

ITP 308 Mine Water and Mine Waste Management

CONCLUDING REPORT

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Summary

Mining and environmental protection are today major global issues. The world's growing middle class and the shift toward green energy have increased the need for minerals and metals. Many countries now view minerals as strategic assets that can influence global politics. But mining also brings shared challenges. As demand for natural resources rises, disputes in the mining sector are becoming more common, underscoring the need for knowledge on how to mine in ways that minimise harm to people and the environment.

Already ten years ago, Sida recognised this need and saw the value in creating an international training programme focused on sustainable mining. This eventually led to the approval of the International Training Programme 308 Mine Water and Mine Waste Management (ITP308), assigned to and coordinated by the Geological Survey of Sweden.

Between 2018 and 2025, the Geological Survey of Sweden, Luleå University of Technology, and the Swedish Environmental Protection Agency worked together and delivered training on topics such as mine closure, mining governance, biodiversity, geochemistry, waste management, gender equality, and social responsibility. The programme built capacity in government officials from Ethiopia, Kenya, Liberia, Rwanda, Tanzania, and Zambia, key actors responsible for regulating mining and environmental protection in their countries. By strengthening the capacity of these authorities, through training staff, supporting organisational improvements, and guiding change projects, the programme helped advance sustainability goals. In total, 205 government officials from 14 organisations completed the programme and are now part of the ITP 308 alumni network.

Over the past seven years, the programme has gone through several changes, the biggest one caused by the Covid-19 pandemic. Even with significant adjustments, the programme was still carried out successfully, although partly in a different way than planned. The original three-week training sessions in Sweden was replaced by online courses held in Africa. To make up for missed mine site visits, regional conferences at the end of each cohort were expanded to include several days of fieldwork in one of the participating countries.

The programme concluded in 2025 with several major events: the final cohort's regional conference in Mombasa in March, a closing event in northern Sweden in May, and two alumni workshops in Tanzania and Zambia in September. The workshops allowed alumni to apply their training directly in the field. In conclusion, the programme resulted in a significant impact related to the ITP 308 theme. More than 200 professionals strengthened their technical skills, and new professional networks were formed both within countries and across borders. Collaborations between government and local communities improved, change projects led to new country regulations, several government guidelines were developed, and numerous pilots and training of mining sector stakeholders were carried out.

The final programme budget was 51 647 339 SEK (60 072 348 SEK). This amount covered a wide range of activities, including one inception year, nine training cohorts, recruitment work, six evaluation meetings, a final event in Sweden, two alumni workshops, and support to develop monitoring and evaluation methods.

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1 Background

1.1 Contractual obligations

The Geological Survey of Sweden (SGU) and the Swedish International Development Cooperation Agency (Sida) signed an agreement in 2017, whereby SGU committed to carry out 'the International Training Programme (ITP) 308 Mine water and mine waste management' in collaboration with the Swedish Environmental Protection Agency (SwEPA) and Luleå University of Technology (LTU), and Sida committed to fund the programme.

The programme was set up to build capacity in government organisations in a number of selected African countries. Focus was set on increasing the technical knowledge as well as integrating more efficient and ethical governance principles into mining and mine waste management, where transparency, equality and stakeholder engagements play large roles. In addition, the ITP 308 provided an opportunity for participants to collaborate and learn from each other to improve practices and governance within the mining sector.

The long-term intended impacts of the ITP 308 are:

- The partner organisations contribute to the protection of ecosystems on land and in water and promote that good living conditions and biodiversity are ensured for current and future generations
- The partner organisations contribute to sustainable mining with strong socio-economic development in a peaceful and inclusive society

1.2 Final programme status

From the start in 2018 until the concluding activities in 2025, nine cohorts completed the training programme. Only the first group, however, completed the programme as per the original programme plan. Due to the Covid-19 pandemic, the ITP 308 was from 2021 carried out as an online training programme with field visits added to the regional conference (please refer to previous annual reports for description of adjustment of the ITP 308 set-up over the years). By the end of 2025, in total:

- 205 individuals completed the programme (Appendix 1 and 2)
- 41 change projects were produced (Appendix 3 for a complete list, 2018–2025)
- 14 organisations participated (minimum of two in each country)
- 6 countries participated (Ethiopia, Kenya, Liberia, Rwanda, Tanzania and Zambia, Figure 1)
- 3 cohorts received training in Sweden (2018–2019)
- 6 cohorts received training online (2021–2024)
- 2 regional conferences were carried out online (2021)
- 6 regional conferences were held in Africa (2019, 2023–2025)
- 1 regional conference was held in Sweden (2022)
- 2 alumni workshops were carried out in Tanzania and Zambia (2025)

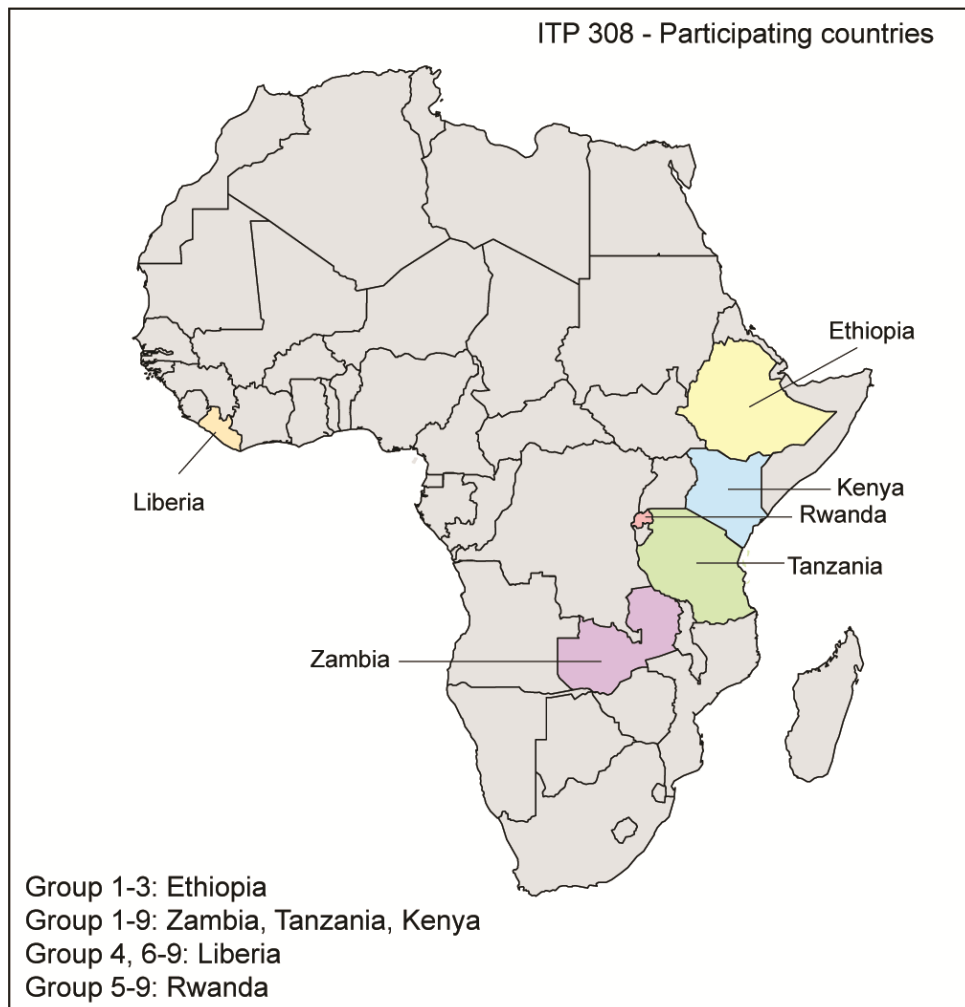


Figure 1. Participating countries in ITP 308– Mine water and mine waste management

1.3 Purpose of report

This concluding report provides an overall evaluation and presentation of results accomplished by the ITP 308, as well as an account of activities carried out in 2025. The report places emphasis on the country-wise analyses of contributions to the ITP 308 outcomes (section 2.4). The report also highlights some lessons learned and recommendations that may be considered for future international training programmes.

The report is complemented by the programme financial report, submitted on the same date.

2 Results and contributions to programme objectives

2.1 Expected results of the ITP 308

The ITP 308 addressed the overall problem that resources and capacity for permitting of mining operations and regulatory supervision throughout the mine life cycles are unsatisfactory, which leads to increased risks for the environment and population in participating countries. The theory of change for the ITP 308 considered that by strengthening government agencies' capacities (by training skilled personnel, as well as implementing organisational changes and improvements), a range of sustainability goals would be achieved. By engaging authorities with mandates related to mining governance, the programme sought to create a meaningful opportunity to drive positive, sector-wide change.

The programme aimed to reach several knowledge-specific outputs for each cohort, e.g., capability and technical knowledge of mine water and mine waste operations; evaluation of Environmental Impact Assessments (EIA); human rights, gender equality and conflict; review of mining and environmental legislation; and stakeholder engagement practices. These are reflected in the results matrix developed during the programme inception phase in 2018 (Appendix 4). By building technical knowledge among government officials, the programme sought to decrease the knowledge gap between public and private sectors associated with the mining industry. By inviting participants from key public agencies in each country, consecutive programme years, the programme also strove to build organisational capacity that would be sustained beyond the individual participants.

By the end of the ITP 308, the programme was expected to have contributed to six outcomes, related to the participating partner organisations:

1. Efficient and ethical governance principles within partner organisations leading to a sustainable mining sector with increased accountability.
2. Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development.
3. Partner organisations ensure the best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle.
4. Partner organisations use transparent, inclusive, and meaningful dialogue to ensure full public participation.
5. Gender discrepancy is continuously targeted within the partner organisations.
6. Strengthened collaboration between partner organisations within and between the participating countries¹.

2.2 Approach and methods for monitoring and evaluating results

Throughout the programme, training events and regional conferences were evaluated to improve logistical arrangements and ensure participants had necessary support to perform at their best, but also to ensure that the technical programme itself evolved and improved for the benefit of the participants and the outcomes. However, a consistent system for collecting and storing information

¹The 6th outcome was added in 2023 after feedback and results indicating that this was a relevant outcome from all groups. This outcome was not one of the original five outcomes, as the need to collaborate with sister agencies to a larger extent was not known to the organisers.

for easy follow-up was absent. Instead, mentors gathered and kept data in an unstructured manner, highlighting the need for a more systematic approach.

In 2022, Sida and SGU agreed that the follow-up of contributions to expected outcome of the programme needed strengthening. Hence NIRAS (Nordic International Engineering and Research Associates) was tied to the programme to support the follow-up evaluation. The work with strengthening the monitoring and evaluation process ended in the development of a Monitoring, Evaluation and Learning (MEL) plan. (Appendix 5). In addition, the tools developed for monitoring purposes (data collection, analysis and reporting) were used regularly from 2023 onwards. The NIRAS-SGU collaboration also included a dialogue about risk management within the ITP 308 framework leading to the introduction of a risk management section in the annual report.

The design and implementation of the final evaluation was not part of NIRAS' assignment. How to conduct a programme evaluation and to assess the lasting impact was not something that was specified in the contract between Sida and SGU, nor were there any resources allocated in the initial budget for an extensive programme evaluation. However, as activities began to wind down the team identified an opportunity to undertake a more comprehensive evaluation of the programme outcomes and impacts prior to its conclusion, within the existing budget.

In line with this, evaluation meetings with each country (organisation management, focal points and Swedish Embassies) were conducted prior to the concluding event in Sweden in May 2025. The team launched online evaluation questions for programme alumni and focal points, as well as interview guides for management of participating organisations (Appendix 6). In addition, during the final event in Sweden, one conference day was dedicated to country presentations which included a self-evaluation of the impacts of the ITP 308 on participants, their organisations, the sector, and relevant stakeholders.

The in-depth analysed results of the final evaluations, including the countries' self-reporting, are presented below in sections 2.3 and 2.4.

2.3 Analysis of results in relation to outputs

Results of the training surveys and feedback for each of the specific programme cohorts have been presented in previous annual reports. Below are highlights related to participants' strengthened capacity and knowledge (the expected knowledge outputs) from the final alumni survey, which can be seen in its completion in Appendix 7 and 8.

The survey achieved a 52% response rate, representing feedback from 94 (180) alumni. The response rate was above what was expected of an online survey. Nine focal points received slightly different but comparable questionnaires, and cohort nine was excluded as they were still participating in the programme when the questionnaire was launched. The result from this final survey aligns well with previously documented findings, with almost 100% strongly agreeing or agreeing to all expected knowledge outputs. It is not expected that a higher response rate would have produced any significant changes to the results presented below.

- The results from the final surveys strengthened the previous cohort specific evaluations, that the programme has been successful in building capacity within the participating government institutions. Apart from one blank, all respondents claim they have improved their technical knowledge of mine water and mine waste management. Based on the participant's backgrounds and positions the improved capacity degree and areas vary.
- 100% of the respondents reported an improved ability to evaluate and work with Environmental Impact Assessments (EIAs). EIA is a systematic approach used to identify, predict, and evaluate the effects of a mining operation on the surrounding environment and

communities. The EIA documents are generally submitted prior to mining activities and typically encompass the entire mining cycle, including mine closure. The ability to thoroughly understand and critically assess these documents is essential in the mining licensing process. Some participants in ITP 308 had previously worked with EIAs without ever visiting a mine or having practical experience in mining. For these individuals, the ITP 308 was particularly valuable.

- 98% of respondents declared that they had achieved an improved understanding and knowledge of mining and environmental legislation. Throughout the programme, participants frequently noted that they now understood what questions to ask and what information to request from parties submitting various mining-related documents. Network communications further showed that participants apply knowledge gained from other countries' legislative frameworks to strengthen or better interpret their own.
- 85% claimed to have been introduced to tools that enhance stakeholder collaboration and involvement. During the programme there were numerous discussions, lectures and case studies on the importance of inclusive and transparent communication and stakeholder engagement. However, this may be the reason for some disagreement with this output. If the interpretation was that the ITP 308 would provide a checklist or a specific document to show how to go about enhanced stakeholder collaboration (i.e. a tool), this was not realised.
- Stakeholder engagement and the integration of human rights emerged as two of the most effective components of ITP 308, a finding consistently supported by previous surveys. 97% felt encouraged to inclusion of social and human rights impacts assessment. Alumni across all participating countries reported adopting more transparent, inclusive, and participatory approaches in their work, particularly during field activities and interactions with affected communities.
- Though the programme was mainly technical, sustainable mining also included social aspects such as human rights, conflict perspectives and gender discussions. The improved awareness was clearly indicated in the responses given in the survey, though we know from experience and reports that the ITP 308 is not leading to any overwhelming structured institutional changes in relation to these.

2.4 Analysis of contributions to long-term objectives

'A reflection on this program and its outcomes, it's clear that sustainability is not a one-time achievement but an ongoing commitment. Whether through technology, policy, or community engagement, the journey is continuous, and each small step builds toward a more sustainable and responsible mining sector.'

Team Kenya in Malá, May 2025

The above astute comment from the Kenyan team reflects the essence of the ITP 308. The demands of projects like the ITP are often to deliver strongly defined change projects, explicit topics and show immediate, precise results. However, and though the cumulative impacts may be harder to measure immediately, it is ultimately what will lead to a more sustainable mining sector for all ITP 308 participating countries. Based on the overall evaluation of the programme, it has contributed to facilitating long-term institutional changes for a more sustainable mining sector in the participating countries by:

- **Individual learning-** Most of the participating organisations identified the absence of technical expertise as a challenge to overcome in their organisations and to ensure a sustainable mining industry in their countries. Thus, by building individual capacity, the partner organisations ensure the best possible scrutiny of environmental impacts, prevention, and mitigation at all stages of the mine cycle going forward.

- **Strengthened network-** The participating organisations reported strengthened collaboration with their in-country sister agencies following their involvement in the programme. These improvements have fostered coordination across all levels of government and promoted efficient, ethical governance within partner organisations, contributing to a more accountable and sustainable mining sector. Furthermore, the international network has enhanced environmental oversight by facilitating the exchange of governing documents and practical experience across borders, supporting prevention and mitigation throughout the entire mining cycle.
- **Change projects-** The collaborative change projects have led to legislative improvements, strengthened the quality and continuity of inspection work, built capacity in the mining sector as well as enhanced transparent and inclusive collaboration with stakeholders and other government institutions.

2.4.1 Outcomes

The final surveys and interviews provided feedback on individual and institutional changes resulting from the ITP 308. Alumni respondents expressed high level of agreement with the expected outcomes, generally ranging from 95% to 99%. Responses to the question about positive organisational change for each outcome ranged from 85% to 95% (Survey options were Both, Organisational, Individual and None). Complete survey results and interview summaries are presented in Appendix 8 and 9. Below is a summary of responses per outcome, including selected highlights from both institutional and individual perspectives. It should be noted that these outcomes are closely interlinked and therefore not always easy to distinguish from one another. Nonetheless, qualitative interviews and surveys have provided countless examples of the positive outcomes of the programme. A number of these examples are given in the text below regarding outcomes 1–6.

Outcome 1. Efficient and ethical governance principles within partner organisations leading to a sustainable mining sector with increased accountability.

98% of respondents reported that the outcome was achieved, and 86% observed visible institutional change. Below are some selected comments given by the respondents.

- ‘As a regulator, I gained in depth understanding of the impacts of mine waste water and how to manage the impacts better. As a result of the knowledge gained I was able to advise industry players more competently and was therefore respected’. *Zambian alum*
- ‘The new Mining and quarry law of 24/07/2024 was formed considering inputs from RMB staff who were part of ITP programs. The chapter V indicates the obligations of the license holder on health and safety and environmental.’ *Rwandan alum*
- ‘As a supervisor and regulator of mines in Liberia, I had a changed perspective on mine waste and my supervision of mines had improved. I started requesting more improved mine waste management from companies.’ *Liberia alum*

Generally, the mining industry expands across participating countries and governments seek to increase its contribution to national GDP, therefore, regulatory systems must evolve accordingly. Many organisations, particularly ministries of minerals, continue to face reputational challenges due to inadequate oversight of poor mining practices, resulting in environmental harm and risks to workers and nearby communities. Maintaining a social license to operate has thus become increasingly difficult. Nonetheless, clearer regulations and more coordinated, visible government engagement are gradually improving public confidence. ITP 308 contributed to this progress by equipping participants with best available techniques and knowledge to uphold responsible and sustainable mining. The programme emphasised transparent and inclusive governance, along with strengthened environmental, social, and economic oversight, with particular focus on environmental sustainability. In response, participating organisations developed regulatory tools

to improve sector management, while stakeholder engagement practices have improved, reflecting a stronger commitment to openness and accountability. Increased institutional capacity has also enabled governments to better enforce legislation and communicate compliance requirements through targeted training. Although limited resources remain a constraint, clear improvements in governance and stakeholder communication are evident, due in part to the ITP 308.

Outcome 2. Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development.

99% of respondents reported that the outcome was achieved, and 95% observed visible institutional change. Below are some selected comments given by the respondents.

- ‘The organization has mobilized an experienced and qualified technical team of mine inspectors who have completed ITP training. This team is capable of making valuable contributions to policymaking regarding environmental matters in the mining industry. For example, the team has been instrumental in implementing the post-mining land use plan for the Base Titanium mining company in Kwale County, Kenya.’ *Kenyan alum*
- ‘We organized multiple of workshops and seminars to regional, zonal, district mining leaders and experts as well as ASM leaders about sustainable extraction techniques and technologies. Increased link with EPA to ensure Environmental sustainability. Four mining area universities were participated on the regional workshops. Developed ASM management guidelines for tailored communication with local leaders & ASM workers, Organized field visits on successful mining operations to demonstrate effective practices in action and develop a monitoring and evaluation checklist as well as created social media platform (whatsapp, telegram group) for networking and Knowledge Sharing’. *Ethiopian alum*
- ‘We at the ministry of mines and energy, after the ITP program, conducted training for our field staff to enable them train or educate artisanal miners to be able mine sustainably.’ *Liberian alum*

The ITP 308 concept was designed to engage the same partner organisations over time to build critical mass and strengthen long-term institutional capacity for the benefit of the country. This approach sought to narrow the knowledge gap between the public and private sectors and ensure continuity in skills development. Its impact has been significant. The programme has fostered a culture of knowledge-sharing, with participants applying new competencies in their daily work, collaborating with colleagues, and developing regulatory tools, guidelines, and change projects. Capacity building has reached a broad set of stakeholders, including miners, government agencies, academia, professionals involved in mining processes, and local communities, through change projects (pilot projects, stakeholder engagement, trainings) and updated governance documents. In Liberia, staff were reassigned to positions where newly acquired skills could be maximised, thereby improving the national governance capacity. In Tanzania, strengthened stakeholder engagement improved relationships between government officials and miners, enhancing mutual understanding and cooperation locally. Similar progress was seen between investors and government officials, where previous tensions stemmed mainly from technical knowledge gaps. Government-led training for mine owners helped bridge these gaps, and some owners even expressed interest in joining the ITP 308 to further advance their understanding of responsible and sustainable mining indicating additional targets groups for a possible new ITP in sustainable mining.

