallholder farming households.

People living in rural communities, particularly women and smallholder farming households represent a large proportion of the population that suffers the negative effects of ASM operations on the natural resources, such as land and water and ecosystem functioning. The constraints involved to return these lands that were once very rich in resources to nearly their original state so that they can be used for a range of other industrial uses, such as agricultural production have caused desperation for financial support from benevolent organizations.

Traditionally, decision-making regarding land is controlled by men, thus making women vulnerable to the extent their voices and interests are marginalized. What is, therefore, urgently needed is to explore the impacts of un-reclaimed mine lands on women and smallholder farming households, and that forms the basis for carrying out this research.

OBJECTIVES

The overarching objective of this research was to do an in-depth study on the impacts associated with re-unclaimed mine lands in 25 communities across Kenema, Kono and Tonkolili districts. Towards achieving this objective, twenty-five separate, but interconnected research questions, arranged under five specific headings, were advanced to guide the data collection. These questions were the specific objectives of this research. Some of these

questions were responded to through drawing from scholarly literature, while others were gathered from the research activity itself (including field visits and interviews). The specific research questions included:

1. How did the un-reclaimed mine lands come about and what activities were carried out by communities on them before?; what activities had communities missed the most?, are the lands still being utilized or not?; how do communities want the un-reclaimed land to be returned to for future uses?; what expectations do communities have for the next generation?; and who should rehabilitate the land?
2. What had been the environmental, social and livelihood impacts on women and smallholder farming households?
3. What types of land rehabilitation programs do local communities prefer?

LIMITATIONS OF THE RESEARCH

During the course of the research, there were several limitations that confronted the process. These were summarized under the following sub-headings:

a) Limited access to literature on the research topic

Because the research topic has rarely received any in-depth and systematic research attention, it was to some extent difficult to find enough literature. This had a negative repercussions on the research process as more time was spent to reflect critically on ideas that were put forward as evidence.

On the other hand, the research relied on local knowledge accessed through the aid of one-on-one interviews, focus group discussions and direct observations, as well as out-sourcing information from other sources such as journals, articles, newsletters, institutional reports etc.

b) Tendency to influence information

Being that the enumerators were NGO workers leaving in the districts where data were gathered, influenced the way they often perceived things. In a situation wherein respondents fell short of needed information, enumerators were tempted to take things for granted and make personal assumptions about what they knew about the issues.

c) Poor road conditions

The roads leading to majority of the study communities were in poor conditions, and travelling by commercial vehicles was not only expensive, but time consuming and risky. To deal with this situation, compromise was reached between the lead researcher and enumerators, allowing the latter to use their motorbikes to ensure safety and easy movement.

d) Respondents' conceptualization of research jargons

The conceptualization of certain jargons used in the research in Mende, Kono and Temne languages posed considerable challenges. Whilst enumerators had working definitions for certain research jargons or terms, there were hardly any equivalent or similar terms/words in the local languages for them, and thus the enumerators have to spend more time to explain the terms.

CHAPTER TWO

METHODOLOGY

The research design adopted in this study was mainly a case study of women and smallholder farming households, and their access to land, water and ecosystems. A household survey questionnaire was used to obtain primary data from randomly selected respondents; key informant and focus group discussion guides were also designed to form the basis of the qualitative analysis.

The research was carried out across Kenema, Kono and Tonkolili district by a team of local enumerators from the 13th to 27th July 2026. It only covered 25 communities randomly selected across the above-mentioned districts that had suffered from an unprecedented spate of artisanal small-scale mining activities, which had left behind re-unclaimed mine lands with hazardous pits and excavated soils unfit for agricultural production, thereby causing devastating long-lasting effects on people's ability to make a living (see figure 2 below for details).

For the purpose of this research, two sources of data collection were sought and included the primary and secondary sources of data. The primary source of information was a household survey questionnaire, which was administered to 300 randomly selected respondents across the study areas mentioned above. Primary source of data was relevant in both quantitative and qualitative analysis of the results. The secondary information was out-sourced through reviewing both old and current documents such as scholarly publications, journals, periodical, reports, and articles from internets (see figure 1 below for details).

There were two main criteria used to select the sample population, which included the inclusion and the exclusion criteria. The inclusion criterion consisted of women and

smallholder farming households whose livelihoods largely depended on the natural resources and bear the heaviest burden. The exclusion criterion covered traditional leaders and like-minded NGOs residing or working in the study areas.