Outcome 3. Partner organisations ensure the best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle.

97% of respondents reported that the outcome was achieved, and 88% observed visible institutional change. Below are some selected comments given by the respondents.

- 'Kenya's legislative framework has integrated environmental protection in the mine life cycle. What ITP has done is to showcase real life examples in environmental protection and mitigation which is rare in Kenya considering the low level of our mining sector. Now that I am better informed, I've improved quality of scrutiny of environmental protection and mitigation approvals, monitoring and enforcement.' *Kenyan alum*
- 'Before ITP 308, it was rare to talk about things like acid mine drainage, leachate, mine closure plan, and the geochemistry of waste rock and tailings in my organization. But this course has taught us/me a lot, many of which have now been adopted into our regulatory strategy for things like social, environmental and economic impacts of mining projects on the local population and the local environment. For instance, how do we properly sample leachate from waste rock piles derived from sulphide ore mining to understand the heavy metals liberation potential into the environment (soil and water).' *Liberian alum*
- '...from the skills I learnt in the ITP, I've been able to propose and implement changes to make our reviews more transparent and inclusive. One of the key improvements has been introducing new ways to collect and share data, which has helped us better monitor and address environmental risks.' *Kenyan alum*

The strengthened capacity of government officials was the most significant contribution as it enhanced their ability to fulfil regulatory mandates as well as supported more informed decision-making throughout the mine cycle. Management reported higher-quality analysis and reporting, contributing to improved governance and more sustainable mining practices throughout the life of mine. Change projects focused on developing or improving regulatory tools and regulatory documents, offering direct benefits to protection of ecosystems on land and in water as well as sustainable mining with a strong and fair socioeconomic development. Numerous examples in the participating countries illustrated how individuals applied their enhanced skills to drive institutional improvements, from more rigorous desk studies and field inspections to stronger stakeholder engagement and updated operational procedures impacting on all phases of mining. Respondents from Kenya, in particular, provided concrete examples of these individual-level contributions. This demonstrates that meaningful organisational change can stem from individual actions and practices, rather than relying solely on formal policy measures. The change projects further highlight an evolution in how officials collaborate with stakeholders, moving from directive communication to approaches based on partnership, shared problem-solving, and capacity-building. This shift in mindset, toward more constructive engagement, demonstrates the programme's lasting influence. Several recent developments also illustrate institutional-scale impact. Tanzania and Ethiopia mentioned that increased scrutiny of Environmental Impact Assessments during stakeholder engagement have increased environmental and social accountability for mining companies, and Tanzania now requires more stringent EIA assessments before project financing. In Zambia, the programme influenced regulatory practice and guidelines, including the adoption of safety letters. Strengthened collaboration among relevant organisations has further improved coordination and consistency in sector governance.

Outcome 4. Partner organisations use transparent, inclusive, and meaningful dialogue to ensure full public participation.

96% of respondents reported that the outcome was achieved, and 85% observed visible institutional change. However, managers noted that the impact is difficult to quantify and solely attribute to the ITP 308. Below are some selected comments given by the respondents.

- 'After participating in the ITP, I have adopted more structured and inclusive consultation practices with local communities and stakeholders this includes holding regular public meetings and/or trainings where stakeholders have the opportunity to voice their concerns and contribute to decision-making processes. We have started engaging with stakeholders

earlier in the project cycle making sure that their feedback is considered in the planning stages rather than after decisions have been made'. *Tanzanian alum*

- 'Yes, after participating in the ITP, I have integrated public participation more deeply into my work, recognizing its critical role in achieving sustainable and socially responsible outcomes.' *Liberian alum*
- 'The ITP has greatly enhanced our commitment to transparent and inclusive public dialogue. After the program, we initiated regular community forums to engage local stakeholders in decision-making processes regarding mining activities. For instance, we now hold quarterly meetings where community members can voice concerns and contribute ideas, ensuring their perspectives are valued. This shift has not only improved community relations but also led to more informed and sustainable project outcomes.' *Rwandan alum*

Although public participation is a constitutional requirement in several countries, programme participants are now generally considered better prepared to manage these processes by managers. Knowledge gained through the programme and the development of change projects have influenced conduct during inspections and stakeholder engagements. In Liberia, management reported that the programme's holistic approach to mining and sustainability had strengthened inclusive stakeholder engagement. There were also concrete results: Ethiopia introduced public dialogue in the Environmental and Social Impact Assessment (ESIA) reviews and implemented community-development activities following participation in the ITP 308. More broadly, many individuals reported contributing to more transparent, inclusive, and meaningful dialogue from the perspective of government officials.

Outcome 5. Gender discrepancy is continuously targeted within the partner organisations.

87% of respondents reported that the outcome was achieved, and 77% observed visible institutional change. Below are some selected comments given by the respondents.

- 'The ITP has significantly influenced my approach to addressing gender discrepancies within our organisation. After participating in the program, I established a mentorship initiative specifically aimed at supporting women in mining and environmental management roles. For example, we now offer targeted training sessions and leadership development opportunities for female staff, which has increased their representation in decision-making positions. This focus on gender equality has not only empowered women but also enriched our organisational culture and effectiveness' *Rwandan alum*
- 'Participating in the ITP opened my eyes to the gender disparities present in both my organisation and the mining industry as a whole. The new understanding motivated me to join a team focused on reviewing and developing more gender-inclusive policies and practices within our organisation in 2021 - 2022.' *Kenyan alum*

This outcome shows the least institutional impression among the long-term expected outcomes, which is unsurprising given the limited time allocated to the topic and the programme's technical orientation. In addition, several institutions already had affirmative action measures in place making it difficult to differentiate exclusive ITP 308 impact. Despite the lower result, both management and alumni reported positive developments in addressing gender disparities attributable to the ITP 308. There was an increased focus on gender inclusivity, much thanks to the ITP 308, during the Zambian Mining and Environmental Remediation and Improvement Project (ZMERIP). Women children and youth are continuously more included in the stakeholder engagements in Liberia according to management reports. However, according to the survey, the strongest impacts are individually driven efforts with clear ties to the ITP 308 gender lectures.

Outcome 6. Strengthened collaboration between partner organisations within and between the participating countries.

95% of respondents reported that the outcome was achieved, and an equal share observe visible institutional change. Below are some selected comments given by the respondents.

- ‘...A few government institutions play pivotal roles in ensuring sustainable mining governance in our country. Before ITP, active collaboration and engagements among these agencies were less and functions were fragmented to some extent. But with the opportunity and learning experience from the ITP program, collaboration has been sharply enhanced, especially between the Ministry of Mines & Energy and the Environmental Protection Agency of Liberia, but also including other agencies of government. We are now discussing the establishment of joint monitoring and inspection efforts in the areas of tailings, waste rock, surface and ground water pollution and underground mine operations, just to name a few. Beyond these technical and scientific collaboration fronts, we are also considering strong collaboration at the policy level of natural resource governance, something which is already gaining traction within our different organizations, all geared towards sustainable mining governance...’ *Liberian alum*
- ‘Because of ITP, we now have better collaborations with ZEMA. As a matter of fact, we devised the National Guideline on the Management of WRD and TSFs together. We now also are able to interact with other organisations from other countries and share information as we look to ensure sustainable mining’ *Zambian alum*

Outcome six was added in 2023 after it became clear that networking and peer learning had a significant impact on the sector. The ITP 308 was designed to promote mutual learning among participants and lecturers, which was reflected in strong collaboration throughout the programme. This was most visible in the change projects: only two of the 41 were completed by single organisations, when opportunities to work jointly existed. Partnerships between sister institutions contributed to both local and national improvements. Examples include the development of governing documents, harmonised tools such as shared checklists in Tanzania and Zambia, and improved coordination through joint inspections in Liberia. The recurring phrase “we are now speaking the same language” highlighted enhanced cross-institutional alignment and future opportunities. Cross-border collaboration also increased. Zambian officials consulted Tanzania on Artisanal Small-Scale Mining formalisation, and the National Environment Management Council (NEMC), Tanzania strengthened cooperation with its sister agencies in Kenya and Zambia. Sharing of information influenced institutional reforms, such as Zambia’s revised EIA review process and the establishment of its Minerals Regulation Commission, informed by Tanzanian experience. Ethiopian participants have also sought peer input via the alumni WhatsApp group while developing a new structure within the Ministry of Mines.

2.4.2 Change projects

Change projects are central components of the ITP concept and are designed to enable participants to apply the knowledge and skills acquired during the programme to real-world challenges in respective organisations. The ITP 308 change projects were formulated by individuals or organisations, refined during online training, implemented over ten months with mentor support, and were in some cases intended to be sustained and built upon over several cohorts. The objectives of the change projects included:

- Developing solutions to current challenges in participating organisations.
- Implementing good governance principles, both as goals and tools for positive change.

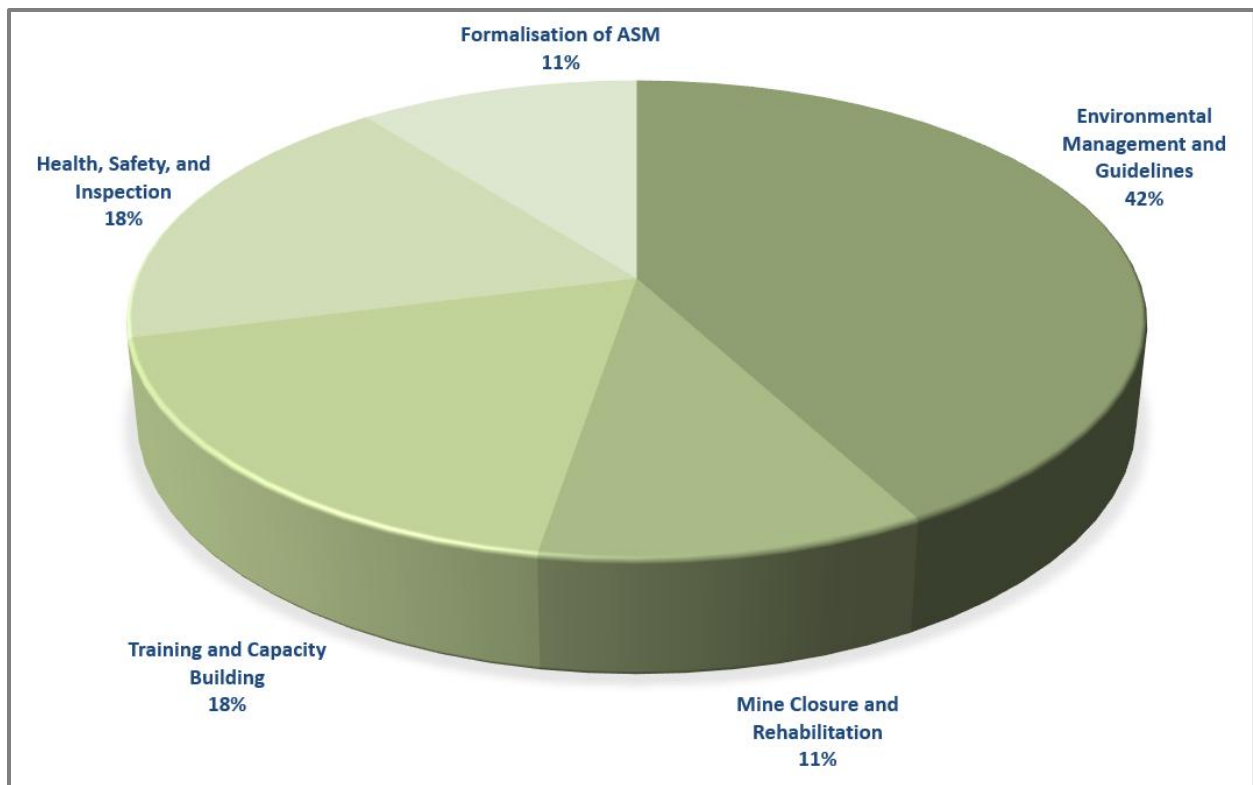


Figure 2. Distribution of change projects by theme.

The projects have had varied themes which is illustrated in Figure 2 above. The projects are related to either Environmental Management and Guidelines, Mine Closure and Rehabilitation, Training and Capacity Building, Health and Safety Inspection or Formalisation of ASM. A detailed description of all 41 ITP 308 change projects is beyond the scope of this report. A selected few are described in this section with an additional number of change project reports added to Appendix 14.

Below follows a short description of four selected projects which all align closely with the expected outcomes of ITP 308 from dissemination and knowledge transfers, efficient and ethical principles leading to accountability, transparent and inclusive dialogue with public participation and strengthened collaborations

- One of the most significant accomplishments by a change project, was the gazettment of the National Guideline on Mine Site Decommissioning and Rehabilitation, a milestone for Kenya's mine closure framework. Prior to 2018, the country lacked substantial regulation on mine closure, and the concept was first introduced during ITP 308 cohort one training in Sweden, where the gap was identified. Building on the initial draft guideline, the Environmental Governance Programme later continued the work, culminating in its gazettment in 2024 ([National-Guidelines-on-Mine-site-decommissioning-and-rehabilitation-min.pdf](#)). The guideline aims to ensure that mine sites are decommissioned, rehabilitated, and closed through a well-planned process that is environmentally sustainable and protects human health. The guideline is intended for adoption and implementation by all relevant stakeholders in the mining sector and it upholds the polluter-pays principle and strengthens the sustainable management of mining operations while safeguarding both the environment and human health.
- The second change project to produce a national regulation was the Regulations Governing Tailings Storage Facilities (TSF) Management Under the Mineral, Mining and Environmental

Protection Law of the Republic of Liberia, 2024 – version 1.0 ([Regulations Governing Tailing Storage Facilities Management Under the Mineral, Mining and Environmental Protection Law of The Republic of Liberia 2024.pdf](#)). During a training session on TSF design and management, Liberian participants identified a major governance gap. Despite several recent dam failures causing fatalities, environmental harm, and groundwater contamination, Liberia had no regulatory framework for TSFs. Without clear requirements, authorities were unable to hold mining companies accountable. Regardless of challenges such as a presidential election and leadership changes, three cohorts collaborated with stakeholders to develop a comprehensive guideline. The process strengthened relationships between government institutions and industry through extensive, inclusive engagement. Remarkably, the regulation entered into force in 2025, just two years after work began. It now provides nationwide requirements for TSF design, construction, closure, and post-closure management. Notably, the ITP 308 is referenced in section 2.1, formally linking the programme to the regulation.

- Several Tanzanian cohorts in the ITP 308 collaborated to develop a ‘Guideline for Mine Water and Tailings Management for Small- and Medium-Scale Mines’ in Tanzania and the associated capacity-building materials and training sessions. The need for this guideline became evident due to limited awareness of best practices within mining communities. While not exhaustive, the document was designed to address key regulatory and practical gaps, particularly in environmental protection and safety within the small-scale mining sector in particular. Across multiple cohorts, participants produced technical content, imagery, brochures, and translations to Swahili in close consultation with stakeholders, including local communities and small-scale miners who contributed recommendations. The combined outputs were consolidated into a single guideline intended as the basis for a national training programme. Pilot trainings were delivered to miners, and two training-of-trainers sessions were conducted for the National Environment Management Council and the Mining Commission to enable delivery. The guideline is now incorporated into the Mining Commission’s routine capacity-building missions, supporting wider dissemination and adoption.
- The Zambian change project, ‘Initiative to Enhance Formalisation of ASM in Zambia’, was a desk-based study designed to identify measures to strengthen the formalisation of the artisanal and small-scale mining sector. While ASM is legally recognised, the current licensing framework imposes the same requirements on both large-scale and small-scale operators, creating substantial barriers for ASM activities. A complementary initiative, ‘ASM Guidelines on Obtaining Mining and Environmental Permits and Licenses’, developed practical recommendations to simplify mining and environmental permitting for the sector. Together, these projects supported ongoing ASM reforms in Zambia by identifying regulatory barriers, proposing simplified licensing and environmental permitting procedures, supporting decentralisation of ASM governance, and developing practical guidance to improve compliance, environmental management and stakeholder coordination. Both initiatives were aligned with, and supported by, the Ministry of Mines and Mineral Development, which was in the process of establishing the Artisanal and Small-Scale Mining Department, an institutional structure dedicated to advancing ASM formalisation.

Below are a few comments from ITP 308 alumni on programme impact on them and their institutions. It is visible that the impact has significant ties to sustainability goals of the Agenda 2030.



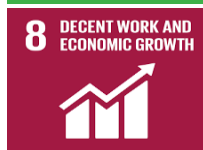
"The knowledge from ITP308 has strengthened our ability to enforce environmental regulations. We now conduct inspections with a more expert perspective, ensuring that mining companies comply with environmental standards."

— Bienvenu Mizero, Rwanda Mines, Petroleum, and Gas Board (RMB)



"We have used the ITP308 materials to educate stakeholders about sustainable practices, especially in the ASM sector. Our training sessions now focus on best practices in waste management and water use, making a real difference on the ground."

— Zena Kongoi, Mining Commission, Tanzania



"Our change project aimed at enhancing the formalization of the Zambian ASM sector has contributed to Zambia's Artisanal and Small-Scale Mining (ASM) reforms. Furthermore, recommendations for ASM miners on how to obtain mining permits have been implemented."

— Adrian Chileshe Mumbi, Mines Development Department (MMMD,) Zambia



"The ITP308 programme has transformed how we engage with communities near mining sites. Improved dialogue and stakeholder engagement have reduced conflicts and enhanced cooperation between miners and local residents."

— John K. Jallah, Liberian Environmental Protection Agency (EPA)



"Women are becoming more active in the mining sector, thanks to awareness raised through ITP308. We are seeing better representation and more inclusive decision-making."

— David Irungu, Regional Mining Inspector, Kenya



"The practical skills gained from ITP308 have helped us improve mine closure practices, ensuring that mining operations contribute positively to local economies even after closure."

— Bienvenu Mizero, RMB, Rwanda



2.4.3 Country analyses

Below is a presentation of analyses of the ITP's cumulative contributions to the expected outcomes, per participating country. Brief risk analyses and descriptions of mitigative actions are also included in each country analysis.

Ethiopia

Context and Key aspects of Mine Water and Mine Waste Management

Ethiopia's mining sector remains relatively underdeveloped but has gained increased attention in recent years due to its potential to contribute to economic and social development. The government has identified mining as a strategic area for economic development and is actively seeking to expand the sector as a source of foreign exchange, industrial expansion and employment. The reform agenda also highlights the need to strengthen institutional capacity, improve regulatory frameworks and enhance coordination within the sector, reflecting broader governance challenges associated with the expansion of mining activities.

Gold is the dominant commodity in Ethiopia, with both large-scale mining and widespread artisanal and small-scale mining playing significant roles. Interest in coal, tantalum, lithium and other industrial minerals is also rising. In line with the policy ambitions, efforts to attract international investment have increased in recent years, particularly in gold and critical minerals, reflecting the aim to expand mineral production and strengthen the sector's economic contribution.

As mining activities expand, challenges related to mine water, mine waste and mine closure are becoming increasingly prominent in the national policy agenda. Over the past decade, the legal and institutional framework governing environmental management in the mining sector has undergone several reforms to strengthen environmental governance, institutional coordination and regulatory oversight. The Ministry of Mines and Petroleum serves as the central authority, whereas environmental oversight is shared with institutions at both federal and regional levels. Recent institutional developments include the re-establishment of dedicated units focusing on environment and community development within the Ministry.

Several regulatory instruments relevant to mine water and waste management have been developed or are currently in progress. These include updated Environmental and Social Impact Assessment guidelines, a public consultation guideline to strengthen stakeholder engagement, and ongoing revisions to the national mining policy. Additional directives on artisanal mining, community development, and environmental funds have also been introduced to enhance sector governance.

Despite these efforts, environmental management practices remain inconsistent, and legacy issues, such as abandoned or inadequately rehabilitated mine sites, continue to pose risks. Water contamination, inadequate waste handling and weak enforcement of environmental regulations are recurring challenges. The expansion of ASM activities further complicates the situation, particularly in areas with limited regulatory presence.

Overall, while Ethiopia has taken important steps to strengthen its regulatory and institutional framework, continued efforts are required to ensure effective implementation, coordination and consistent application of environmental standards.

ITP 308 partners

Ethiopia participated in the first three training cohorts, but participation was paused indefinitely since 2021, due to the security situation in the country. Since then, the sector has undergone significant institutional changes, including name changes and organisational restructuring. Nonetheless, these

organisations are still central to mining governance in the country and collectively cover licensing, inspections, environmental and social oversight, technical support and research-related functions responsible for environmental management and mining oversight.

- **Ministry of Mines and Petroleum (MoMP)**, is the central government authority responsible for regulating, licensing and promoting Ethiopia's mining sector. The Ministry oversees policy development, issues mineral rights and monitors compliance with sector regulations. It plays a dual role as both regulator and sector development actor, coordinating sector governance across national and regional levels.
- **Oromia Mines Development Authority (OMDA)**, is the regional government body responsible for regulating and supporting mining activities within the Oromia region. The Authority oversees licensing of ASM, monitors compliance with regional regulations and facilitates the implementation of national policies at the local level.

Contribution to programme outcomes in Ethiopia

Within the Ethiopian context, the ITP 308 programme contributed to strengthening technical knowledge and practical capacity related to environmental management in the mining sector, particularly in the areas of mine closure, environmental monitoring and ASM governance.

As in other participating countries, the development of change projects was a key component of the programme. Ethiopian projects focused on developing practical tools and guidelines to support regulatory functions, including mine closure, environmental inspections and compliance monitoring. Examples include the preparation of a guideline for mine closure planning, as well as the development of checklists for environmental inspections and compliance monitoring. The tools were intended to support regulatory authorities in carrying out their responsibilities and contribute to more structured and consistent oversight of mining operations. The guideline for mine closure developed through one of the change projects, has reportedly entered early stages of implementation at MoMP and regional levels, suggesting initial institutional uptake. While implementation remains uneven and influenced by capacity constraints, these outputs contributed to ongoing policy processes and supported regulatory functions such as environmental monitoring and mine closure planning.

The programme has contributed to increased awareness of environmental and social risks associated with mining. Interview responses highlight challenges such as limited awareness among surrounding communities and environmental impacts including flooding, waste displacement and groundwater contamination. Several change projects have addressed these issues by focusing on environmental management, regulatory tools and awareness-raising among ASM actors, including licensing procedures and safe operational practices.

An important value addition to the programme was the opportunity for participants to exchange experiences and knowledge with peers from other partner countries. These exchanges provided practical insights into how similar challenges were addressed in different contexts, particularly in areas such as ASM formalisation, environmental monitoring and institutional coordination. Ethiopia emerged as a leading example within the programme in relation to ASM formalisation. Experiences from Ethiopia have been shared with other countries, and several partners have sought dialogue with Ethiopian counterparts to inform their own approaches. This highlights the programme's role in facilitating south-south knowledge exchange and mutual learning. Participants also disseminated knowledge within their respective organisations, contributing to broader institutional learning. While capacity constraints remain, the programme has supported incremental improvements in regulatory practices and strengthened collaboration between institutions.

Country risk analysis and mitigation

The continued development of Ethiopia's mining sector presents both opportunities and risks. Environmental risks related to mine waste, mine water and mine closure are expected to increase as mining activities expand. Regional mining authorities have reported cases of tailings seepage affecting groundwater, as well as flooding and waste material displacement linked to inadequate waste management practices. Limited awareness among local communities regarding mining-related environmental impacts has also been identified as a contributing factor. These examples highlight the practical implications of weak environmental controls and underline the need for improved regulatory oversight, technical capacity and public awareness.

Institutional risks, such as capacity constraints or elevated staff turnovers, represent significant risks for both sector development and future programme implementations. Regulatory authorities often face limitations related to technical expertise and financial resources, affecting their ability to carry out inspections, enforce regulations and ensure compliance. These challenges are particularly evident at regional level, where responsibilities for oversight are increasing in parallel with sector growth. High staff turnover within key institutions further constrains capacity development, as knowledge and skills are not always retained over time, limiting institutional memory and reducing the long-term impact of capacity-building efforts.

Contextual risks such as political instability and security challenges in certain regions may also affect the implementation of regulatory activities, including inspections, monitoring and stakeholder engagement. These conditions may influence institutional performance, investment conditions and the continuity of programme activities, as was evident in the ITP 308.

Several mitigation measures are supported through previous programme activities and related institutional efforts. These include strengthening technical capacity within regulatory authorities, developing practical tools such as guidelines and checklists, and improving awareness of environmental and safety requirements within the ASM sector. Continued international cooperation and capacity development remain important in supporting these processes and strengthening sustainable mining governance in Ethiopia.

Kenya

Context and Key aspects of Mine Water and Mine Waste Management

Kenya's mining industry is still in an early stage of development, historically contributing less than 1% to the national GDP. The government has nevertheless set an ambitious goal for the sector to contribute 10% of GDP by 2030. Achieving this requires significant regulatory, financial, social, and environmental advancements, many of which align with the ITP 308 expected outcomes. As an emerging mining nation, Kenya has a unique opportunity to address mining-related challenges proactively and governing institutions have lately been granted stronger mandates to regulate the industry. In recent years, these institutions have intensified their efforts to establish a sustainable and responsibly managed mining sector, partly aided by the ITP 308.

With global gold prices reaching record highs, Kenya has experienced a significant increase in artisanal and small-scale miners entering the gold mining sector, many of whom have limited experience in mining practices. This influx heightens the need for effective regulation and enforcement, as low awareness of mining-related risks can lead to unsafe conditions and environmental harm. In recent years, the government reports having shut down at least 3 000 illegal mining operations as part of its effort to transition toward a fully formalised mining industry. Nonetheless, there is room in the law to designate areas exclusively for artisanal and small scale mining, to reduce conflicts, promote environmental and occupational safety, enhance productivity as well as compliance within the sector. However, a gap between policy intent and implementation has been identified while aligning Kenya

with international best practices in ASM governance. Therefore, guidelines for a structured framework to identify, designate, manage, and regulate ASM areas in Kenya has been drafted in 2025.

The establishment of Artisanal Mining Committees at local levels in 2020 improved coordination and helped reduce conflict. Subsequent years brought even more substantial progress. In 2023, the government lifted the four-year moratorium on mining licenses to stimulate investment and increase national revenue. Simultaneously, artisanal miners were organised into cooperatives, enabling them to access safer technologies, receive legal recognition, and benefit from more structured governance.

The Artisanal Mining Committee's Manual, which was an ITP 308 change project, has further standardised the management of artisanal mining across counties. Looking ahead, the government has identified capacity building as a key priority. Training programmes for artisanal miners using rudimentary equipment are planned, along with the development and distribution of manuals and guidelines focused on environmental management and the prevention of degradation associated with small-scale mining.

Growing public awareness of environmental rights and the role of mining in degradation has increasingly resulted in legal challenges and stronger community resistance to mining activities. Media coverage of mining disasters and environmental violations furthers the public demand for reforms. In response, public participation in Kenya's mining sector has been strengthened through mandatory Environmental and Social Impact Assessments and stakeholder consultations, prior to project approvals. By 2022, enforcement of ESIA requirements had intensified, with mining companies now obligated to develop comprehensive environmental management plans before beginning operations. Enhanced stakeholder engagement, through public consultations and structured community engagement frameworks, has further improved the social license to operate in mining areas and projects.

ITP 308 partners

In Kenya, the authorities responsible for supervising and permitting planned and operational mines, and who also participate in the programme are:

- **The National Environment Management Authority (NEMA)** ensures that environmental considerations are integrated into development policies, plans, programmes, and projects to promote the sustainable use of natural resources. Staff capacity is primarily focused on broad environmental competence.
- **The Ministry of Mining, Blue Economy and Maritime affairs (MiBEMA)** promotes a sustainable extractive sector in Kenya. The primary focus of this institution is the geological aspects of the mining sector.

Contribution to programme outcomes in Kenya

The knowledge sharing approach promoted by the ITP 308 capacity building programme is clearly reflected in Kenya and its participating organisations. The change projects have been closely aligned with governmental and institutional priorities, supported by strong engagement from senior management. This top-level commitment has strengthened the impact of ITP 308, particularly within NEMA.

Staff who completed the programme are now providing internal training and workshops, contributing to broader knowledge transfer across technical teams and local offices. This demonstrates an effective utilisation of the competencies gained through the programme. Beyond the development of guiding documents and regulations, this ongoing dissemination of knowledge indicates that ITP 308 has made a meaningful and lasting contribution to mining regulations in Kenya. Furthermore, the recognition of ITP 308 change projects as models for other government bodies addressing

environmental and safety issues in the extractive sector highlights the programme's influence well beyond the individual participants and underscores its national relevance.

Exposure to global best practices and case studies through ITP 308 enabled participating organisations to benchmark local processes, identify gaps, and contribute more effectively to policy reviews. This included informed input on waste management in the extractive industries and catchment-level water resource policies, which frequently overlap with mining activities. Following the awareness-raising and training activities conducted by Kenyan ITP 308 participants in 2023, community-based initiatives in Migori County, led by the Migori County Artisanal Miners Cooperative, have begun restoring degraded ecosystems. This illustrates how communities living near mine sites are becoming more involved through enhanced public participation, and how transparency and knowledge are reaching local communities from government institutions.

The programme also improved the quality of environmental inspections overall by strengthening participants' capacity to analyse data and interpret design and mitigation strategies presented in ESIA's. In addition, Kenya's ongoing governmental initiatives to expand the mining sector and formalise artisanal and small-scale mining are clearly reflected in the Kenyan participants' change projects, further aligning the programme with national efforts to build a sustainable extractive sector. National politics and the ITP 308 goals coincide overall, but perhaps particularly well in outcomes 1. Efficient and ethical governance principles within partner organisations lead to a sustainable mining sector with increased accountability, 2. Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development, and 3. Partner organisations ensure the best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle.

The participants' change projects have strengthened both regulatory oversight and factual supervision of the mining sector by introducing new tools such as mine-waste monitoring systems, standard operating procedures for tailings-dam inspections, and guidelines for land rehabilitation. These efforts have resulted in the development of several guiding documents intended to support mine inspectors and to inform the public about the environmental impacts of mining. Three of the most impactful change projects are the Mine Closure and Rehabilitation Guidelines which later evolved into a joint initiative under the Environmental Governance Programme led by the Swedish EPA and UNDP, the ESIA guidelines for the mining sector in Kenya and the manual for the ASM committees. Together, these projects promote early planning for post-mining land use and strengthen sector-wide understanding of environmental and social considerations in mining operations.

Additional benefits reported by government officials include strengthened accountability for long-term water quality management and mine closure responsibilities, as well as a reduction in pollution incidents in several mining areas. These outcomes demonstrate the broader impact of the programme beyond institutional capacity building, extending into improved environmental governance and community-level practice. Together, these outputs contribute to improved quality and long-term sustainability in the sector.

Despite the programme's significant achievements, improvement of several ITP 308 outputs could continue to strengthen Kenya's mining sector. The forthcoming guidelines for licensing and inspection of mine waste storage facilities, developed as ITP 308 change projects, still require formalisation. The regional pilots have demonstrated strong potential, but additional technical work, institutional alignment, and capacity-building efforts are needed to ensure their effective national rollout.

Country risk analysis and mitigation

To ensure the sustainable growth of Kenya's mining sector, continued political commitment and institutional regulatory strengthening are essential. Although recent reforms have contributed to progress, significant challenges persist. Kenya still faces long-standing structural weaknesses and remains vulnerable to the 'resource curse'. The resource curse describes how countries rich in natural resources can experience weaker economic growth, fragile institutions, and more conflict because resource wealth often leads to dependency, corruption, and poor governance. Given Kenya's relatively early stage of mining sector development and the strong geopolitical competition surrounding natural resources, this risk is both real and pressing. Continued capacity building for government institutions and mining operators is therefore critical to complement strengthened regulatory and enforcement frameworks.

Political instability also presents a contextual risk. In Kenya, leadership appointments at various administrative levels are closely tied to political considerations rather than professional expertise. This poses a risk of losing momentum in efforts to build a sustainable mining sector. Conversely, it could also create opportunities if appointments align with sectoral needs and leadership committed to sustainable development are put in place.

The ASM sector is expected to continue growing, introducing individuals with limited mining or processing experience to the sector. This creates additional contextual risks for environmental degradation and human health and safety incidents that require strong regulation, cross-agency collaboration, and effective enforcement. The government's intent to strengthen capacities among both ASM communities and the regulators responsible for oversight is an important step in mitigating poor mining practices that can harm ecosystems, pollute water sources, and endanger lives. By improving regulatory tools, strengthening institutional capacity, and enhancing community awareness, the programme will continue to contribute directly to Kenya's efforts to manage risks and promote more responsible and sustainable ASM practices throughout the entire mine lifecycle.

Liberia

Context and Key aspects of Mine Water and Mine Waste Management

Liberia is a small country where much of the population works in informal, low-productivity jobs. Since the start of the ITP 308, the mining sector, dominated by iron ore, gold, and diamonds, has largely expanded, although it remains highly vulnerable to market fluctuations. Elevated mineral prices have driven many people to shift from fishing and agriculture to artisanal and small-scale mining, often without prior experience or understanding of mining practices or their environmental and health impacts. Insufficient regulations and limited public awareness have contributed to significant environmental degradation and serious health risks. To mitigate these impacts, the Liberian government introduced several measures between 2019 and 2022, including bans on dredges and mercury in gold mining, revisions to ESIA regulations, and new requirements for chemical registration and importation. In addition, ASM handbooks have been produced both as part of the EU-sponsored PanAfGeo as well as the UNDP and SwEPA led Environmental Governance Programme.

Following the 2023 presidential election, changes in government brought reforms to the governance of the mining sector. Statutory authority was returned to the Ministry of Mines and Energy from previously being situated under the president's office, to reduce political interference and curb opportunities for corruption while maintaining focus on environmental protection. Additional regulatory updates were introduced, including new rules for air and water quality, chemicals, waste management, wetlands, and the ratification of the Minamata Convention on Mercury. A Mineral Sector Working Group was also established. Draft regulations on tailings storage facilities and mine closure and decommissioning were completed, and a decentralisation process was initiated to bring

regulatory institutions closer to affected communities and help address local conflicts related to mining and other land-use pressures. The Environmental Protection Agency of Liberia earlier opened regional offices to monitor mining activities at the local level, address area-specific environmental challenges, and support the implementation of environmental protection and conservation measures.

In 2023, mining accounted for approximately 15% of Liberia's GDP, yet much work remains to be done to strengthen in-country value chains. Recent investments, such as expanded and upgraded rail infrastructure, increase in deep-sea port capacity, and construction of a new concentrator, reflect efforts to increase national revenue. Iron ore production is expected to triple by 2026 due to new operators and improved logistics. All time high gold prices are expanding the artisanal and small-scale mining sector, creating regulatory and environmental challenges. Although a formalisation programme was launched in 2019, ASM operations remain largely informal. Poor mining practices and their associated environmental impacts have led to repeated shutdowns of illegal operations across the country, affecting both local and foreign actors.

ITP 308 partners

The two organisations that have been invited to the programme are the Ministry of Mines and Energy and the Environmental Protection Agency of Liberia.

- **The Ministry of Mines and Energy (MME)** is responsible for monitoring and enforcing compliance on policies regarding exploration, development and exploitation of minerals, water, and energy resources in Liberia.
- **The Environmental Protection Agency of Liberia (EPAL)** has the mandate to manage the environment in Liberia and to coordinate, monitor and consult with stakeholder on all activities for the protection of the environment and the sustainable use of natural resources. It is also in their portfolio to inform and advise on the state of the environment, and anything connected with it.

Contribution to programme outcomes in Liberia

Liberia is one of the most recent countries to join the ITP 308. Despite having participated in fewer cohorts, the influence of ITP 308 is visible at both individual and institutional levels, reflecting in changed mindsets, organisational restructuring, and the development of new regulatory documents.

The previously mentioned key drivers of the post-2023 reforms also include several outputs and outcomes from the ITP 308. Institutional collaboration and information-sharing have strengthened, particularly between the MME and the EPAL. Previously, cooperation occurred mainly at policy and senior levels, but the networking activities and change projects have fostered more practical, field-level collaborations. This includes joint inspections, shared use of resources and a broader shift toward incorporating bottom-up feedback into organisational decision-making, in contrast to the earlier predominantly top-down approach. At the same time, discussions among senior management across organisations have also intensified, largely driven by the change project work and need for joint understanding and collaborations to successfully complete them.

Liberia has also made extensive use of the programme's training materials, more so than any other participating country, ensuring dissemination and knowledge transfers of sustainable mineral extraction, thereby contributing to local and national development. The EPAL has incorporated the ITP 308 content on sustainable mining into its in-house training for government employees, training-of-trainers programmes, and capacity-building for environmental and EIA inspectors (the latter being standalone consultants in Liberia). The

material has also been used by EPAL staff in university courses, strengthening capacity not only within the EPAL but also among stakeholders involved in regulating and monitoring the mining sector as well as future professionals within the sector. The EPAL's regular in-house training has been continuously updated and expanded, and it has now become a standardised process for all new employees. This institutionalised training structure represents one of the most significant organisational changes resulting from ITP 308.

The organisations have also restructured their internal arrangements, partly because of the capacity built through the ITP 308 and the resulting shifts in individual roles due to improved competencies. These changes have strengthened the institutions' ability to fulfil their mandates, although they have not always been welcomed by the employees. However, this also indicates that the ITP 308 has addressed one of the main challenges of the MME, i.e. the absence of technical capacity.

Beyond improved institutional collaboration, increased individual capacity and changes in stakeholder engagement practices have strengthened governance in the mining sector. Stakeholder engagement has become more holistic, with greater emphasis on social considerations within the ESIA process. Additionally, there has been a notable shift away from a predominantly top-down approach toward more inclusive engagement that increasingly incorporates the perspectives of women, children, and youth.

The initial focus of the Liberian change projects was on ASM-related issues and the development of training toolkits. However, because several other initiatives in Liberia were already targeting the ASM sector, it became increasingly difficult to distinguish the ITP 308 efforts from other projects and to avoid overlapping initiatives. To maximise the effectiveness of their work, the Liberian teams chose to shift their focus to a new topic inspired by the ITP 308 training: the management of tailings storage facilities.

The final three Liberian cohorts collaboratively produced the comprehensive Tailings Storage Facility (TSF) management regulations and guidelines which was mentioned earlier. To advance the regulatory drafts, the project teams conducted numerous stakeholder consultations involving local communities, technical experts, and other relevant actors. Ensuring transparency and broad participation was a central priority, allowing the groups to work collaboratively across diverse interests and expertise to achieve the strongest possible outcome. The project's objectives and implementation align closely with all expected outcomes of ITP 308 from dissemination and knowledge transfers, efficient and ethical principles leading to accountability, transparent and inclusive dialogue with public participation and strengthened collaborations.

As a culminating achievement, the Regulations Governing Tailings Storage Facilities Management under the Mineral, Mining and Environmental Protection Law of the Republic of Liberia 2024 – Version 1.0 came into effect in October 2025, firmly establishing the contributions of the ITP 308 participants, and the spirit of the programme, as a lasting milestone in advancing a more sustainable, transparent and inclusive mining sector in Liberia.

- *Mining authorities must adapt to growing complexity*
- *Local communities must be treated as partners, not recipients*
- *Post-mining sustainability needs planning from the start*

Key messages from Team Liberia, Malå, May 2025

It should also be noted that several Liberian participants in ITP 308 have held senior positions within the authority, permitting them to drive substantial organisational change. Their mandates enabled them to pursue and implement the opportunities for improvement introduced through the programme, such as knowledge transfers, inclusive dialogues and collaborations. Moreover, their institutions tend to be relatively small, which makes the programme's impact more closely linked to the motivation, initiative, and influence of individual participants. Most of the programme participants do not have the authority to effect change within their organisations. In this sense, both Liberia and the ITP 308 programme have benefited from having highly driven individuals with the mandate to act involved in the training.

Country risk analysis and mitigation

The extensive institutional changes introduced after the 2023 presidential election have centered on decentralising governance of the mining sector. While this shift offers important opportunities, it also introduces contextual and institutional risks. Outcomes may vary significantly depending on the priorities and integrity of the governing parties, leading all elections to become risk factors. Weak, autocratic or inconsistent leadership could undermine regulatory enforcement, whereas strong, inclusive and transparent leadership could strengthen sustainability and accountability going forward.

The most effective way to mitigate these risks is to ensure preparedness and consistently highlight the tangible benefits of a sustainable mining industry for Liberia's economy, environment, and communities. Institutional risks associated with changes in leadership can be reduced by promoting transparent decision-making, bottom-up engagement, and inclusive governance processes which are some of the outcomes of the ITP 308 in Liberia.

The contextual risk associated with attracting investors to Liberia lies in ensuring that mining activities are conducted responsibly. Corrupt politicians or officials may create institutional risks by intentionally failing to enforce regulatory mandates, while mining companies may disregard rules and environmental standards if oversight is weak or if they lack a commitment to transparency, inclusivity, and responsible environmental practices.