After a successful collection of data, the 300 questionnaires were coded and inputted into the SPSS 16.0 for statistical analysis. The results produced were later exported into MS word, where interpretations and discussions were made. MS Excel application was used to produce tables, graphs and charts.

A breakdown of the number of respondents by district and research instrument is summarized in figure 1 below:

Figure 1: Distribution of respondents by district and research instrument

Research tools used	Targets according to gender	Male	Female	Total
HH Survey Questionnaire	Kenema	33	67	100
	Kono	26	74	100
	Tonkolili	34	66	100
Key informant interviews	Kenema	24	64	88
	Kono	16	10	26
	Tonkolili	14	06	20
Focus group discussions	Kenema	09	03	12
	Kono	0	0	0
	Tonkolili	16	08	24

Figure 2 below, presents a distribution of research areas visited by chiefdom and district:

Figure 2: Distribution of research areas visited by chiefdom and district:

No	Community	Chiefdom	District	Total
1	Lalehun	Lower Bambara	Kenema	7
2	Mavehun			
3	Bumpe			
4	Jagbema			
5	Landoma			
6	Jakundama			
7	Tongor Field			

1	Yardu	Gbense	Kono Kono	5
2	Farandu			
3	Boroma			
4	Gbense			
5	Small Sefadu			
6	Yermakono	Kamara		
7	Tombodu			3
8	Fendu			
9	Sengbador	Nimikoro		3
10	Bongema one			
11	Woade			
12	Resettlement	Tankoro		3
13	Ellie Drive			
14	Koidu			
1	Masobri	Simiria	Tonkolili	4
2	Masanga	Kholifa Rowalla		
3	Tonkolili	Simiria		
4	Baliya	Dansogoia		
			Total	25

CHAPTER THREE

FINDINGS:

The field work lasted for three weeks to include data collection and analysis, and report writing. The findings were discussed under five themes, which included demographic characteristics of respondents; historical background of un-reclaimed mine land; social, environmental and livelihood impacts associated with un-reclaimed mine land on women and smallholder farming households; type of land rehabilitation practice that communities prefer; conclusion and recommendations.

Demographic characteristics of respondents

In figures 3, 4, 5, and 6 below, showing the distribution of respondents by sex, age, marital status, educational attainment, religion and ethnicity, the research findings revealed that the selected sample for this study comprised of males (31%) and females (69%). About 59% of the respondents were between the ages of 18 - 35 years, and 33% between the ages of 36 – 49 years, and 8% of age 50+ years. This analysis indicates that the population in the study areas comprise of young people in the working age category (i.e. 18 - 49 years). About 69% of the respondents were married; 22.6% were single and 8.4% were either widows, widowers or divorced. The study results also show that 49% of the respondents attended school and 51% never went to school. About 52% of the respondents were Christian and 48% were Muslim of the total sample. The largest ethnic groups represented in the sample were Mendes (33%), Kono (23%), Temnes (26%) and Limbas (9%). The total sample for the survey was equally allocated in the three study districts; however, distribution by gender was slightly uneven. Slightly more females were targeted in the data collection in all the nine chiefdoms.

Figure 3: Distribution of respondents by sex

Sex	No. of Respondent	Percent	Total
Male	93	31%	93
Female	207	69%	207
Total	300	100%	300