Rwanda

Context and Key aspects of Mine Water and Mine Waste Management

Rwanda is a small, central African country with a mining sector that has operated for more than 80 years with mining of mainly tin, tungsten, tantalum, gold and recently lithium. Meaningful regulatory oversight, however, only began in 2017 (which coincides with the inception year of the ITP 308), with the establishment of the Rwanda Mines, Petroleum and Gas Board, whose mandate was to modernise and expand the industry and strengthen Rwanda's position in the global mining sector. The transformation also focused on developing a qualified and sufficient professional workforce. In 2019, the first cohort from the newly established School of Geology and Mining graduated with degrees in mining-related disciplines, marking an important step toward strengthening Rwanda's technical capacity in the industry. As many other countries, the development of the mining sector was financially driven in Rwanda and in the efforts to put Rwanda on the map as a significant mining hub in East Africa, the LuNa tin smelter was opened in 2019. The country also has one gold refinery and one tantalite refinery. By 2025, the mining sector had become the fastest-growing industry in the country and is expected to play an increasingly important role in Rwanda going forward. The transformation is driven by ongoing reforms such as increased mechanisation, adoption of new technologies, professionalisation of mining operations, the promotion of responsible and environmentally sustainable practices, and improved geological knowledge through continued exploration.

Rwanda borders to established mining countries such as the Democratic Republic of Congo (DRC) and Tanzania. The conflict between DRC and Rwanda dominates much of the news about mining in the region and concerning mineral production in Rwanda. Cross-border mineral trade and associated conflicts are reported in the press and by organisations implicating Rwanda as a major part and as a beneficiary of mineral resources in the DRC. Rwanda's viewpoint continues to be that all minerals sold from Rwanda originate in Rwanda and not in the DRC. The border conflicts between the DRC and Rwanda are far reaching and goes back decades. It peaked in 2025, but a peace agreement was signed between the DRC and Rwanda to de-escalate the conflict. However, to date the unstable situation is not resolved. ITSCI's (originally from the International Tin Association) purpose is to create responsible mineral supply chains in member countries. ITSCI works in the area but still experience challenges with security in the area, low government capacity and resources and an informal mining sector, which hinders the optimal outcomes of the ITSCI procedures and thus, the controversy over legal/illegal mineral trade continues, albeit under increased supervision.

Rwanda's first environmental- and mining laws were introduced in 2018, and the first regulation for safety standards was published in 2024. The mining and quarry law from 2024, especially chapter 5 which specifies the obligations of license holders on health, safety and environment, included inputs from ITP 308 alumni, showing the far reach ITP 308 capacity building has had on the regulations in the country. These regulatory additions are crucial for governing the mining sector in the country. In response to criticism from the Rwanda Environment Management Authority, that the Rwanda Mine and Gas Board too easily award mining permits without sufficient base information of impact on the environment, the RMB employed environmental experts who work exclusively on environmental issues related to the extractive industry.

Another important focus within the industry is that the president has called for an inventory of all sites in need of rehabilitation. The goal is that all abandoned or closed mine sites from pre-2003 should be mapped and properly managed. One of the change projects that can be tied to this inventory is the cohort seven 'Register for inventory of operating and decommissioned tailing management facilities'. Today, the country requires mining companies to implement progressive closure and to have financial guarantees for this process.

ITP 308 partners

The two Rwandan organisations invited to the programme were the Rwanda Mines, Petroleum and Gas Board and the Rwanda Environment Management Authority. Both institutions are mandated to regulate and enforce laws and regulations governing the mining sector in Rwanda, making them well-suited participants in the ITP 308 programme.

- Rwanda Mines, Petroleum and Gas Board (RMB) is the government institution that regulates the mining activities and advise the government on laws, policies, and strategy to implement a mining industry. RMB currently focuses on improving oversight of compliance to mining law whilst delivering new regulations on e.g., licensing and permitting, mineral processing and mine site rehabilitation guarantees.
- Rwanda Environment Management Authority (REMA) is a government agency under the Ministry of Environment with a mandate to protect, conserve, promote, and manage the environment. Its responsibilities include advising the government on environmental and climate-related matters. REMA recently updated the environmental impact assessment guidelines for mining projects and previously launched a strategic plan for the sustainable management of natural resources in Rwanda.

Contribution to programme outcomes in Rwanda

Rwanda was the last country to join the ITP 308. Given its relatively young regulatory framework, limited educational opportunities prior to 2019, and constrained institutional experience,

capacity-building for government staff has been particularly vital in Rwanda. Strengthening the skills of employees from both RMB and REMA is, therefore, essential for the continued development and implementation of mining legislation in the country.

The individual impact of the programme alumni is especially visible in Rwanda compared to other ITP 308 countries. This is due to two main factors: first, the functionality of regional offices in a comparatively small mining sector, where much of the inspection work is decentralised; and second, the requirement for mining companies to embed government officials within their operations. Together, these factors create strong opportunities for programme alumni to influence and improve mining practices at grassroot level, not only through legislation, but through day-to-day operational engagement. Nonetheless, the number of organisational changes following new guidelines and checklists quickly impact on how authorities work in mining regions.

As in all other participating countries, the ITP 308 alumni from Rwanda demonstrate a clear shift in the way inspections are conducted following their participation in the programme. Their strengthened understanding of environmental impacts and mining-operation design has enhanced their ability to assess projects more effectively and with greater technical confidence, while also enabling meaningful knowledge transfer to mining operations. The instruction of RMB staff to guide operators on tailings management, waste disposal, and mine closure planning has now been incorporated into compliance requirements, underscoring the programme's contribution to improved knowledge dissemination, ethical governance, and a more robust application of preventive and mitigation measures throughout the mining cycle. This is clear evidence of the ITP 308 expected outcomes coinciding with organisational change and steps towards a more sustainable mining sector in Rwanda. It has even been reported that the programme so greatly enhanced the understanding of sustainable mineral extraction that it led to implementation of new waste management practices in operations, e.g. adopting water recycling systems that significantly reduce environmental impact and operational costs.

In terms of transparency and stakeholder engagement, there are several examples of how the programme has encouraged participants in Rwanda to establish community forums and hold quarterly meetings in their regions. This shift has strengthened community relations and contributed to more informed and sustainable project outcomes, aligning well with the programme's objective of enhancing transparency and public participation in the country. There are also examples of multi-stakeholder partnerships that include government agencies, mining associations, and local communities formed to address mining challenges. Actions include joint workshops to share resources and develop best practices, ensuring a coordinated approach to sustainable mining. This collaboration has led to more effective policies and a unified response to environmental and social issues in the mining operations in Rwanda.

Change project impact on the programme outcomes include strengthened regulatory guidelines for tailings storage facilities, promoting safer practices. In the highly mountainous country, management and design of waste facilities are particularly important as the risk of landslides as well as river and land pollution is clear. Together with the above outcomes, it is evident that all the expected outcomes have been met in Rwanda and significant steps have been taken to ensure the programme intended long-term impacts.

Country risk analysis and mitigation

The contextual and institutional risks arising from the conflict between the DRC and Rwanda continue to overshadow the region. In 2025, allegations linking the CEO of RMB to the conflict likely resulted in the change in leadership, illustrating how political and mineral-related tensions can directly affect regulatory institutions. Such developments risk undermining public trust in government agencies and may impede progress toward a more transparent and sustainable mining sector in Rwanda.

The absence of clear guiding documents for the mining industry poses institutional risks for regulators in Rwanda. The recent development of such documents is an important step toward mitigating environmental impacts and reducing the likelihood of major incidents, such as tailings dam failures. However, the rapid growth of the industry, combined with new staff and the need to implement multiple new regulatory frameworks, continues to pose challenges for both environmental protection and community safety. Several ITP 308 change projects were designed to address these gaps and support improved governance; however, more work is required. Given the current capacity constraints and the continued expansion of regulatory institutions, there remains a strong need for specialist training and the involvement of experts to develop guidelines that ensure best practices and alignment with international standards. It is therefore of interest that the EU sponsored PanAfGeo+ Country Window Rwanda is partially focusing on mine waste management and hazards.

Tanzania

Context and Key aspects of Mine Water and Mine Waste Management

Tanzania's mining sector has undergone substantial transformation over the past decade, with its contribution to GDP more than doubling to 10% since 2015. This growth has positioned the country as one of Africa's leading mining countries. As mining activities expand and the government pursues continued sectoral development, maintaining comprehensive, current, and consistently enforced regulations remain essential. This places significant responsibility on the institutions charged with oversight and regulation. Nevertheless, the President's strong commitment to sustainable mining in Tanzania provides essential support, reinforcing and facilitating the work of enforcement agencies.

To strengthen governance of the sector, the Mining Commission was established in 2017 as the operational arm of the Ministry of Minerals. The National Environmental Management Council, established in 1983, is currently being restructured into the National Environment Management Authority to reinforce its legal mandate. Both institutions now maintain regional offices to support, advise, and guide miners across the country.

Since 2018, several major legislative reforms, including the 2019 revision of the Tanzania Mining Act, have reinforced governance frameworks, enhanced oversight, and strengthened local content requirements.

The rapid expansion of the ASM sector continues to present challenges, though recent improvements are evident. Awareness of the ASM sector's impact has been raised in mining communities through social media and the country now has a substantial number of formalised small-scale miners. The sustainability agenda has broadened from focusing primarily on large and medium-scale mining to also addressing ASM activities. The Mining Act e.g. empowers the Ministry of Minerals to declare designated areas reserved exclusively for small-scale mining. Within these zones, only small-scale licenses can be issued, ensuring that artisanal operators are protected from competition with large-scale mining companies. Despite regulatory requirements applying to all mining operations, ASM operations still have the lowest compliance levels, underscoring the need for continued engagement and enforcement in this stakeholder group in particular.

Government actions, such as training, regulation and enforcement, remain critical to ensuring a well-regulated sector. The establishment of mineral markets and buying centers in all regions and designated districts has advanced the small-scale mining sector. The aim was to curb illegal mineral trading and smuggling, enhance transparency and accountability for small-scale mining as well as providing a fair buyer-seller trading platform. Today, more than 40% of Tanzania's mineral exports, mainly gold, originate from ASM operators, highlighting their importance to the sector's sustainable development.

Tanzania's mining industry is expected to continue growing, and the government is currently developing a strategy for critical and strategic minerals. Numerous exploration and mining operations are under development and resources of graphite, nickel, lithium, and rare earth elements have positioned the country as an important contributor to the global energy transition. Tanzania's alignment with international environmental and mining standards has likely influenced recent strategic guidelines and policy initiatives. However, mining-related accidents persist, often due to limited knowledge of safe practices, regulatory non-compliance and insufficient enforcement. Continued efforts are therefore necessary, to achieve a sustainable and well-managed mining industry in Tanzania.

ITP 308 partners

In line with strengthening government capacity, all participating Tanzanian institutions are directly involved in governing and enforcing regulations within the mining sector.

- **The Ministry of Mineral's (MoM)** mission is to 'manage minerals resources effectively and efficiently through sound policy and legal frameworks'.
- **The Mining Commission (MC)** is a body created within the MoM and supervises and regulates all mining operations by issuing licenses and permits, conducting compliance inspections, and organising awareness trainings.
- **The National Environmental Management Council (NEMC)** is the overall environmental regulator and mainly review, oversee, and monitor EIA processes as well as oversee compliance and enforcement.
- **Occupational Safety and Health Authority (OSHA)** regulate safety and health matters by ensuring safe work environments through, e.g., accident investigations and awareness trainings. They also issue compliance licenses.

Contribution to programme outcomes in Tanzania

The programme has contributed in multiple ways to positive developments within Tanzania's mining sector and its regulatory institutions, thereby supporting the expected outcomes of ITP 308. The most evident change within participating organisations is the strengthened individual capacity of staff. While increased individual competence is not a programme objective, it is essential for achieving organisational change. Government institutions cannot be strengthened without enhancing the skills of their personnel. Through training and field visits, officials have improved their technical expertise in mine water and mine waste management, enabling them to carry out their responsibilities more effectively and advancing the government's overall performance in sustainable mining. By continuously inviting the same institutions and building a critical mass of ITP alumni within regulatory agencies, the programme has significantly strengthened Tanzania's environmental and institutional capacities and narrowed the gap between the public and private mining sectors.

The increased knowledge base has also enabled "training-of-trainers" activities and improved stakeholder engagement through collaborative awareness campaigns and field-based training sessions. The programme has fostered collaboration among government agencies, mining companies, and local communities to address environmental challenges collectively, while also promoting gender equality and inclusivity in decision-making processes. All these activities have been part of change project actions, and the outcomes directly contribute to all the programme's expected outcomes including the recently added, 'strengthened collaboration between partner organisations within and between the participating countries'. The enhanced knowledge of mine waste management has also led to improved inspections and the development of more robust regulatory and guiding documents. One notable example is the impact on mine closure regulations after the first cohort, in which participants contributed to extending the required post-monitoring period and clarifying conditions under which a mine can be considered closed. Given that chemical

alterations can occur decades after closure, this revision represents a strong contribution to the long-term objective to protect ecosystems on land and in water and promote that good living conditions and biodiversity are ensured for current and future generations.

In Tanzania, organisational change efforts during the programme have primarily targeted small- and medium-scale mining operations, reflecting the fact that larger mines generally demonstrate higher regulatory compliance. Across the cohorts, three clusters of change projects emerged: 1) inspection checklists, 2) guidelines and training for small- and medium-scale miners, and 3) cyanide container control. Through these initiatives, the programme has introduced practical tools and guidelines on waste management within regulatory agencies, thereby enhancing and streamlining environmental management at the government level. User-friendly guidelines, training materials, and awareness campaigns, partly in Swahili, have strengthened stakeholders' capacity on safety and mine waste management, enabling miners to meet environmental requirements to a degree that was previously beyond reach. Most of the materials developed through the change projects can be used by both miners and government officials, illustrating the broad impact of the programme's outputs. These guidelines and training resources now form part of the ongoing capacity-building activities carried out by the organisations themselves as part of their mandates to regulate the mining sector. As a result, the ITP 308 has left a significant and lasting footprint on the sustainable development of Tanzania's mining industry.

Country risk analysis and mitigation

Going forward, contextual and institutional risks threaten the long-term impact of the ITP 308's outputs and outcomes. Last year, the contextual risk related to a potential loss of support from national political leaders or local communities was assessed as low, though it was noted that the 2025 elections could alter this situation. Although the elections did not result in a change of leadership, and presidential support for a strong and sustainable mining sector remains, the political turbulence surrounding the October 2025 election has created significant institutional risk by political and reputational damage. Several countries have withdrawn their support. This development increases the likelihood that countries and investors with weaker environmental and human rights regulations and standards will gain influence in Tanzania's mining sector.

Institutional risks within government authorities also remain evident. The participating organisations continue to face challenges in providing miners with sufficient information and guidance on mining risks, contributing to ongoing accidents with severe environmental and human health consequences. For example, mine collapses persist despite the existence of strong regulations, demonstrating a continued need for capacity building at all levels of the mining industry and for the development of efficient, harmonised and user-friendly governance tools. Also, the human resources are not enough to ensure inspections and enforcement. Capacity building initiatives such as the ITP 308 play an important role in mitigating these risks. The programme has strengthened institutional competencies and assisted in producing tools for sustainable mining governance. With the ITP 308 winding down, other capacity building initiatives such as the EU-funded PanAfGeo+ Country Window Tanzania, where SGU also participates, continue to support sustainable mining practices and foster stronger ties between Tanzania and the EU for mutual benefit.

Zambia

Context and Key aspects of Mine Water and Mine Waste Management

Zambia has a long history of mining and remains one of Africa's most important copper-producing countries. Copper continues to dominate the sector, while minerals such as cobalt and nickel are gaining increasing importance due to their role in the global energy transition. The government has set an ambitious target of increasing annual copper production to three million tonnes by 2031 in order to strengthen Zambia's role in the global copper market and attract new investments to the sector.

Mining activities are mainly concentrated in the Copperbelt Province and the North-Western Province, where several large-scale mining operations are located. In recent years, the mining sector has expanded through both new investments and increased production. At the same time, artisanal and small-scale mining has grown in many parts of the country. In addition to mining operations, the number of small- and medium-scale processing plants has increased, particularly in the Copperbelt region. Many of these facilities process low-grade ore or residual materials from mine waste purchased from traders or artisanal miners. This development has created a market for mine waste and tailings, which in turn encourages informal mining activities at abandoned or active mine sites. The expansion of ASM has also raised concerns related to safety and environmental management. In recent years, several fatal accidents linked to informal mining activities have been reported in different parts of the country, highlighting the risks associated with unregulated mining practices and limited oversight. These events have increased public attention on the need for improved regulation, licensing procedures and awareness of safe mining practices within the ASM sector.

The institutional framework governing Zambia's mining sector has recently undergone important changes. Historically, the Ministry of Mines and Minerals Development (MMMD) has been responsible for regulating the mining sector through several departments, including the Mines Safety Department (MSD). The department has traditionally overseen environmental aspects of mining operations. In 2024, Zambia adopted the Minerals Regulation Commission Act, establishing the Minerals Regulation Commission (MRC) as the central regulatory authority for the mining sector. The reform consolidated several regulatory functions previously exercised within the ministry and introduced a Mining Appeals Tribunal to handle disputes related to licensing and regulatory decisions.

Environmental governance in Zambia is primarily guided by the Environmental Management Act No. 12 of 2011. The legislation mandates the Zambia Environmental Management Agency (ZEMA) to oversee environmental impact assessments, pollution control and environmental monitoring across sectors, including mining. ZEMA reviews environmental impact assessment reports for mining projects and ensures that operations comply with environmental regulations. In addition, national policy initiatives such as the National Green Growth Strategy 2024–2030 emphasise the importance of environmental sustainability, climate resilience and the rehabilitation of closed or abandoned mine sites.

Despite these institutional and policy frameworks, Zambia continues to face environmental challenges related to mining activities. Many mining areas have a long history of mineral extraction, resulting in legacy environmental impacts such as abandoned mine sites, contaminated land and poorly managed tailings facilities. In several parts of the Copperbelt, historical mining activities have contributed to pollution and sedimentation in local water bodies, including the Kafue River system. These environmental challenges highlight the importance of strengthening mine water management, tailings governance and mine closure practices in order to reduce long-term environmental risks.

ITP 308 partners

In Zambia, the organisations invited to participate in the ITP 308 programme were the Ministry of Mines and Minerals Development (MMMD) and the Zambia Environmental Management

Agency (ZEMA). Both institutions play central roles in regulating and overseeing the mining sector and are therefore well-suited participants in a programme focused on mine water and mine waste management.

- **The Ministry of Mines and Mineral Development (MMMD)** has historically played a central role in regulating the mining sector in Zambia through the MSD, which has been responsible for mine safety, mine waste management, explosives regulation and technical inspections of mining operations. During the implementation of the ITP308 programme, MMMD and MSD were the primary institutional partners representing Zambia. Recent institutional reforms have resulted in the establishment of the Minerals Regulation Commission as the main regulatory authority for the mining sector, with the functions of the former MSD now incorporated into it.
- **Zambia Environmental Management Agency (ZEMA)** is an independent environmental regulator established under the Environmental Management Act of 2011. ZEMA plays a key role in reviewing environmental impact assessments, monitoring environmental compliance and ensuring that development activities, including mining projects, are implemented in accordance with environmental regulations. Through its mandate, ZEMA contributes to safeguarding environmental sustainability and natural resource management in Zambia

Contribution to programme outcomes in Zambia

Within this context, the ITP 308 programme has contributed to strengthening knowledge and institutional capacity related to mine water and mine waste management in Zambia. By engaging regulatory authorities responsible for overseeing mining activities, the programme has supported improved understanding of environmental risks and enhanced dialogue between institutions involved in mineral resource governance. Through training activities and collaborative learning, participants have gained increased knowledge of international practices related to mine water management, tailings governance and environmental monitoring. This increased knowledge base has improved the ability of participating institutions to scrutinise environmental impacts associated with mining operations and to promote preventive and mitigation measures throughout the mining life cycle.

An important component of the programme in Zambia has been the development of change projects by programme participants. These projects have focused on addressing practical challenges related to environmental governance, regulatory procedures and stakeholder awareness within the mining sector. Several projects have aimed to strengthen regulatory guidance and improve the dissemination of information on environmental management practices. For example, some projects have focused on improving regulatory tools used by government institutions, including the development of guidelines, checklists and training materials related to mine waste management and environmental inspections. These tools support government officials in carrying out their regulatory responsibilities and contribute to more consistent and effective environmental oversight.

Other initiatives have focused on improving awareness among ASM miners regarding licensing procedures, environmental permitting requirements and safe operational practices. These initiatives are particularly relevant in Zambia given the fatal accidents linked to informal mining activities. By improving awareness of regulatory requirements and enhancing communication between authorities and miners, such initiatives aim to reduce unsafe practices, raise environmental awareness, and encourage greater formalisation of the ASM sector.

Participants have also shared knowledge gained through the programme with colleagues and stakeholders within their organisations. This internal knowledge transfer has contributed to increased institutional capacity and improved awareness of environmental risks associated with mining operations. In addition, the programme has facilitated knowledge exchange between

participants from different countries. Experiences shared between Zambia and other participating countries, including discussions on the formalisation of the ASM sector, have provided valuable insights into different regulatory approaches and practical solutions. For example, exchanges with participants from Tanzania in relation to ASM formalisation have contributed to a broader understanding of how regulatory frameworks and awareness-raising initiatives can support safer and more sustainable ASM practices.