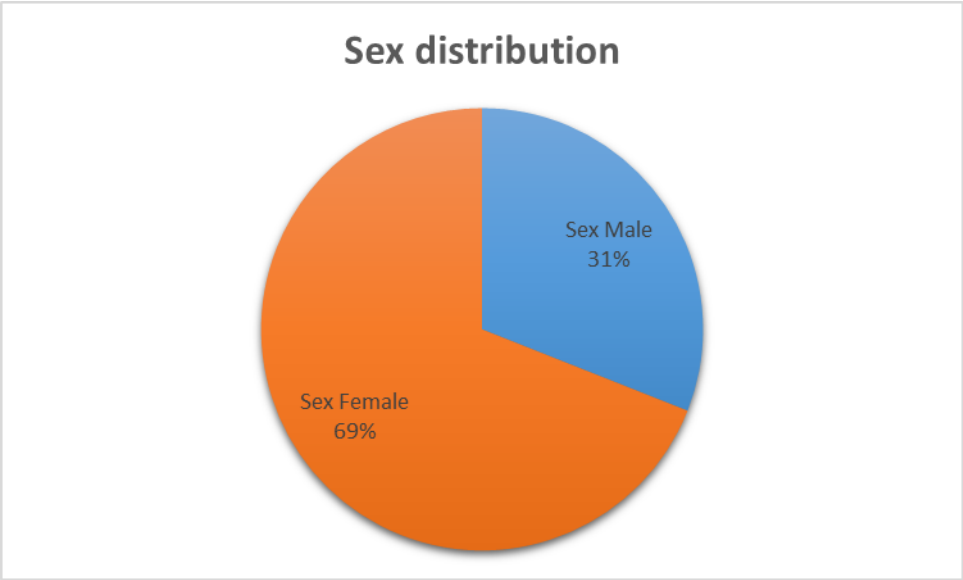


Figure 4: Distribution of respondents by age

Age	No. of Respondent	Percent	Total
18 - 35 yrs.	176	59%	176
36 - 50 yrs.	100	33%	100
51 + years	24	8%	24
Total	300	100%	300

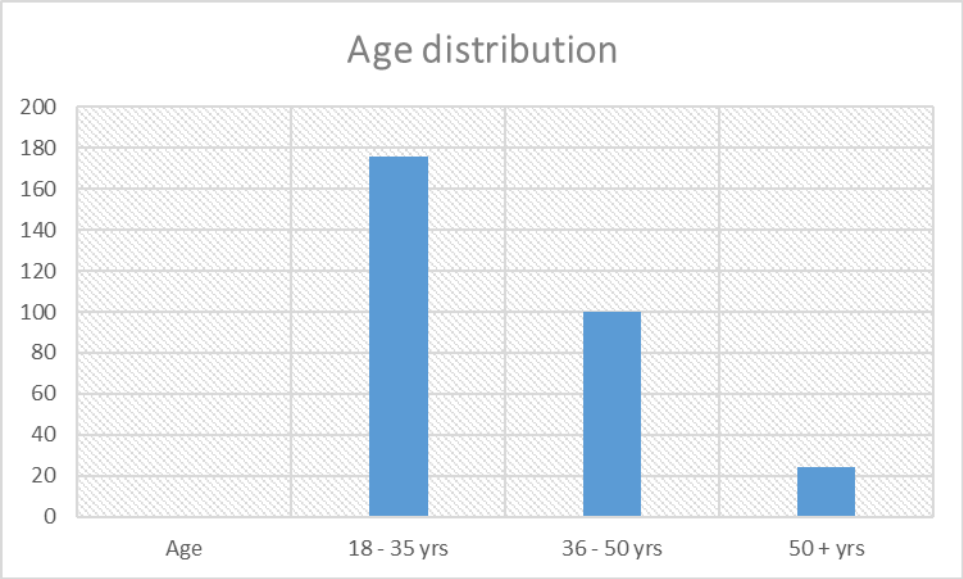


Figure 5: Distribution of respondents by marital status

Marital Status	No. of Respondent	Percent	Total
Married	207	69%	207
Single	68	22.6%	68
Widow/Widower/Divorce	25	8.4%	25
Total	300	100%	300

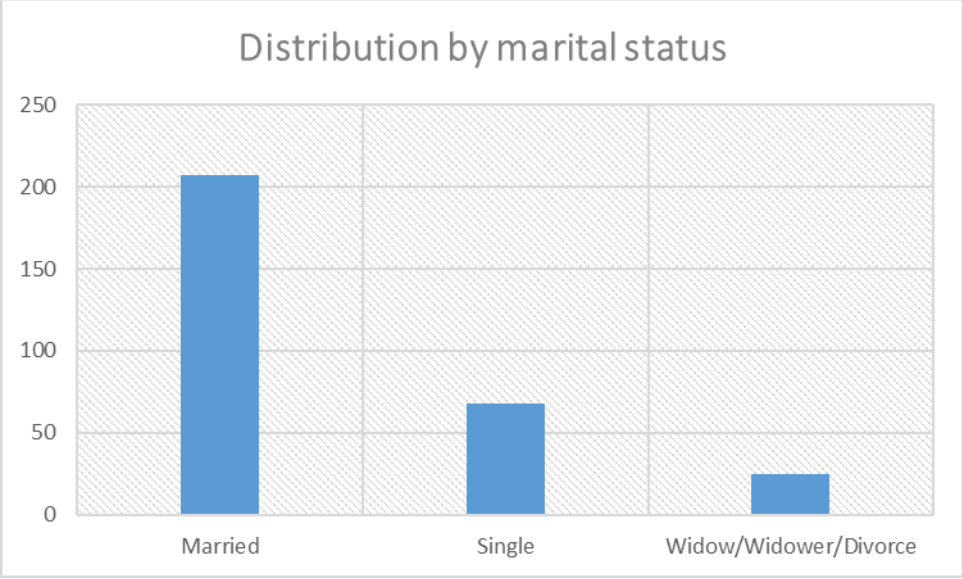


Figure 6: Distribution of respondents by educational attainment, religion and Ethnicity