Although institutional capacity constraints remain, the ITP 308 has contributed to strengthening collaboration between regulatory authorities and improving the dissemination of knowledge related to sustainable mining governance. Through the development of change projects and ongoing institutional learning, the ITP 308 programme has supported progress toward improved environmental management and more sustainable mining practices in Zambia.

Country risk analysis and mitigation

The rapid expansion of Zambia's mining sector has increased the importance of managing environmental risks associated with mine waste, mine water and mine closure. Mining activities in the country have historically generated significant environmental liabilities, including abandoned mine sites, contaminated land and long-term pollution from legacy mining operations. At the same time, the growth of both large-scale mining and ASM continues to place additional pressure on water resources, ecosystems and local communities. Environmental challenges linked to mining therefore remain a key governance challenge in Zambia's mining sector.

Recent environmental incidents have highlighted the potential consequences of inadequate tailings management. In 2025, an acid spill linked to a tailings facility outside Kitwe contaminated parts of the Kafue River system, affecting water resources and surrounding communities. In the same year, a tailings dam collapse at the Mukabamo copper mine in Luapula Province resulted in pollution of a nearby stream and led to the suspension of mining operations. These incidents illustrate the environmental risks associated with mine waste management and demonstrate the importance of effective monitoring, regulatory oversight and emergency preparedness.

As processing capacity expands in the country, the domestic market for ASM produced material is also growing, creating room for institutional risks. The development may further incentivise informal mining activities, particularly in areas with legacy mine waste or abandoned mine sites, which can complicate regulatory oversight and increase environmental and safety risks. As mentioned earlier, several fatal accidents linked to informal mining activities have been reported lately, illustrating the safety risks associated with poorly regulated ASM operations. These incidents highlight the need for stronger oversight, clearer licensing procedures and improved awareness of safe mining practices within the sector.

Institutional capacity constraints represent an additional risk. Regulatory authorities responsible for monitoring mining activities often face limitations related to staffing, technical equipment and financial resources. As the number of mining operations and processing facilities increases, the demand for inspections and regulatory oversight also grows.

Contextual risks such as climate variability may also affect the sector. Zambia relies heavily on hydropower for electricity generation, and prolonged droughts can significantly reduce power production. In recent years, severe droughts have led to electricity shortages that affected mining operations and industrial production across the country.

Several mitigation measures are being implemented to address these risks. The measures include strengthening regulatory frameworks, improving coordination between institutions responsible for mining and environmental protection, and enhancing technical capacity within regulatory authorities. Efforts are also being made to formalise ASM activities and improve awareness of licensing

procedures, safety requirements and environmental regulations. Capacity-building initiatives and international cooperation programmes play an important role in supporting these efforts by supporting institutional knowledge, improving regulatory tools and promoting the exchange of experience related to sustainable mine water and mine waste management. These efforts are particularly important in a context where rapid sector expansion places increasing demands on environmental governance systems.

3 Participants and activities 2025

3.1 Recruitment and participants

In 2025, the ITP 308 programme concluded its main phase and ceased accepting new participants. However, due to remaining funds, Sida approved an extension to include two standalone alumni workshops. 39 participants were nominated by their respective organisations from the existing alumni groups in Liberia, Kenya, Zambia, Rwanda, and Tanzania. The nominees were selected based on the relevance of their ongoing work to the specific themes of the workshops.

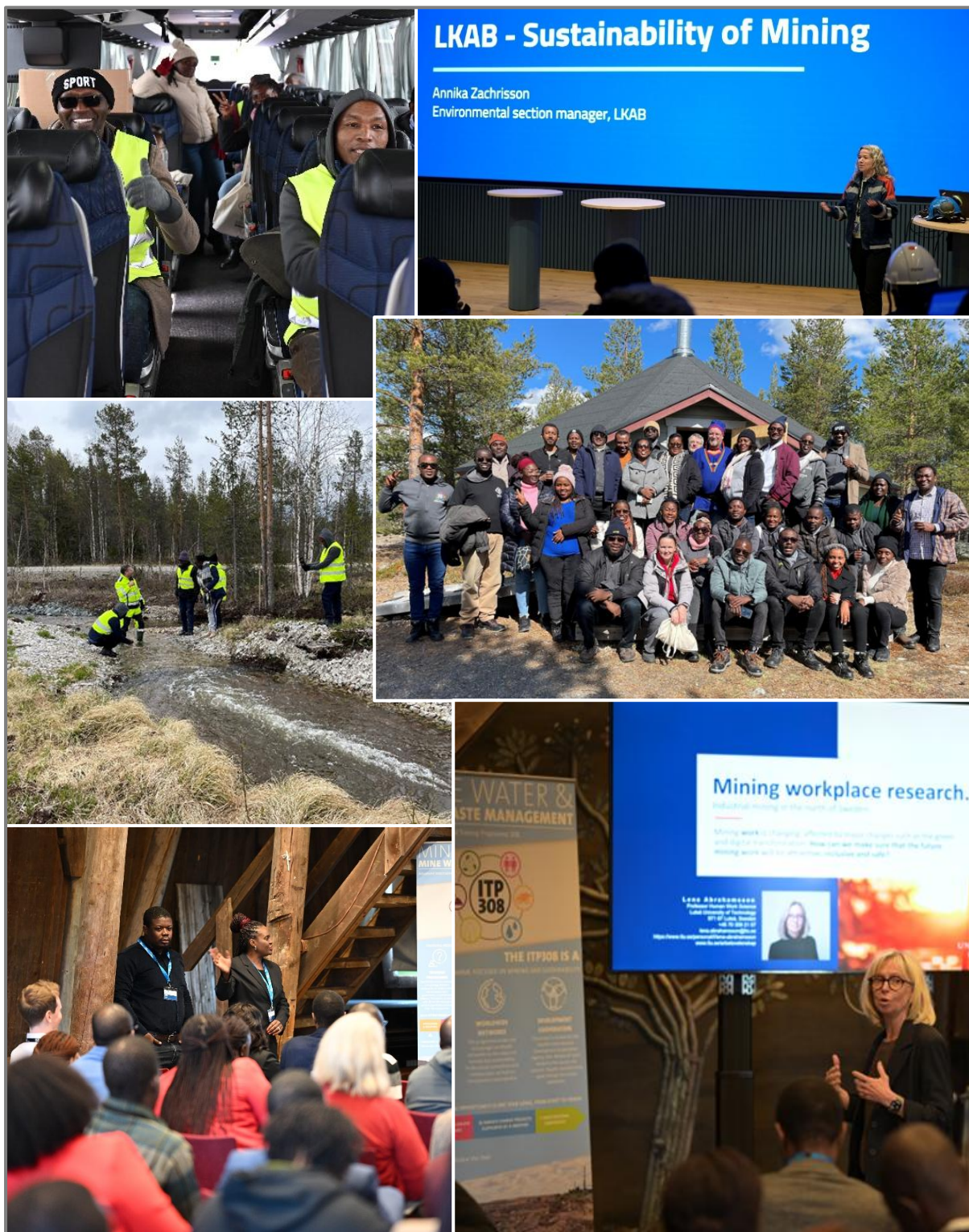
3.2 Implemented activities

The programme completed its final activities, including a regional conference, which served as the only regular programme activity, followed by evaluation meetings and the concluding event held in northern Sweden. In addition, the two extension alumni workshops were conducted in Tanzania and Zambia in September. Below follows a list of activities.

- **One-week Regional Conference in Mombasa, Kenya for Cohort nine.**
The regional conference was held in Kenya for the first time. The programme focused on mine closure and included several field visits: Bamburi Cement's operations and the internationally recognised Bamburi Haller Park; the closure activities at the Base Titanium mine in Kwale; the Coastal Calcium open-pit mine in Kwale; and a cultural visit to the Fort Jesus Museum in Mombasa. Final day schedule is located in Appendix 10.
- **Provision of mentorship for participants online, continuously supporting the development and/ or implementation of change projects in 2025.**
- **Concluding event in Sweden in May.**
A total of 38 ITP 308 alumni, focal points as well as managers and directors of their respective organisations were invited to a ten-day excursion in northern Sweden with a two-day conference as the conclusion of the programme (Appendix 11 and 12).
- **Alumni workshops in Zambia and Tanzania in September.**
The alumni workshop in Tanzania focused on gold mining and three days of field activities in the Singida area and two days of group collaboration and gap analysis exercises. In Zambia, the workshop centred on environmental challenges in the mining sector in the Copperbelt. Participants discussed procedures responding to mine-related emergencies, reviewed sampling methods and protocols, and visited a vocational training facility for mine workers.
- **Final evaluation surveys and interviews in Kenya, Liberia, Rwanda, and Zambia.**
The participants included directors and managers who had nominated staff to the ITP 308, focal points, and in Kenya and Liberia, representatives from the Swedish Embassies.
- **Swedish government organisations visited Zambia in May.**
When a tailings dam breach occurred in Zambia in February 2025, resulting in significant environmental damage, Swedish government authorities identified an opportunity to assess how/if knowledge gained through Sweden-sponsored programmes on mine waste management had been applied by local government officials. The incident also provided a basis to explore potential needs and long-term opportunities for collaboration in the areas of mining and environmental management, both between Sweden and Zambia but also among Swedish organisations themselves.



Upper left: ASM mine visit during Tanzania workshop. Upper left row 2: Workshop in Dodoma, Tanzania. Photo: Jonnina Karlsson, SGU. Middle left Regional conference meeting in Mombasa. Upper right: Bamburi Haller Park rehabilitation area visit in Mombasa. Upper right row 2: TSF look out at Base Titanium Kwale mine site. Middle right: Visit at plant nursery for rehabilitation at Base Titanium's Kwale mine site. Bottom: Cohort nine in Mombasa. Photo: Mattias Fackel, UnEarth AB.



Upper left: Northern Sweden tour in May 2025. Middle left: Participants are drinking water from Fäbodtjärn water discharge in May 2025. Photo: Jonnina Karlsson, SGU. Bottom left: Final presentation in Malå by Team Zambia. Upper right: LKAB visit with talk about mining and sustainability by Annika Zachrisson. Bottom right: Lena Abrahamsson, LTU speaks about mining workplace research and gender in Malå, May 2025. Photo Mattias Fackel, UnEarth AB. Middle right Team photo of the entire visiting group in May 2025. Photo: Anna Apler, SGU.

- **SGU visited the Geological Survey of Finland in May.**
The purpose of the long-awaited visit to GTK's Mineral Processing Pilot Plant and Laboratories - GTK Mintec was the opportunity such a facility may have on participating organisations and to discuss their digital tool for mine closure, Closurematics. In addition, a visit to the old mine museum in Outokumpu was on the agenda.
- **Expansion of the ITP 308 website.**
The translation of material from English into French and Spanish was completed during the year.
- **Establishment of an Alumni network.**
A WhatsApp group was launched, and all ITP 308 alumni were invited to join.

3.3 Comments on implemented activities

Below follows a brief description of each implemented activity. As mentioned earlier, only the regional conference in Kenya in March was part of the regular programme. The other activities were added to enhance the programme outcome and add value to the participants and their organisations.

- **One-week Regional Conference in Mombasa, Kenya for cohort nine.**
The regional conference was held in Kenya for the first time. Of the 28 online participants in cohort nine, 25 completed the programme, with withdrawals due to studies, childbirth, or personal reasons. The two field visits to Bamburi Haller Park and Base Titanium were the highlights as they both brought practical examples of how mine closure can be achieved in close collaboration with local communities. The progress and outcome of the respective, progressive, mine closures were clearly visible and were discussed at length both at the nature park in Mombasa and at the plant nursery at Base Titanium in Kwale. The transparent discussions with the Mining Association (small scale miners) during the final conference day were particularly enlightening for the participants. Finally, each country presented their change project, focusing on two guidelines, two checklists, and one training-of-trainers session based on earlier project work.
- **Concluding event in Sweden in May.**
The final event in northern Sweden can be considered a fitting and successful conclusion to the ITP 308. The African partner organisations participated not only through their focal points and selected programme participants, but also through high-level leadership, including directors, a commissioner, a deputy minister, and several heads of units and departments. Their presence demonstrated the strong interest and the importance of the ITP 308 and the topic of mine water and mine waste management in general.
The delegation was invited to Luleå University of Technology to see the cutting-edge research that is currently being carried out in the sector in Sweden. The visit to the Aitik mine showcased one of the world's most efficient and yet financially viable copper mining operations, despite its extremely high waste-to-ore ratio of over 99%. In Kiruna, participants engaged in discussions on LKAB's approach to mining and sustainability in the underground mine, as well as the preparations involved in relocating the city of Kiruna including the historic wooden church. The participants expressed appreciation for Sweden's sustainability-oriented approach to mining and the close collaboration between the residents of Kiruna and the mining company during the mine expansion. Several months later, on the days of the church relocation, discussions continued actively in the alumni WhatsApp group, highlighting the lasting impression the visit had made. The visit to the newly opened gold mine in Fäbodtjärn provided an opportunity to observe Sweden's most recent mining operation and to experience firsthand the clean water discharge from the mine into the surrounding environment. Several participants even had a sip of the water together with the CEO of the mine, illustrating the high level of trust placed in Sweden's self-

monitoring system for environmental parameters such as water quality.

Swedish culture was also included in the programme, with visits to the Storforsen nature reserve and Malå Hembygdsgård (open air museum), where participants experienced local traditions including folk dancing and fika. For several participants, the visit was a warm reunion, as they had previously baked flatbread (tunnbröd) in the museum's traditional baking cottage during their training in Sweden prior to the Covid-19 pandemic. The cultural dimension is a vital component of any training programme that spans countries and cultural backgrounds. Integrating cultural experiences helps build mutual understanding, strengthens relationships, and enhances the overall learning environment.

On the final day, and after having presented outcomes and evaluations of the programme, the participants were introduced to how several Swedish organisations and government authorities engage in mining-related work in Africa and in partnership with African institutions. These presentations demonstrated both the breadth of expertise available in Sweden and the strong commitment to continued collaboration.

- **Alumni workshops in Zambia and Tanzania in September.**

The alumni workshops proved successful in Tanzania and partially successful in Zambia, despite both requiring adjustments due to unforeseen circumstances. In Tanzania, a change of location did not affect the main objective of strengthening understanding of gold mining, chemical use, and mine design. Participants carried out field-visit toolkits and gap analyses, and many appreciated the participatory teaching format. All countries identified opportunities for improvement in gold mining practice, e.g., using a windsock to monitor wind direction when working with cyanide.

After the February tailings dam collapse in Zambia, which resulted in the Kafue river system being severely polluted, the ITP 308 identified an opportunity to learn from, and assist with, processes associated with mining disasters, which makes up part of the programme curriculum. However, political developments prevented the planned visit to a dam-breach area, resulting in the last-minute cancellation of the intended full environmental fact-finding mission. The team instead visited alternative mine sites, conducted sampling, and discussed tailings storage facility - related hazards. These activities still generated valuable insights, including the identification of previously unknown risk areas by Zambian authorities. Participants also visited a vocational training facility, which was highly appreciated.

- **Final evaluation surveys and interviews in Liberia, Rwanda, Kenya, and Zambia.**

During these meetings, the programme team presented final survey results and conducted interviews with organisational management. Some early conclusions were also shared by the organisations themselves during the May event in Malå, Sweden, and are further detailed in Section 2 of this report. Swedish Embassies were invited to all evaluation meetings, though only the sessions in Liberia and Kenya included embassy representatives. Their involvement aimed to showcase the work of Swedish government organisations, introduce the Embassies to participating institutions, and create opportunities for future collaboration.

- **ITP website expansion.**

Another positive aspect of the programme is the use of the openly accessible ITP 308 website [ITP308: Mine water and mine waste management](#). Its popularity continues, despite the programme not accepting applications, and 36 000 individual visits were made in 2025. Almost all visitors engaged with the knowledge chapters on mining and the environment. Most users found the site through Google searches, indicating a global need for reliable information on these topics. India is dominating in the statistics with 21% of the visitors. The success of the English-language version created opportunity for further development of the website. By September 2025, most of the knowledge chapters had been translated into French and Spanish, significantly expanding the website's reach and accessibility. Almost 10% (5% and 4,5% respectively) of the visits are on the newly translated knowledge chapters.

- **Swedish government organisations visited Zambia in May.**

In May 2025, representatives from Swedish government organisations visited Zambia, where several Sida-funded programmes on mining and environmental management are underway. The visit followed the February tailings dam failure in the Copperbelt, which caused severe pollution of the Kafue River system. Experts from the ITP 308 programme and the SwEPA-led 'Strengthening Zambian Mining Governance in The Nexus of Environment, Human Rights, and Climate' (ZAMNEX) initiative proposed a joint assessment, though ultimately only LTU and SwEPA participated. The mission aimed to identify priority needs and assess opportunities for long-term support from Swedish authorities. It also provided insight into how earlier Sweden-supported collaborations and capacity-building efforts had been applied, and how future assistance could strengthen preparedness for similar incidents. Additionally, the visit served as preparation for the workshop planned for September, which was intended to focus on the dam breach. In the months that followed, political challenges in Zambia, including issues affecting international relations and governance of the mining sector, hindered the planned environmental assessment, highlighting significant institutional and contextual risks.

- **Establishment of an Alumni network.**

Due to the financial limitations and time constraints after the completion of the ITP 308, it was decided that the Facebook group would be discontinued, the ITP 308 LinkedIn account hosted by SGU would remain active, and a single all-inclusive WhatsApp group would be created to replace the initial nine separate cohort groups. To date there are 160 participants in this group, and it remains a productive way of communicating about sustainable mining and above all, governance in mining.

4 Lessons learnt – reflections and recommendations

4.1 Reflections on implementation

After more than seven years of engagement with ITP 308, several reflections merit documentation. In relation to Sida's expectations of strengthened competencies, adoption of new solutions and ways of working, and the formation of local partnerships, the programme demonstrably made a positive difference and delivered on these intended outcomes. The process, however, was not seamless. Effective management and delivery developed iteratively with continuous adjustments throughout the programme's duration. This evolution reflected both the novelty of implementing an ITP and external challenges, particularly the Covid-19 pandemic.

Despite the continuous challenges, the Swedish organising institutions demonstrated strong, well-aligned expertise in mine water and mine waste management, and each delivered their respective contributions effectively throughout the programme. All organisations remained adaptable during challenging periods and have expressed interest in continued collaborations if suitable opportunities should arise. The participating organisations were also well considered, due to their mandates in regulating the mining sector, though several institutions would have benefitted from having their respective water authority in the programme as well.

Despite the challenges and adjustments, numerous examples from the country analyses and programme evaluation illustrate evident organisational change attributable to ITP 308. Rather than detailing every operational adjustment and challenge, the following section highlights key areas that best capture the programme's broader development and impact starting with a list of perceived challenges from programme and participant point of views.

Participants:

- Substantial workloads hindered focus on change projects and training. Stakeholder fatigue is apparent in e.g. Zambia, where initiatives are severalfold and time to do regular work is insufficient.
- Shifting organisational priorities, often due to unexpected events (e.g., pandemics, elections), disrupted participation and delivery.
- Geographically diverse offices hindered collaboration, including meetings, pilot projects, and stakeholder engagements.
- Participant skill levels varied widely and were sometimes below the level needed for more technical content, particularly in LTU's modules.
- Language barriers were present to various extent but particularly in Ethiopia and somewhat in Rwanda.
- Insufficient field exposure reduced participants' ability to learn and practice technical aspects effectively.
- Institutional change in the mining sector requires long time frames (e.g., legislative, policy, and inter-/intra-organisational reforms).
- Some participants faced high expectations from leadership without adequate resource support during e.g. change projects.
- Others experienced low organisational expectations or limited managerial interest, reducing support during e.g. change projects.

Programme related challenges:

- SGU required internal procedures at the start e.g. updated policies, security training and international project financial procedures, resulting in additional workload establishing them. In addition, the loss of programme staff increased the workload for remaining team members.
- Inconsistent demands from Sida supervisors, challenging data management systems (three different during the programme) for applications and applicants and the absence of templates and frameworks.
- Numerous programme design changes were required, largely due to Covid-19, but also armed conflicts, budget impacts, and organisational changes within Sida.
- Online training was less effective than in person capacity building, offering less time per topic and no field visits (three-week Sweden phase with 12 field days vs. 10 days online training and no field visits).
- Change projects were not funded by the programme, resulting in less effective outcomes when organisations did not follow through with promised financial support.
- Collaborations and joint efforts with other programmes or organisations were difficult to achieve during change projects.
- Management turnover in partner organisations reduced understanding of the programme and support for participants and organisers.
- Communication with management and participants in partner organisations was often challenging. OSHA, Tanzania and REMA, Rwanda, were two organisations that were included in the programme but inability to get in contact with management and inability to appear in training and meetings made it impossible to work with them for a longer time period, despite second, third and fourth chances.
- Programme evaluation and alumni plans and activities were not included in the initial project budget.

4.1.1 Collaborations

The three Swedish institutions collaborating in ITP 308 were thoroughly selected for the programme and complemented one another effectively within the thematic areas addressed.

The Swedish Environmental Protection Agency (SwEPA) possesses extensive expertise in mining operations, particularly in areas such as biodiversity and species protection, water impacts, characterization, waste management, circular economy, environmental economics, legislation, and regulatory guidance.

The Swedish Environmental Protection Agency (SwEPA) is responsible for guiding other authorities on the application of the Environmental Code and for participating as a party or expert in cases handled by government agencies and courts. Exchange on the application of environmental legislation and regulatory guidance has been central to the ITP, and SwEPA has been able to contribute actively to these areas. The concept of an Environmental court has been of significant interest to many of the participating countries who do not already have one. One key lesson is that, although environmental legislation in Sweden differs from that of the countries participating in the ITP, several fundamental principles are shared. These include the polluter-pays principle, the precautionary principle, the requirement for environmental impact assessments, waste management plans, mine closure and rehabilitation plans, strategic environmental assessments, and the general rules of consideration under the Swedish Environmental Code. This exchange has been regarded by SwEPA as successful and has been appreciated by participants from several countries.

Luleå University of Technology (LTU) is Sweden's leading mining university with more than 21,000 students, and almost 2 000 employees. The Department of Civil, Environmental and Natural Resources Engineering contributed to the ITP 308 with extensive academic knowledge via lecturers and researchers with international experience.

LTU is a research-oriented institution, with Mines and Minerals as one of eleven key focus areas. Its research is conducted both in Sweden and internationally, and the ITP 308 has aligned well with parts of LTU's ongoing capacity-building work in, for example, Ghana. As a research-driven university, it is essential that its outputs are grounded in scientific evidence. However, this can sometimes create a gap between research findings and the practical realities of sectors such as mining. This discrepancy is visible in Sweden and should be taken into consideration when collaborating with government institutions in Africa as well.

Much of the legislative and regulatory framework within the mining sector is not fully research-based, which presents opportunities for improvement. At the same time, this may limit the impact that LTU's research-driven contributions can have on ITP participating institutions if their regulatory systems are not aligned with current scientific knowledge. This became clearly apparent during the final ITP workshop in Zambia: while participants were well-versed in the regulatory framework, they lacked the expertise needed to conduct scientific research. This highlights the importance of incorporating scientific project work into future ITP training to strengthen their scientific skills. The level of training the university can contribute with, and the expectations, must therefore be considered carefully, prior to training programmes like the ITP 308. Nonetheless, learning occurs both ways and by participating in the ITP 308, the institutional capacity in international capacity building is also improving at LTU, as well as the SwEPA and SGU.

The Geological Survey of Sweden (SGU) served as the lead organiser. As the national authority for bedrock, soil and groundwater, SGU provides geological information for societal needs, safeguards groundwater quality and supports urban planning through mapping and research. It also contributes to environmental quality objectives and manages the investigation and remediation of contaminated sites. The Mining Inspectorate, responsible for issuing permits for mineral exploration and extraction, is part of SGU.

Beyond its administrative role, SGU contributed to the programme by focusing on ASM, governance, and stakeholder engagement. Although SGU staff brought substantial international mining expertise, ITP 308 was the agency's first experience with the ITP model. As such, the process naturally involved a steep learning curve.

Participating government organisations were consistently challenging to collaborate with, yet highly valuable partners. While most applied programme knowledge effectively, progress was at times limited by organisational restructuring, staff turnover, and uneven communication or managerial engagement. The introduction of focal points helped mitigate these issues, and their use from the start is recommended for future ITPs.

Participant selection also merits attention. Capacity levels varied and were often lower than expected, requiring adaptations to programme content with mixed results. The choice between nominations and open applications has advantages and drawbacks, though nominations may help reduce issues such as language barriers. However, even with interviews included in the online acceptance process, participant suitability remained an occasional challenge. Including senior staff in the programme was important, as they are generally better positioned to drive institutional change and strengthen programme outcomes.

4.1.2 Programme management, mentorship, reporting and MEL

SGU as an institution was not fully prepared for the launch of ITP 308. None of the project managers had prior experience with ITPs, and several internal processes and tools were not yet established. Reporting and implementation were further complicated by the absence of clear templates and frameworks from Sida, as well as differing requirements from various Sida programme supervisors, which created uncertainty about expected deliverables.

Over time, communication with Sida improved markedly. Since the pandemic, this strengthened dialogue helped mitigate several challenges and enabled the programme to generate added value beyond its original scope, including the in-depth country evaluations and the workshops in Tanzania and Zambia. Sida's flexibility and support were instrumental to the successful implementation and completion of ITP 308.

In 2023, SGU and Sida jointly recognised the need to strengthen SGU's internal capacity, particularly in monitoring, evaluation, and learning (MEL). This has become one of the most significant improvements to programme management. With support from NIRAS, SGU formalised previously informal data-management practices, co-developed tools for data collection, follow-up, and reporting, and significantly upgraded the reporting template. This included systematising information management and improving the articulation and tracking of outputs, outcomes, and impacts. Although the Theory of Change was identified as an area needing improvement, it was not considered critical at this late stage; however, it must be strengthened in future ITPs.

Looking ahead, closer alignment between Sida and programme organisers is essential to ensure shared expectations, clearer frameworks and templates, and more harmonised processes. Such improvements would support comparability across projects and provide continuity for new Sida supervisors following staff rotations.

4.1.3 Programme design

The programme's emphasis on mine water and mine waste management proved timely, as geopolitical developments around natural resources grew increasingly significant during its implementation. Country analyses (see section 2.4) also show that participating countries are planning substantial investments to expand their mining sectors, underscoring the need for strengthened sector governance. While the programme's original design was sound, unforeseen challenges, particularly the pandemic, and lessons learned along the way warranted various adjustments. Below are a few points that further elaborates on this.

- **Online programme.** The initial programme plan with training sessions in Sweden, though sound as it was, was quickly overtaken by circumstance and had to be modified early in the programme. Covid-19 forced major adjustments from cohort two and onwards, and although these changes were challenging, the programme format stabilised from cohort five. The original three-week Sweden phase with extensive field visits was replaced by a 10-day online phase with no field visits, which presented clear limitations. While some field activities were incorporated into the regional conferences, the overall reduction in practical exposure affected learning outcomes.

Going forward, decisions on programme format should carefully balance multiple factors: sustainability considerations (reduced and shorter flights versus the value of in-person learning), location options (Sweden or alternative countries), resource requirements (international training is highly resource demanding), and the capacity levels of participants. Careful reflection will be essential to optimise both efficiency and educational impact in future ITPs.

- **Change projects.** It is important to recognise that working with authorities responsible for developing or revising national guidelines and regulations is inherently a long-term process. Experience from Sweden shows that such undertakings take considerable time. In retrospect, expecting participants to deliver substantial organisational change within a 10-month change-project period was unrealistic. However, implementing change projects across several cohorts created cumulative value and opened genuine opportunities for organisational transformation. Although the ITP concept evaluation recommends extending the cohort length to 18 months, this should be carefully assessed. Experience from ITP 308 shows that maintaining communication and participant engagement over even 12 months is challenging and resource intensive, and further extension risks reducing programme effectiveness while increasing the burden on mentors. A more workable approach would be either a) include a dedicated change project budget within the programme to enable organisations to carry out necessary field work, or b) predefine change projects with organisational leadership and agree on an internal budget commitment as a requirement for participation. If change project funding is embedded in the organisation's annual budget, financial gaps are avoided, and participants can implement planned activities without uncertainty. This could be formalised through a letter of intent or memorandum of understanding. At times, Sida's expectations for measurable impact did not fully align with institutional realities in partner countries. Achieving consistent, tangible organisational shifts by each change project would have required deeper pre-programme engagement with senior leadership and a stronger focus on change management than ITP 308 was designed to provide. Additional change-management input should therefore be considered for future programmes.
- **Evaluation.** Evaluating the programme also presented challenges as no evaluation activities were budgeted initially. Only toward the end could on-site management interviews be added to the alumni online surveys. Involving Swedish embassies in these interviews and country presentations helped encourage continued collaboration and should be repeated when possible. The final evaluation followed the inception-phase results matrix and relied on qualitative interviews, though limited to participating organisations.

4.1.4 Synergetic opportunities

Although synergies can be difficult to realise in practice, ITP 308 benefited from strong complementarities with SwEPA's global Environmental Governance Programme (EGP). Both initiatives operated in the same countries, creating opportunities for joint efforts. The institutional capacity developed through the ITP 308 has directly supported the implementation of EGP's activities related to mining governance. Several focal points in ministries and authorities in Kenya and Zambia who collaborate with EGP have previously participated in the programme, which has clearly benefited EGP's work by strengthening both understanding and capacity within partner institutions.

Beyond the collaboration on the Mine Closure and Rehabilitation Guidelines, EGP also provided resources for an additional change project in Zambia to develop national guidance on mine waste management. However, review of the draft revealed that substantial work remained and conditions for completing the collaboration were not yet in place. Nevertheless, similar cooperation holds strong potential for future change projects or programmes.

Another example of synergies within ITP 308 is the Tanzanian change project on developing a joint inspection checklist for Artisanal and Small-Scale Gold Mining (ASGM), which was supported by the World Bank funded Environmental Health and Pollution Management Programme (EHPMP). By delivering an ITP 308 change project that could simultaneously serve

as an output for EHPMP, the Tanzanian team succeeded in securing funding for their work while fulfilling requirements for both programmes. The funding was facilitated by the fact that the manager of the World Bank project was an ITP 308 alum, already familiar with the programme's concept and approach. The resulting change project and joint checklist are now used not only by government officials and other end users, but also as training material for miners.

The ITP 308 open website, which includes some pre-programme learning material and project posters provides another type of synergy. The availability of information on sustainable mining in several different languages gives the ITP 308 a reach far beyond the participating organisations. Its popularity, though not advertised explicitly, indicates the need for capacity building within sustainable mining on a global scale. Although it is not yet been decided how the information will be maintained going forward, the situation has opened a valuable opportunity for capacity building.

These examples demonstrate both the potential for collaborative work and the efficiency gains that the ITP model can generate, while underscoring the need for strong understanding of each contributing programme. Achieving such synergies is not always straightforward, but maintaining professional networks and working in the same countries increases the likelihood of alignment. At the same time, the examples show that timing, particularly the availability of funding and overlapping thematic priorities, is critical for realising meaningful synergies. A pre-programme assessment within each organisation to identify potential collaboration partners could therefore be valuable. Such an approach may help avoid duplication of effort and enhance the overall impact of multiple programmes.

4.1.5 Swedish reputation, international networks and alumni opportunities

When ITP 308 was designed, alumni activities were neither planned nor budgeted for, and the implementing institutions do not intend to assume this responsibility in the future, as it would require post-programme resources that are not available. During implementation, a WhatsApp group with roughly 160 members was created, and a LinkedIn page was set up under SGU's name though it is not very active. The WhatsApp group remains the most feasible, low-resource option for maintaining contact, yet, as noted in Cowater's 2024 evaluation of the ITP concept, informal networks often lose momentum over time.

This situation reflects a broader gap regarding long-term ownership of alumni engagement, Sweden's international reputation, and the opportunities generated by ITP programmes. Building international networks among government professionals has been one of ITP 308's strongest contributions to capacity development and to promoting more sustainable mining practices. In addition, throughout the programme, several positive examples emerged of participants' relatives or colleagues having partaken in other ITPs or Sida-funded initiatives. The positive perception of Sweden is clear, and programmes like ITP 308 help reinforce this goodwill. Preserving this asset is important.

Discussions with the Swedish Institute (SI) confirmed that, although SI manages a significant budget for international promotion, ITP alumni fall outside its mandate. Likewise, Sida does not assume long-term responsibility for the ITP alumni who could remain valuable partners. This indicates a need for clearer ownership of alumni engagement across all ITPs.

The ongoing work on sustainable mining in ITP 308 countries has also given the organisers a strong advantage when delivering other projects in the region, largely due to the reputation and relationships built over seven years with the same agencies. Losing this advantage would be unfortunate given the significant investment behind it and ties to bilateral agreements in association of the ITPs could be one way of mitigating this loss of opportunity.

4.2 Recommendations from the ITP 308 experience

Despite the challenges, ITP 308 delivered on all expected outcomes. The projects and newly acquired knowledge have influenced the behaviour of government officials and other key stakeholders, indicating that the programme's thematic focus and overall design were both timely and effective. While there is room for further refinement, the programme demonstrated clear and meaningful contributions to institutional capacity and sector governance.

Below are some recommendations based on the experience of the ITP 308. Incidentally, some of the recommendations of the official ITP evaluation by Cowater Sweden, coincides with the ones based on the ITP 308 experience. In Appendix 13 there is a response to the ITP Cowater evaluation from an ITP 308 point of view.

- Continue using the ITP concept but clearly define what an ITP entails so all stakeholders understand expectations and requirements from the outset.
- Provide stronger support for new ITP organisers, including guidance on designing, launching, managing, and concluding programmes.
- Develop and share standardised templates to benefit both Sida and ITP organisers and to streamline reporting and administration.
- Continue working with mandated organisations within the ITP concept, ensuring that participating institutions have the authority and legitimacy to drive sector change.
- Maintain focus on sustainable mining, given its relevance and demonstrated impact. However, it may be in place to set higher standards and demands on participating organisations, e.g. organisations must contribute with monetary support to change projects to be able to participate. This could engage the organisations more effectively in the programme.
- Link ITPs to subsequent bilateral agreements to sustain momentum in partner countries and maximise long-term results once relationships and collaboration structures have been established.
- Collaborate with the Swedish Institute on alumni engagement to avoid losing valuable networks and long-term goodwill built through the programme.
- Provide risk-management and security training for organisers, ensuring they are adequately prepared for the programme. *(This was lacking when ITP 308 started but may now be part of Sida's updated processes.)*
- Continue communicating and be flexible to ensure best possible outcome *(This goes both ways)*

5 Risk Analysis and Management

5.1 Risks

There were various risks associated with the programme execution and in the ITP 308 Mine water and mine waste management context and they were divided into contextual, programmatic and institutional risks. However, in hindsight, many of the major developments that necessitated adjustments to the programme could be considered outside the scope of what could reasonably have been forecast, given their scale and unpredictability. Example of such are the Covid-19 pandemic, armed conflicts and military escalations as well as major organisational reconstructions and limitations in the Swedish organisations.

Contextual risks

These risks are factors and situations that organisations have no control over or possibly limited control over. Examples are natural disasters, humanitarian crises, state failure and conflicts.

Programmatic risks

These risks are focused on the factors and situations that are directly connected with the programme. Such risks are weaknesses in design and implementation, failure to achieve programme aims and objectives and the risk of causing harm to individuals due to ongoing collaborations or interventions.

Institutional risks

These risks are associated with both organising and participating organisations. Examples of such risks are management failures, reputational loss, political and reputational damage at home and abroad and exposing staff to security risks.

5.2 Risk overview

ITP 308 strove to enhance its effectiveness in promoting sustainable mine water and mine waste management practices in the participating countries, by systematically addressing programmatic, institutional, and contextual risks while implementing targeted mitigation strategies when possible. Nonetheless, the SwEPA observed, based on experience from other international initiatives, that the ITP model in itself has an inbuilt mitigating factor for most risks. It is more resilient than many traditional project formats because it operates across multiple countries. This structure offers flexibility when contextual or institutional risks, such as those listed below, prevent continued engagement with a specific organisation, region, or country. Ethiopia is a clear example: when the civil war began in 2020, Sida/Sweden instructed the programme to discontinue activities and withdrew support in several forms. Because the ITP model spans multiple countries, the programme was able to continue its work elsewhere; had Ethiopia been the sole focus, the programme would have been forced to close entirely. Even so, some general mitigating strategic efforts are seen below for different groups of risks.

Stakeholder Engagement and Collaboration:

Contributed to collaboration among government agencies and international partners to address institutional and programmatic challenges collectively. Transparent and inclusive themes in the training were ways of adding to this risk mitigation. Another was the adoption of focal points in the programme.

Capacity Building and Training:

Invested in continuous training and skill development programmes for government officials to enhance their ability to manage risks associated with mining activities as well as the programme.

Resource Mobilisation:

Dialogue regarding the need for resources from both domestic and international sources to address contextual challenges such as staffing shortages and restructuring efforts. Nonetheless, this is hard to achieve when the organisers do not have a lot of leverage.

Monitoring and Evaluation:

Ensured robust monitoring and evaluation mechanisms to track the progress of risk mitigation efforts and adjust strategies as needed. Regularly assessed programme outcomes and impact to ensure alignment with overarching goals and objectives.

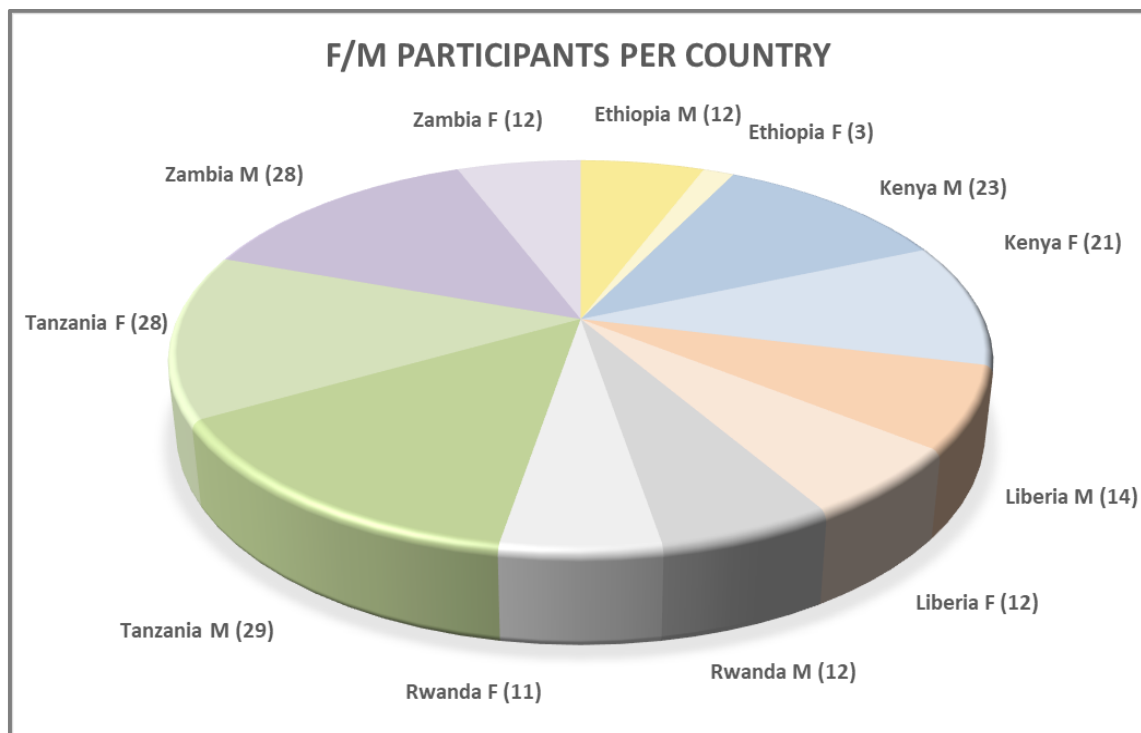
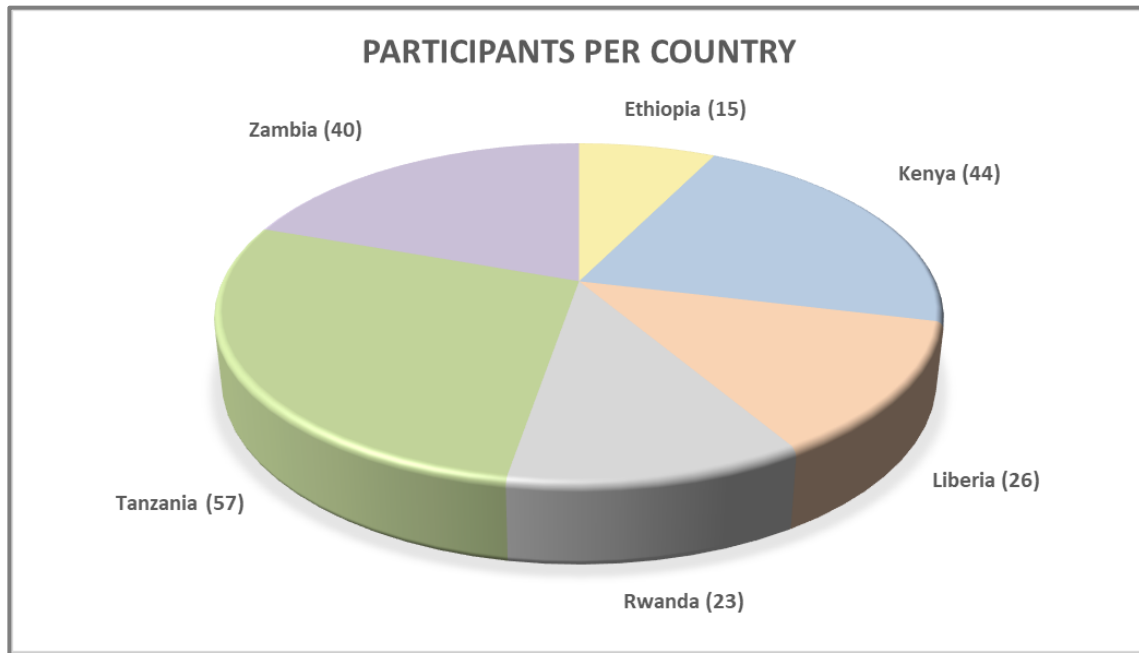
Contextual

The Covid-19 pandemic and the armed conflicts in the Ukraine and Ethiopia were three major situations that changed focus of funding in Sweden and in participating countries. The continued troublesome geopolitical situation with military confrontations, natural disasters as well as trade wars, impacted the programme in several ways. Financially it was impacted mainly by the fluctuating USD (budget forecast for activities abroad became more unreliable) and the severe changes in Sida's budget. Administratively it was affected by the pausing of Ethiopia's participation in the programme. However, and at the same time, the increased focus on minerals and metals helped to raise the level of importance of the programme. The Swedish Government's policies and instructions to Sida, and partly to SGU, also affected the programme; Did we accelerate or brake? As these risks were difficult to counteract, some key factors to mitigate this were flexibility, planning and preparation as well as continuous communication with Sida.