Educational Attainment	No. of Respondent	Percent	Total
Never attended school	154	51%	154
Primary	78	26%	78
Junior Secondary	54	18%	54
Senior Secondary	12	4%	12
Tech/Voc	0	0%	0
Degree/Higher	2	1%	2
Total	300	100%	300
Religion			
Christian	156	52%	156
Muslim	144	48%	144
Total	300	100	300
Skipped	5	2.9	5
Total	300	100%	174
Ethnicity			
Mende	99	33%	99
Temne	78	26%	78
Kono	69	23%	69
Limba	26	9%	26
Koranko	6	2%	6
Mandingo	5	1.6%	5
Fullah	3	1%	3
Kissi	12	4%	12
Yalonka	0	0%	0
Krio	1	0.3%	1
Other Sierra Leonean	1	0.3%	1
Total	300	100%	300

HISTORICAL BACKGROUND OF THE UN-RECLAIMED MINE LANDS

Under this heading, respondents responded to several questions, such as how the lands were utilized before becoming un-reclaimed mine lands and which of the uses did they consider most important or missed the most. Responses were also gathered on whether they have stopped producing something on the land and how they would like to return the land for future uses. And finally, how did they anticipate the next generation will use the land and who they thought is responsible for habilitating the land. These responses were further

cross-checked through scholarly literature, site visits, key informant interviews and focus group discussions. Below were the findings:

FINDINGS

The main findings from interviews with respondents varied across the different sources of data collection. However, it became apparent that the lands were initially covered with natural forests that were rich in natural medicinal herbs; fertile for food and cash crops production to sustain families; rich in timber for logging to construct houses and community buildings; sustained water sources and ideal grounds for hunting and fishing; animal grazing; and sacred societal pools like shrines, societal bushes and burial sites.

With regards to livelihood activities that had been missed the most, a majority of the respondents indicated that food and cash crops productions were the most important livelihood activities that have been missed the most when the forest became inaccessible and soils lost their fertility, making the un-reclaimed mine lands unfit for agricultural production. Results obtained from scholarly literature, key informant interviews and focus group discussions affirmed that these communities were nearly self-sufficient in rice (their main staple food), cocoa, coffee and vegetable production, but this had long since been reduced production of these crops by 75%, leading to food insecurity and malnutrition, and diseases.

Regarding how to make the un-reclaimed mine lands fit for future activities, research findings showed that for communities where a large part of their lands had been affected, they would like their lands to be returned to the state they were before. While for others where a small part of their lands had been affected, they would like their lands back, but not exactly in the form as they were before. For them, they argued that it could be very difficult to restore the benefits lost due to the timeframes that have passed since the mining

ceased. They were with the conviction that it might take hundreds of years for rehabilitated land to return to a form comparable to native lands.

Given that the original operators of the dug-up mine fields were either no longer existing or cannot be traced or lacked the financial capacity to take responsibility for the damages they had caused, and being that communities all by themselves did have the capacity to reclaim the lands, most respondents looked up government to rehabilitate the lands, while on the other hand, others called on NGOs in collaboration with communities themselves to undertake the land rehabilitation.

COMMUNITIES' PREFERRED TYPES OF LAND REHABILITATION

Regarding the types of land rehabilitation, the researcher found that getting the desirable types of land rehabilitation for un-reclaimed mine lands that had lived untouched for many years requires a range of interventions to effectively help reverse or militate its negative impacts and enhance soil fertility, prevent erosion and foster the recovery of the ecosystems so as to improve the land productivity, support livelihoods, and promote environmental sustainability. This was observed to be far beyond the capacity of the local communities. Such process demands multi-stakeholder engagement, community participation and implementation of scientifically and locally adapted approaches tailored to specific ecological context (Rose and Morgan, 2010; World Bank and International Finance Corporation, 2002).

With these in mind, the research results highlighted subjective answers obtained from respondents such as:

a) A type of land rehabilitation that aims at strengthening of community-based water systems and restoring of degraded landscapes to build adaptive capacity and enhanced food-water-ecosystem security;

b) A type of land rehabilitation that aims at strengthening climate-smart farming practices such as agroforestry, aquaculture, aquaponics and sustainable agriculture systems;

c) A type of land rehabilitation that supports communities practice ecosystem restoration through reforestation and biodiversity corridor development;

d) A type of land rehabilitation that builds local adaptive capacity through capacity building in areas like community early warning systems and climate education, and

e) A type of land rehabilitation that supports women-led eco-enterprises such as tree nurseries, bee keeping and fish ponds.

The fact that almost all the communities were predominantly agrarian population and depend on rain-fed farming, and the presence of large hectares of un-reclaimed mine fields, which could make them highly vulnerable to climate shocks like erratic rainfall and floods leading to loss of income, crop failure and increased food insecurity. Feasibly, types a, b, and c could be the most preferred.

SOCIAL, ENVIRONMENTAL AND LIVELIHOOD IMPACTS OF UN-RECLAIMED MINE LANDS ON WOMEN AND SMALLHOLDER FARMING HOUSEHOLDS

For this aspect of the research, the researcher explored how un-reclaimed mine lands had posed significant environmental threats and far-reaching social and livelihood consequences on women and smallholder farming households. Details of the consequences indicated by the respondents were captured and summarized as follows:

A) Increase in women's workload

Drawing from both scholarly literature and data gathered from the household survey questionnaires, key informant interviews and focus group discussions, the research results revealed that women were the ones who fetch water, gather fire woods, and secure households' food, and these are not occasional tasks. They are daily, time-intensive,

physically demanding activities that form the backbone of household survival. Because the un-reclaimed mine lands could not provide these services, these tasks have become significantly harder and more time-consuming, forcing women to travel longer distances to find firewood and fodder. Also, the drop of water tables and rivers becoming dried up due to obstruction and contamination of the water catchment zones, the journey to a reliable water source stretched from minutes to hours. The situation is exacerbated during dry seasons, when women used to spend up to five hours daily just collecting water. They start their collection journeys at abnormal hours – sometimes as early as 4:30 a.m. – to avoid long queues at dwindling water sources. This pattern is not just limited to water. The destruction of the forests has forced women to walk further for every essential resource – fuel wood, fodder for livestock, wild foods, and medicinal plants. With intensifying environmental changes, women are likely to spend even longer hours fetching firewood, drawing water, working the land, and processing crops. Each additional hour spent on resource collection is an hour lost for education, rest, income generation, or community participation. A woman from Masobri community in Missiria chiefdom, Tonkolili district by the name of Sarah strongly reaffirmed the above assertion and said, *" look the mining has contaminated the water we are using to wash our clothes, cook, and watered our garden is being destroyed"*



B. Increased time spent on unpaid care work

The research findings revealed that increased time spent on resource gathering compounds an already enormous burden of unpaid domestic work. It was apparent that women spend roughly eight times more hours on unpaid care work than men – far exceeding the global average of three times. Women of working age across the study areas devoted about 43 percent of their waking hours to unpaid domestic and care activities, while men spend around 5 percent. Environmental degradation of the forests, soils and water sources has intensified this gap further. When water is fetched from greater distances, when fuel takes longer to gather, when crop failures demand more labour to compensate – all of these add to the unpaid workload that women already shoulder. The result is what economists call time poverty: women simply run out of hours in the day, leaving them unable to pursue paid employment, education, or skill development.

C. Lower crop yields and fewer livestock

The survey results revealed that women are the primary subsistence farmers, and the declining soil fertility or erratic rainfall patterns hit their productivity hard. And that the economic fallout of environmental degradation on them extends well beyond the immediate increase in physical labour. Degraded land being left unclaimed has led to lower crop yields and fewer livestock, directly affecting women's agricultural livelihoods, particularly for communities where a large part of their lands had been affected.



Un-reclaimed mine land at Dodoma in Lower Bambara

D. Male outmigration and feminization of responsibilities

The study revealed that when local environmental and economic conditions became deteriorated, men migrated to urban settlements in search of work, leaving the women behind to manage not only their existing duties, but also the responsibilities men previously handled such as overseeing farmland, caring for the elderly, raising children, and managing household finances, all with fewer resources and no additional support.

The results revealed that climate change is significantly affecting some communities, thereby worsening women's socioeconomic conditions, particularly in agriculture, food

security, and health. Indirectly, children's education suffered because mothers have no time for school involvement; family health is declining because women cannot access healthcare due to time constraints; and community resilience has weakens because women, who are the primary managers of local natural resources, are overburdened.