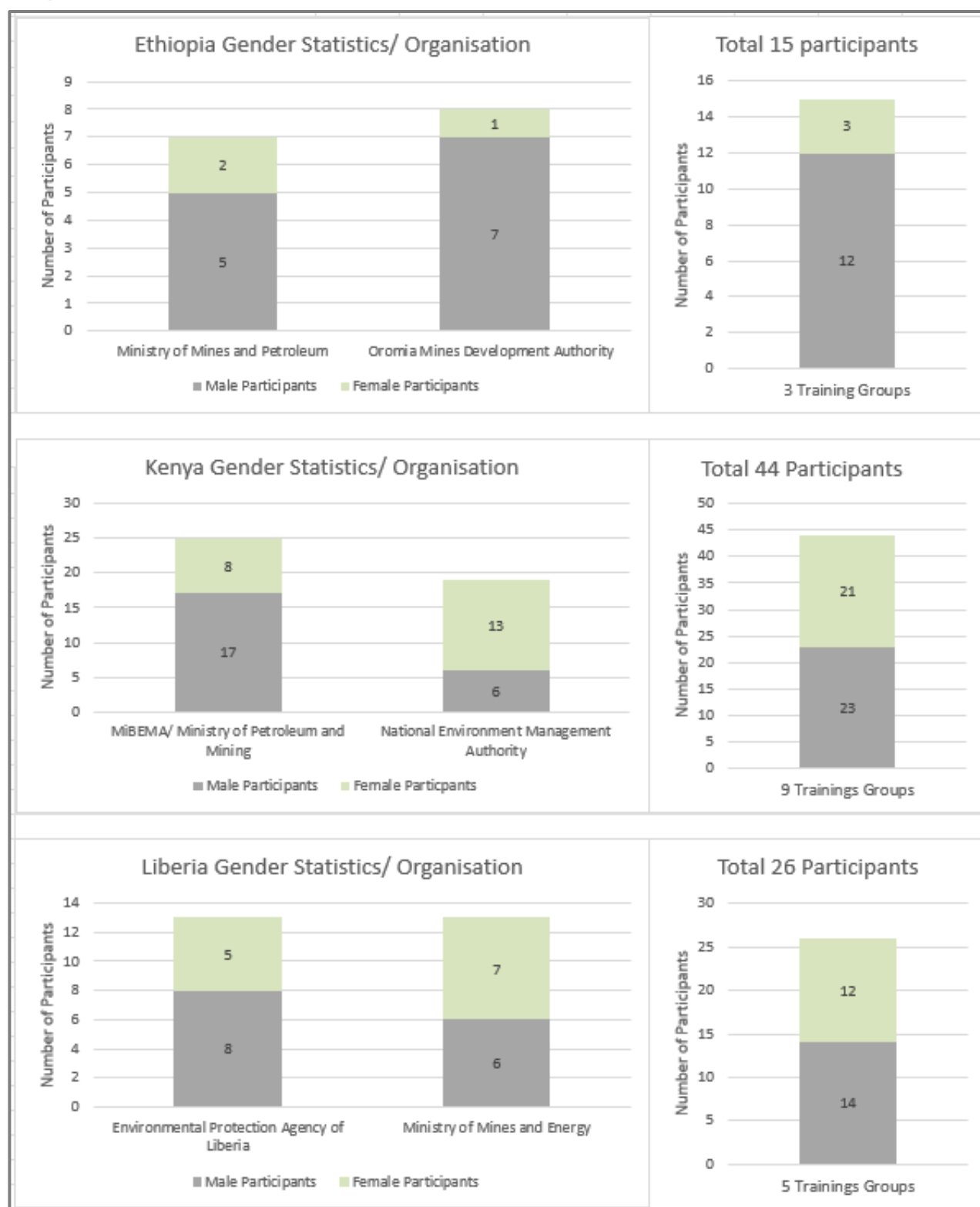
Institutional

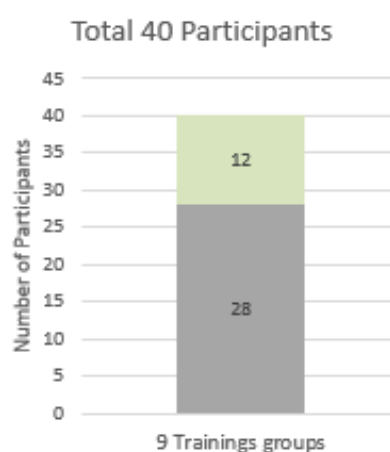
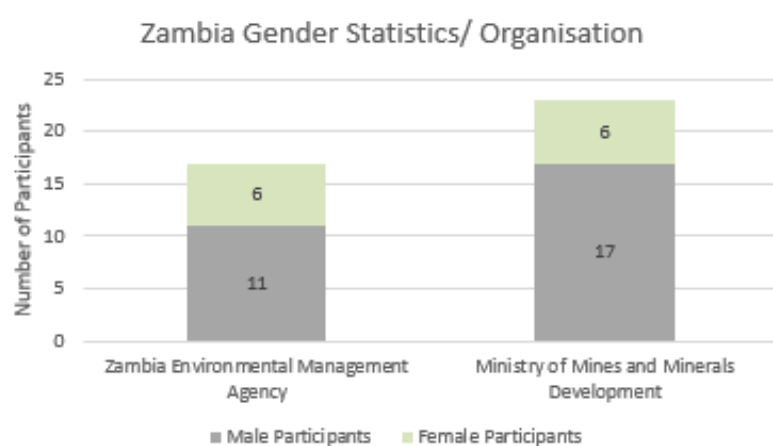
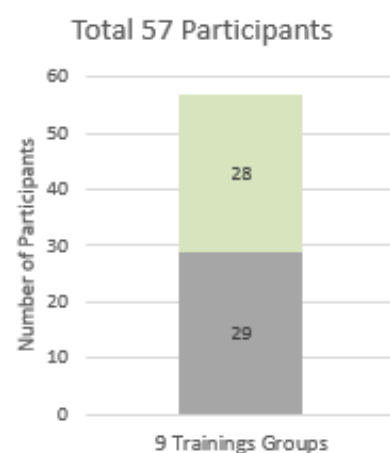
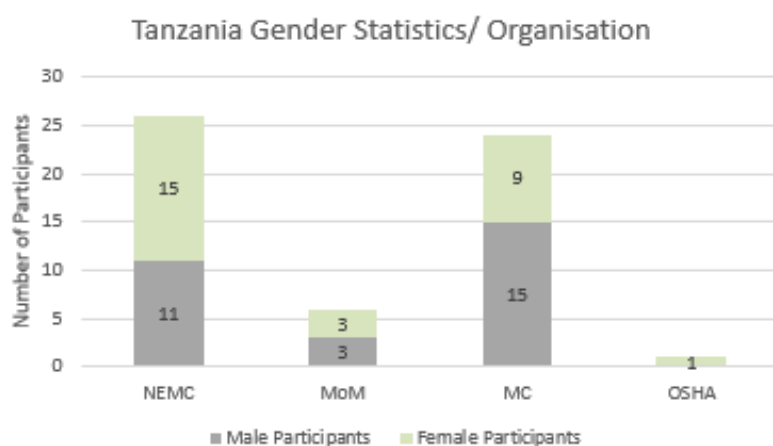
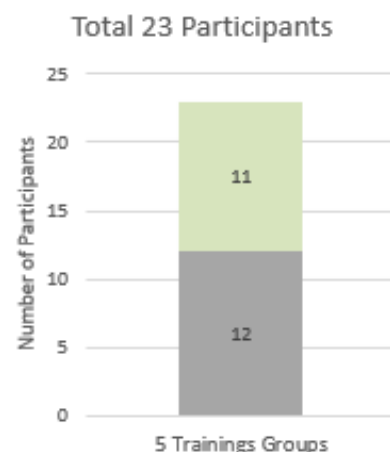
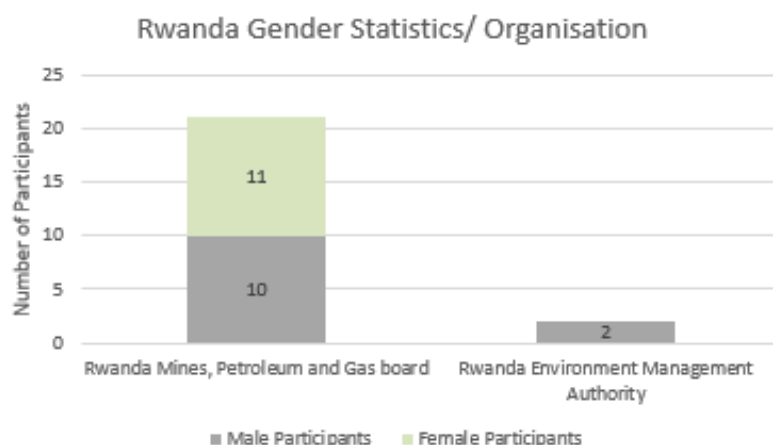
- One of the most significant institutional risks was the frequent turnover of management within participating organisations, along with shifts in national political priorities. Such risks are common across countries, particularly during a long-term programme like ITP 308. A notable example is Liberia, where the programme initially benefitted from strong collaboration with organisational leaders and even ministers. Following the national election, however, communication with the institutions became considerably more difficult, limiting engagement to participants and alumni rather than senior leadership.
- Maintaining the programme's visibility and relevance within participating African organisations, especially at management level, proved to be an ongoing challenge. To reduce the risk of declining leadership engagement and support programme objectives, focal points were appointed and communication with senior management was improved. However, these measures were not always sufficient. In some cases, ITP 308 may have been too limited in scale or perceived less strategic important to be prioritised by managers, directors, or ministers. This highlighted the need for sustained proactive communication and consistent high-level engagement. Given these challenges, the focal points played a critical role in maintaining continuity and enabling the effective delivery of the programme.
- Another institutional risk concerned events associated with organisers' travels. The mitigating factors here were not to send staff into dangerous countries, educate staff in travel hazards and the internal risk matrix SGU has in place for travel. The matrix was evaluated before and after all travels with the Head of Unit at SGU and was presented in previous annual reports.

Appendix 1. Participants and gender by country



Appendix 2. Participants and gender by country and organisation





COMPLETED THE PROGRAMME (Group 1-9)					
Country	No. Org.	Organisation	M	F	Participants
ET	1	Ministry of Mines and Petroleum	5	2	7
	2	Oromia Mines Development Authority	7	1	8
TOTAL	2		12	3	15
KE	3	MiBEMA/ Ministry of Petroleum and Mining	17	8	25
	4	National Environment Management Authority	6	13	19
TOTAL	2		23	21	44
LB	5	Environmental Protection Agency of Liberia	8	5	13
	6	Ministry of Mines and Energy	6	7	13
TOTAL	2		14	12	26
RW	7	Rwanda Mines, Petroleum and Gas board	10	11	21
	8	Rwanda Environment Management Authority	2	0	2
TOTAL	2		12	11	23
TZ	9	National Environment Management Council	11	15	26
	10	Ministry of Minerals	3	3	6
	11	Mining Commission	15	9	24
	12	Occupational Safety and Health Authority	0	1	1
TOTAL	4		29	28	57
ZA	13	Zambia Environmental Management Agency	11	6	17
	14	Ministry of Mines and Minerals Development	17	6	23
TOTAL	2		28	12	40
6	14		118	87	205

COHORT 1				
Country	No.	Government Organisation	M	F
ET	1	Ministry of Mines and Petroleum	2	0
	2	Oromia Mines Development Authority	1	0
KE	3	National Environment Management Authority	1	1
TZ	4	National Environment Management Council	3	2
	5	Mining Commission	4	1
ZA	6	Zambia Environmental Management Agency	3	3
	7	Ministry of Mines and Minerals Development	3	0
4	7		17	7

COHORT 2				
Country	No.	Government Organisation	M	F
ET	1	Ministry of Mines and Petroleum	1	1
	2	Oromia Mines Development Authority	5	1
KE	3	Ministry of Petroleum and Mining	1	1
	4	National Environment Management Authority	1	2
TZ	5	National Environment Management Council	1	4
	6	Ministry of Minerals	2	0
	7	Mining Commission	1	1
ZA	8	Ministry of Mines and Minerals Development	2	0
4	8		14	10

COHORT 3				
Country	No.	Government Organisation	M	F
ET	1	Ministry of Mines and Petroleum	2	1
	2	Oromia Mines Development Authority	1	0
KE	3	Ministry of Petroleum and Mining	2	3
	4	National Environment Management Authority	0	3
TZ	5	National Environment Management Council	2	1
	6	Ministry of Minerals	0	1
	7	Mining Commission	1	2
ZA	8	Zambia Environmental Management Agency	3	0
	9	Ministry of Mines and Minerals Development	2	0
4	9		13	11

COHORT 4				
Country	No.	Government Organisation	M	F
KE	1	Ministry of Petroleum and Mining	1	0
	2	National Environment Management Authority	1	1
LB	3	Environmental Protection Agency of Liberia	0	1
	4	Ministry of Mines and Energy	1	1
TZ	5	National Environment Management Council	0	1
	6	Mining Commission	1	0
	7	Occupational Safety and Health Authority	0	1
ZA	8	Zambia Environmental Management Agency	0	1
	9	Ministry of Mines and Minerals Development	0	1
4	9		4	7

COHORT 5				
Country	No.	Government Organisation	M	F
KE	1	National Environment Management Authority	2	1
	2	Ministry of Petroleum and Mining	2	1
RW	3	Rwanda Mines, Petroleum and Gas board	3	3
TZ	4	National Environment Management Council	2	0
	5	Mining Commission (Ministry of Minerals)	5	2
ZA	6	Ministry of Mines and Minerals Development	2	0
4	6		16	7

COHORT 6				
Country	No.	Government Organisation	M	F
KE	1	Ministry of Petroleum and Mining	3	2
LB	2	Environmental Protection Agency of Liberia	2	1
	3	Ministry of Mines and Energy	1	2
RW	4	Rwanda Mines, Petroleum and Gas board	0	3
	5	Rwanda Environment Management Authority	1	0
TZ	6	National Environment Management Council	0	2
	7	Mining Commission (Ministry of Minerals)	2	1
ZA	8	Ministry of Mines and Minerals Development	3	3
5	8		12	14

COHORT 7				
Country	No.	Government Organisation	M	F
KE	1	National Environment Management Authority	1	1
	2	Ministry of Petroleum and Mining	3	0
LB	3	Environmental Protection Agency of Liberia	2	1
	4	Ministry of Mines and Energy	1	1
RW	5	Rwanda Mines, Petroleum and Gas board	2	1
	6	Rwanda Environment Management Authority	1	0
TZ	7	Ministry of Minerals	1	1
	8	National Environment Management Council	0	2
	9	Mining Commission (Ministry of Minerals)	0	1
ZA	10	Ministry of Mines and Minerals Development	1	0
	11	Zambia Environmental Management Agency	3	0
5	11		15	8

COHORT 8				
Country	No.	Government Organisation	M	F
KE	1	National Environment Management Authority	0	2
	2	Ministry of Petroleum and Mining	3	1
LB	3	Environmental Protection Agency of Liberia	2	1
	4	Ministry of Mines and Energy	2	1
RW	5	Rwanda Mines, Petroleum and Gas board	2	2
TZ	6	National Environment Management Council	2	2
ZA	7	Ministry of Mines and Minerals Development	1	2
	8	Zambia Environmental Management Agency	1	1
5	8		13	12

COHORT 9				
Country	No.	Organisation	M	F
KE	1	National Environment Management Authority	0	2
	2	MiBEMA	2	0
LB	3	Environmental Protection Agency of Liberia	2	1
	4	Ministry of Mines and Energy	1	2
RW	5	Rwanda Mines, Petroleum and Gas board	3	2
TZ	6	Ministry of Minerals	0	1
	7	National Environment Management Council	1	1
	8	Mining Commission (Ministry of Minerals)	1	1
ZA	9	Ministry of Mines and Minerals Development	3	0
	10	Zambia Environmental Management Agency	1	1
5	10		14	11

Appendix 3. List of 41 Completed Change Projects

COUNTRY	CHANGE PROJECT	PARTICIPATING ORGANISATIONS
Ethiopia	Environmental management guidelines for artisanal mining in Ethiopia	Ministry of Mines and Petroleum, Oromia Mines Development Authority
Ethiopia	General mine closure plan guideline for Ethiopia	Ministry of Mines and Petroleum, Oromia Mines Development Authority
Ethiopia	Compliance monitoring checklist for environmental and mine safety management of gold and related mines operation projects	Ministry of Mines and Petroleum, Oromia Mines Development Authority
Kenya	Environmental framework for mine site closure	National Environment Management Authority
Kenya	National guidelines for licensing and inspection of mine waste storage facilities in Kenya	National Environment Management Authority, Ministry of Petroleum and Mining
Kenya	Toolkit for permitting and inspections of waste rock dumps in mining sites	National Environment Management Authority, Ministry of Petroleum and Mining
Kenya	A training manual for artisanal mining committees in Kenya: Checklist for the artisanal mining permit	National Environment Management Authority, Ministry of Petroleum and Mining
Kenya	Finalizing, Piloting & Capacity Building on the Artisanal Mining Committee Manual	National Environment Management Authority, Ministry of Petroleum and Mining
Kenya	Mine Safety Toolkit for ASM in Taita Taveta County	National Environment Management Authority, Ministry of Petroleum and Mining
Kenya	Inspection Checklist for ASM sites during decommissioning	National Environment Management Authority, Ministry of Mining, Blue Economy and Maritime Affairs
Kenya	Rehabilitation plan of abandoned mines in Kenya - case study from Kajiado county	National Environment Management Authority, Ministry of Mining, Blue Economy and Maritime Affairs
Kenya	Monitoring checklist for TSFs, Lined ponds, Processing ponds in Kenya's Artisanal and small-scale gold mines (ASGM)	National Environment Management Authority, Ministry of Mining, Blue Economy and Maritime Affairs
Liberia	Environmental stewardship minimal benchmark toolkit for artisanal miners	Ministry of Mines and Energy, Environmental Protection Energy
Liberia	Environmental stewardship minimal benchmark training toolkit for artisanal and small-scale gold miners	Ministry of Mines and Energy, Environmental Protection Energy
Liberia	A sector-level regulation and guideline for the management of TSF in Liberia	Ministry of Mines and Energy, Environmental Protection Energy
Liberia	Regulations and guidelines for the management of tailings storage facilities in Liberia	Ministry of Mines and Energy, Environmental Protection Energy
Liberia	Development of guidelines for monitoring and management of tailings and tailings storage facilities	Ministry of Mines and Energy, Environmental Protection Energy
Rwanda	Guidelines of tailings management in the small-scale mining sector in Rwanda	Rwanda Mines, Petroleum and Gas board