E. Reduced income-generating opportunities

As water has become scarcer, it was reported that women now spend more time and energy collecting it, limiting their opportunities to engage in income-generating activities and education. A literature review of UNICEF document acknowledged that women and girls handle water collection duties in about 80 percent of households that lack on-site water access. The document also indicated that every hour diverted to resource gathering is an hour unavailable for paid work, market activities, or skills training.

This dynamic creates a self-reinforcing cycle. Environmental degradation pushes women further into unpaid labour, which reduces their economic independence, which in turn limits their ability to invest in adaptive strategies or alternative livelihoods. It explains why women in resource-dependent communities often prioritize sustainable resource management – they understand from direct experience what environmental loss costs them.

F. Poor environmental safeguards

The research results disclose that there is government regulatory framework on mining operations, but it used to be weak and not effectively monitored; thereby resulting to low level of compliance. Pollutions from the intensive use of chemicals caused contamination of local water reserves and damage to local biodiversity. The results further disclose that the environmental impact assessment (EIA) does not stipulate pre-defined sanctions for miners' failure to adhere to mining laws or to undertake measures to mitigate risks to human life,

soils, rivers and biodiversity. One respondent in Lower Bambara, Kenema district confirmed this claim in these words:

"There is a deep abandoned mining pit very close to our community. This pit is always filled with dirty water. Because of this, a very foul smell spreads across the entire community. Mosquitoes are breeding in large number, which is causing malaria and other water borne diseases. Children and elderly people are most affected by this unhygienic condition. During the raining season, the pit gets overflowed and water spreads on the road to our farms. This makes it difficult to visit our farms. It also increases the risk of accidents, especially for our children who use the road to go to school".



G. Agricultural land loss

The research results found that in most communities a large part of their forests that were previously occupied by agricultural activities have been turned into abandoned mine fields with no land restorations done on them. This has generated significant hostile spillovers to farmers including worsening of the arable land availability and farming practices and competition for limited farmlands, making food items to become scare and very expensive in

these communities. This situations have resulted in the inability of so many households to meet their livelihood goals such as decent housing, education, health, recreational facilities and adequate nutrition.

The results further revealed that because of the reduction in farm lands and loss of soil fertility, the average rice yield has dropped from 3.6 metric ton to 1 metric ton per hectare. This is a clear manifestation that mining activities have hindered the productivity of agricultural lands in the affected communities.



CHAPTER FOUR

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The three weeks long research was designed to explore the social, environmental and livelihoods impacts associated with un-reclaimed mine lands, specifically on women and smallholder farming households.

There were critical questions mentioned earlier in this report that the research sought to answer. The findings clearly answered all of those questions. One of the major findings revealed that even though artisanal and small-scale mining operations gave communities quick income and short-term jobs, which helped sustain people's livelihoods, however its negative impacts on women and smallholder farming households' livelihoods and outcomes surpassed the benefits. This was made evident in all the 25 communities across Kenema, Kono and Tonkolili districts where the research took place. In these communities whose lands were forested, but today a large part of the forests have been reduced to un-reclaimed mine lands unfit for food and cash crops productions, perpetrating severe hardship and sufferings on the people.

It was against this background this research was conducted to investigate how these had affected the livelihoods of women and smallholder farming households so that a desirable land rehabilitation approach could be undertaken to lessen the sufferings.

To approach make sustainable and produce the desired results, the research findings pointed out that must be indigenous and based on what the local communities think can work best for them, as they are the ones knowledgeable about their situations and possess invaluable knowledge, which can contribute to changing their life situations and perceive the approach as theirs and not merely as charitable efforts.

The research findings indicated the challenges associated with Un-reclaimed mine lands such as increase in women's workload; increased time spent on unpaid care work; lower crop yields and fewer livestock; male outmigration and feminization of responsibilities; reduced income-generating opportunities; poor environmental safeguards; and agricultural land loss.

RECOMMENDATIONS

Based on the foregoing challenges, the researcher recognizes the need for the implementation of sustainable land rehabilitation approaches that aim at meeting the critical environmental, social and livelihoods needs of women and rural, which could include any of the following targets:

a) Strengthening of community-based water systems and restoring of degraded landscapes to build adaptive capacity and enhanced food-water-ecosystem security;

b) Strengthening climate-smart farming practices such as agroforestry, aquaculture, aquaponics and sustainable agriculture systems;

c) Enhancing communities' ability to practice ecosystem restoration through reforestation and biodiversity corridor development.

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