Rwanda	Guidelines of Tailings Management in the Small-Scale Mining Sector in Rwanda- V2.0	Rwanda Mines, Petroleum and Gas board, Rwanda Environment Management Authority
Rwanda	Register for inventory of operating and decommissioned tailings management facilities	Rwanda Mines, Petroleum and Gas board, Rwanda Environment Management Authority
Rwanda	Draft checklist for mine waste facilities	Rwanda Mines, Petroleum and Gas board
Rwanda	Mine Closure Checklist for Rwanda	Rwanda Mines, Petroleum and Gas board
Tanzania	Guidelines for mine water and tailings management for small and medium scale mines	Ministry of Minerals, National Environment Management Council
Tanzania	Joint inspection checklist for mines	Ministry of Minerals, National Environment Management Council. Mining Commission
Tanzania	Mine waste management drawings for small scale mining	Ministry of Minerals, National Environment Management Council. Mining Commission
Tanzania	Simplified training and awareness material for mine waste management in small and medium scale mines	National Environment Management Council, Occupational Safety and Health Authority, Mining Commission
Tanzania	Draft Guidelines for management and disposal of empty cyanide containers	National Environment Management Council, Mining Commission
Tanzania	Training programme for mine water and tailings management for small and medium scale mines in Tanzania	National Environment Management Council, Mining Commission
Tanzania	Guidelines for management and disposal of empty cyanide containers	Ministry of Minerals, National Environment Management Council. Mining Commission
Tanzania	Joint inspection checklist for ASGM in Tanzania	National Environment Management Council, Mining Commission
Tanzania	Training of trainers: Manual and pilot training in mine water and tailings management for small- and medium-scale mines	Ministry of Minerals, National Environment Management Council. Mining Commission
Zambia	Tailings storage facility tool kit	Ministry of Mines and Minerals Development
Zambia	Guidelines for inspection and review of tailings storage facilities	Zambia Environmental Management Agency
Zambia	Toolkit for waste rock dump inspection	Ministry of Mines and Minerals Development
Zambia	A national guideline for mine waste facilities - waste rock dumps and tailings storage facilities	Ministry of Mines and Minerals Development, Zambia Environmental Management Agency
Zambia	Training manual to enforce the national guidelines for mine waste storage facilities (tailings storage facilities and waste rock dumps)	Ministry of Mines and Minerals Development, Zambia Environmental Management Agency
Zambia	Initiative to enhance formalisation of ASM in Zambia	Ministry of Mines and Minerals Development
Zambia	National Guidelines for design and management of tailings storage facilities and waste rock dumps in Zambia	Ministry of Mines and Minerals Development

Zambia	Mine Inspector's Handbook - A Guide for Inspecting a Tailings Storage Facility	Ministry of Mines and Minerals Development, Zambia Environmental Management Agency
Zambia	Safety, health and environmental management guidelines for small-scale and artisanal miners	Ministry of Mines and Minerals Development, Zambia Environmental Management Agency
Zambia	ASM guidelines on obtaining mining and environmental permits and licenses	Ministry of Mines and Minerals Development, Zambia Environmental Management Agency

Appendix 4. Result matrix from Inception report

Activities	Outputs	Outcomes	Impacts
Start-up and selection 1. Identify and select participants 2. Preparation of outline and work teams for change projects 3. Selection of mentors for each project	Outputs 1. Improved technical knowledge of mine water and mine waste operations as well as better availability to best practice approaches 2. Improved technical knowledge related to better evaluate content of EIA:s 3. Strengthen the capabilities to understand and review mining and environmental legislation <i>Monitoring methods and indicators: Mini-surveys and final evaluation of training program for participants. Lecturer and mentor interviews.</i> 4. Improved awareness and knowledge about gender equality, conflict perspectives, human rights and anti-corruption 5. Encourage the inclusion of social and human rights impacts assessments <i>Monitoring methods and indicators: Exercises and discussion evaluation. Mini-surveys and final evaluation of training program for participants.</i> 6. Introduce efficient and meaningful communication tools to enhance participatory and stakeholder collaboration and involvement 7. Encourage transparency and inclusive participatory methods <i>Monitoring methods and indicators: Exercises and discussion evaluation. Mini-surveys and final evaluation of training program for participants. Regional conference evaluation.</i>	Expected outcomes 1. Efficient and ethical governance principles within partner organizations leading to a sustainable mining sector with increased accountability. 2. Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development 3. Partner organizations ensure best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle <i>Monitoring methods: Long-term surveys, based on baselines and evaluation from several trainings. Regional conference evaluations. Interviews with stakeholders and organizational leaders.</i> <i>Indicators: Level of internal confidence in agency's governance system. Level of public confidence in agency. Level of private sector confidence in agency. Number of projects with included information to the public. Increase in agency involvement in environmental issues and inspection of mining industry.</i>	Intended impacts 1. The partner organisations contribute to protection of ecosystems on land and in water and promote that good living conditions and biodiversity are ensured for current and future generations 2. The partner organisations contribute to sustainable mining with strong socio-economic development in a peaceful and inclusive society <i>Monitoring and evaluation methods: Long-term surveys, based on baselines and evaluation from several trainings. Regional conference evaluations. Interviews with stakeholders and organizational leaders.</i>
Sweden phase 4. Education (lectures, seminars, group work, field studies etc.) in Sweden 5. Networking events 6. Start-up session for work teams and selected mentors 7. Phase evaluation			
Change project phase 8. Carry out planned change projects 9. Regular check-offs between project teams, mentors and ITP-management 10. Reporting of results 11. Regional conference 12. Presentation of relevant change projects to a wider audience 13. Thematic sessions 14. Sustainability component 15. Continuation plans			
Post programme phase 16. Programme evaluation			

Activities	Outputs	Outcomes	Impacts
Outreach for complementary competence 17. Set up of a self-study and knowledge platform 18. Set up of community on e.g. LinkedIn or GOXI for communication and alumni events.	Knowledge outputs 8. Encourage continued individual professional development 9. Encourage continuous building of professional networking <i>Monitoring methods and indicators:</i> <i>Mini-surveys and final evaluation of training program for participants.</i> <i>Self-evaluation.</i> <i>Regional conference evaluation.</i> Completed products 10. Reporting to Sida 11. Alumni follow-up 12. Integrate continuation plan in change projects 13. Established impact follow-up plan 14. Proposal of new candidate organisations and countries to Sida 15. Gender equal group of participants 17. Well-structured change projects 18. Finalised and reported change projects 19. Continued improvement and relevance of the training programme by the programme management <i>Monitoring methods and indicators:</i> <i>Check completion of outputs, for example number of reports to Sida or Alumni meetings performed.</i> <i>Program evaluation and input from lecturers, mentors and program team.</i> <i>Up-to-date techniques and best practice from regional conferences and external events.</i>	Expected outcomes 4. Partner organizations use transparent, inclusive and meaningful dialogue to ensure full public participation 5. Gender discrepancy is continuously targeted within the partner organizations <i>Monitoring methods and indicators:</i> <i>Long-term surveys, based on baselines and evaluation from several trainings.</i> <i>Regional conference evaluations.</i> <i>Interviews with stakeholders and organizational leaders.</i> <i>Indicators:</i> <i>Number of stakeholders participating in participatory meetings.</i> <i>Number of projects with included information to the public.</i> <i>Organizational system for targeting gender discrepancy adopted.</i>	

Appendix 5. PMEL–plan for ITP 308

MEL plan for ITP 308

Purpose

The purpose of this Monitoring, Evaluation and Learning (MEL) plan is to give guidance and structure on when different monitoring, learning, reporting and evaluation activities will take place for ITP 308 in its remaining period of implementation. It gives an overview of what tools or methods will be used and towards what purposes, as well as responsibilities among the ITP 308 project team staff. It is intended as a help in planning, communicating and ensuring that MEL is adequately carried out during the remainder of the project implementation and closure.

The MEL plan complements the project's theory of change and its results framework, as set out in the project proposal document. The MEL plan also reflects the Results Based Management thinking and guidance that has been elaborated during 2022-2023. The MEL plan comprises of an overview of MEL activities, and a calendar for when each activity will be carried out. The MEL plan as a whole follows the ITP 308 project implementation cycle. It should be considered a "live" document and may be updated as needed².

MEL Plan part 1: Overview of Monitoring, Evaluation, Learning and Reporting activities

The matrix below lays out the planned MEL activities for ITP 308, the key purpose of each activity and the methods or tools that will be applied. It also indicates the ITP 308 project staff's respective responsibilities and comments on the procedure for carrying out each MEL activity.

MEL activity:	Purpose:	Methods and tools for monitoring, learning and reporting:	Responsibilities and procedure:
Final Report <i>March 2026</i>	Accountability towards Sida, demonstrating contribution towards expected outcomes, unexpected outcomes and long-term development goal, including effects of Change Projects per country. Analysis of key factors influencing effectiveness of implementation of the intervention as a whole.	Coordination, analysis, writing Final Report. The final report adheres to the contractual obligations on reporting. Analysis based on aggregation and synthesis of all annual reports, as well as complementary monitoring activities (TBD). Specific expectations on final reporting to be discussed with Sida officer.	- PM coordinates reporting process, main responsible for synthesizing analysis. - Mentors provide analysis of implementation and contributions to outcomes on country basis and support synthesis of results of intervention as a whole. - Admin coordinates and stores monitoring data, compiles and analyses statistics (e.g. on change projects, participants).

² The MEL plan presented here does not repeat or elaborate on the TOC or results frameworks of ITP 308 presented in the project document. It is meant as a simple and practical plan to help coordinating MEL activities as part of project implementation until the end of 2026. It will likely be useful to update the MEL plan when the final phase of the ITP implementation is planned and concretized (the "follow-up" component, cohort 10.) This MEL plan replaces the previous "ITP 308 Evaluation Plan" (2018).

Annual Report <i>March/April 2024,</i> <i>March/April 2025</i>	Accountability towards Sida, with an analysis of contributions and progress towards expected outcomes per participating country. Accountability and basis for communication within ITP 308 project team as to progress and possible needs for programmatic adjustments.	Coordination, analysis, writing Annual Report The report will be based on the overall format developed for the 2022 annual report and adheres to the contractual obligations on reporting. Annual reports will provide analysis of contributions towards outcomes, on a country level, as well as analysis of project implementation (adjustments made, changes in context/risks, etc.), with a focus on the past year's implementation. Analysis is to be supported by documentation of project activities performed and key outputs achieved (primarily presented in annexes). Specific expectations on final reporting to be discussed with Sida officer.	- PM coordinates reporting process, main responsible for synthesizing analysis. - Mentors provide analysis of implementation and contributions to outcomes on a country basis, on a program and accumulated intervention basis. - Admin coordinates and stores monitoring data, compiles and analyses statistics (e.g. on change projects, participants). - Sida comments on annual report and if any changes are required. Annual meeting is called by PM in collaboration with Sida officer. - PM coordinates possible revisions and finalizes report.
Financial Report <i>March/April 2024,</i> <i>March/April 2025</i> <i>March 2026</i>	Accountability towards Sida in terms of actual costs vs budget, and vs activities performed.	Coordination, analysis, writing Financial Report. The financial report adheres to the contractual obligations on reporting. Account for actual cost vis-à-vis budgeted fees and expenditures, and analysis of possible deviations. The financial report is comprised of a narrative part and a separate accumulative budget report. Financial report to refer to activities performed, and outputs achieved, as described in the Annual Report. The financial reports is annexed to the Annual/Final Report.	- Project financial officer provides financial data for each ITP group. - PM summarizes all financial data in collaboration with Project financial officer and writes a narrative financial report.
Analysis of contributions to outcomes, focus on organisational and institutional changes 2024-2025	Deepen analysis of contribution of ITP's contribution towards outcomes (and possibly towards development goal); triangulate /substantiate findings against mentors' country wise analyses.	Interviews with key participating organisations Semi-structured interviews with representatives from key participating organisations, focus on qualitative information related to organisational changes, effects of change projects, and relevance vis-à-vis country/sectoral context. Development of case studies/impact stories, for inclusion in Final Report. Possibly to be conducted physically in connection with regional trainings.	- PM and one mentor design and plan for impact story interviews - Mentors provide input on interview methodology, selection on informants, conduct interviews, synthesizes findings vis-à-vis ITP expected outcomes. - One mentor designs survey, analyses responses. - Evaluation meetings with focal points and organisational management

		Alumni survey Alumni-wide survey, and management interviews, mixture of quantitative and qualitative questions to capture sectoral / institutional/ organisational changes and possible contributions of the ITP towards these.	
Analysis of ITP contribution to outcomes and defining ITP aims, per country. <i>January 2024</i> <i>March 2024</i> <i>September 2024</i> <i>November 2024</i> <i>March 2025</i> <i>March 2026</i>	- Ensure mentorship and change projects in each country are aligned with ITP goal and expected outcomes; - Systematically analyse progress towards outcomes per country, based on change projects taken together and over time; - Support a results-oriented approach to mentorship and change projects in the ITP, by setting strategic aims and direction for each country during change project starts up (in alignment with the ITP expected results) and clarifying the mentor approach per country.	Country analyses Analyses of each participating country, in terms of possible key changes in sectoral /institutional/ organisational context and ITP's contributions to these changes; as well as strategic aims and direction for the ITP's continued contributions. Each country analysis is structured according to a template and "owned" by the respective mentor. The country analysis are "live" documents, to be revisited at the end of each program. Information for the country analyses is drawn from the progress tracking tool, participants' change project reports, mentors' observations and analysis based on mentor-participant dialogues and mentor engagement during the scheduled phases of the ITP. ITP team country analysis reflection sessions Facilitated ITP team meetings with aim of learning exchange between mentors regarding the ITP mentor support via change projects and mentorship at large, vis-à-vis the strategic direction/aims defined per country.	- PM coordinates use of country analysis templates and follows up on mentors' active use of the country analysis as a strategic planning tool. This is done as part of regular ITP update meetings four times/ year. - Mentors periodically revise the country analyses, drawing on the other monitoring tools and active engagement with their mentees. - PM convenes and coordinates reflection sessions during update meetings four times/ year. - Mentors participate actively in reflection sessions. - Learning / findings / actions that concern strategic planning of the ITP is followed-up by PM. - Learning / findings /actions that concern planning and/or mentorship at country level is followed-up by respective mentor and PM.
On-going documentation and reflection on progress towards outcomes, per country <i>On-going, Jan 2024–</i> <i>March 2026.</i>	- Ensure activities carried out through the ITP, including mentor support and the participants' change projects are continually aligned with ITP expected outcomes - Ensure that mentors actively monitor change projects' progress towards ITP outcomes and in line with the strategic direction set out in the country analyses,	Progress tracking tool (excel) Continuous updating of the progress tracking tool, with both descriptive and reflective / analytical information as per the topics/questions of the tool. Mentor-participant dialogues (supported by mentor guidance document). Regular dialogues between mentors and their mentee participants. Dialogues will focus on strategic questions to ensure the relevance of the Change Projects vis-à-vis the participants' country and organisation, as well as the ITP expected long-term results.	- Mentors continuously use and update the progress tracking tool, in particular in connection to interactions with participants and review of participants' change project reports. - Mentors engage actively, to the extent possible, during the scheduled phases of the ITP and make use of opportunities to listen for, observe, and identify follow-up questions for understanding participants' change projects' progress and alignment with ITP expected results.

	and that the mentorship, change project development are adjusted accordingly.	Mentors' own systematic documentation of dialogues, to be captured in part in the progress tracking tool (excel). Mentor engagement during ITP scheduled phases. Mentors' observations and analysis of information shared by participants during e.g. interactive discussions and/or field visits, which are of relevance to monitoring progress of change projects. Mentors' own systematic documentation of observations, to be captured in part in the progress tracking tool (excel). ITP team planning meetings (with reflection on progress towards outcomes) Regular ITP update meetings to take stock of e.g. progress of the change projects and adequacy of mentor support in relation to the strategic directions set out in the country analyses and to identify possible needs for adjustments in the mentor support and/or other input provided through the ITP to strengthen contributions to outcomes.	- PM supports and encourages mentors to actively use the progress monitoring tool and take ownership for continuous observations and reflections, to support the ITP's monitoring and adjustments.
Participants' reporting <i>As part of participants' applications, and delivery of three reports for each program.</i>	- The change project concept note ensures and implies organizational commitment to the program. - The various participants' project reports ensure continued strategic and topic related focus during the change project work. - Provide a basis for mentor-participant dialogue and on-going monitoring of change project progress.	Change Project Concept note Initiate organizational change thinking before joining the programme and consider opportunities to work with during the program. Change Project Project Plan Initial project consideration and plan made by participants should align with programme outcomes and lead to organizational change in some way. Change Project Halfway Report Report that provides update on change project progress. Indicates if the project has been presented and approved by organization management and if any unexpected challenges in carrying out the change project have occurred and require change of course. Ensure	- Admin ensures participants submit project concept notes with application - Participants submit a project plan after finalizing the two weeks of online training. - The mentor facilitates discussions, support and forward the thoughts of the participants. -Mentors ensure their participants submit their reports on time and with adequate contents, which, align with outcome and impact goals. -Participants submit final report and mentors give feedback and create posters. -Admin and Communication finalize and print out posters and flyers.

		continued strategic and topic relevance as well as progress vis-à-vis ITP expected outcomes. Change Project Final Project Report Together with final PPT and the actual output (tool kit, guideline, check lists, etc.) the immediate deliveries at the end of the program. Accountability on behalf of participant that change project progress has been made and some results achieved. Provide analysis of relevance of change project, as well as adjustments made in the project design/implementation. Provide input to mentors in the overall analysis of the ITP's contributions to expected outcomes, on a country basis.	
Analysis of outputs <i>At end of each scheduled training phase.</i>	Regular monitoring of output results related particularly to the ITP scheduled phases (training). Analysis of results allows for adjustments in e.g. ITP training contents and delivery.	Participants' satisfaction surveys Standardized participant surveys to capture perceptions on ITP training contents, relevance and delivery and – to some extent – perceptions of outputs contributions towards ITP outcomes. Participant surveys are conducted twice per program/cohort. Results are systematically collected and assessed for the intervention as a whole. ITP team planning meetings (with reflection on progress towards outputs) Regular ITP team meetings to take stock of e.g. achievements of expected outputs and reflect on adequacy of ITP inputs/activities, and organisation towards their achievement.	- Admin manages survey distributions, systematization and sorting of results per program and as accumulated for the ITP intervention as a whole. - Admin maintains an information management system to facilitate administration of surveys and retrieval of results across programs. - PM, with support from admin, presents results of satisfaction surveys and achievement of output results to ITP team.
Ongoing tracking of activities and finances. <i>Ongoing</i>	Ensure systematic documentation of implemented activities, time spent, and accumulated costs (fees and expenditures) vs budget. Provide flexibility when need of rapid changes due to unforeseen events and circumstances.	ITP internal project and information management system to administer finances, documentation, etc.	- Project financial officer manages financial information in business system and provides PM with summarized budgetary information. - PM continuously ensures budget is on track by use of business system and contractual agreements.

MEL Plan part 2: MEL and Reporting Calendar

The below matrix provides an overview of when MEL activities were carried out for the ITP 308, in 2024.

ITP308 PMEL Annual Calendar Q1-4 2025

The calendar follows the implementation of the remaining ITP308 (programmes 7-10)

	Main responsible				January				February				March				April				May				June				July				August				September				October				November				December												
	PM	M	Ad	P	Sida	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15	w16	w17	w18	w19	w20	w21	w22	w23	w24	w25	w26	w27	w28	w29	w30	w31	w32	w33	w34	w35	w36	w37	w38	w39	w40	w41	w42	w43	w44	w45	w46	w47	w48	w49	w50	w51	w52				
ITP Intervention Reporting																																																													
Final Report (incl draft, revision, finalization)	X	x			x																																																								
Annual Report (incl draft, annual meeting, revision, finalization)	X	x			x												M/Ad				PM																																								
Financial Report (incl draft, annual meeting, revision, finalization)	X		x		x															Ad	PM																																								
Analysis of contributions to outcomes (ITP intervention level)																																																													
Interviews with key participating organisations		X																																																											
Alumni survey	X			x																																																									
Country analyses	X	X															M																																												
ITP team country analysis reflection sessions	X																	PM/M																																											
Documentation and reflection on progress towards outcomes (ITP program level)																																																													
Progress Tracking (use of Excel tool)		X	X															Ad/M																																											
Mentor-Participant dialogues		X		x																																																									
Mentor engagement during scheduled phases		X											P/M																																																
Participant Change Project Reporting (Concept, Plan, Progress, Final)		x		X								P/M						PM																																											
ITP team planning meetings (with reflection on progress)*	X	x	x						PM/M/Ad																		PM/M/Ad																																		
Monitoring, analysis and documentation of outputs																																																													
Participants' satisfaction surveys	X		x	x																	PM																																								
ITP team planning meetings (with reflection on progress towards outputs)	X	X	X					PM					PM					PM				PM																																							
ITP internal project and information management system	X							PM					PM					PM				PM																																							

X=lead responsible; x=responsible for contributions

Initials: PM=ITP Project Manager, M=Mentors, Ad=ITP Admin, P=ITP Participants, Sida=Swedish International Development Cooperation Agency

Appendix 6. Organisational Evaluation Survey and Management Interviews

ITP 308 MINE WATER AND MINE WASTE MANAGEMENT Final Programme Evaluation by SGU

What country are you from?

- ☐ Ethiopia
- ☐ Kenya
- ☐ Liberia
- ☐ Rwanda
- ☐ Tanzania
- ☐ Zambia
- ☐

What organisation do you work for / did you work for during the ITP308?

- ☐ ET, Oromia Water, Mineral and Energy Bureau
- ☐ ET, Ministry of Mines and Petroleum
- ☐ KE, National Environment Management Authority, NEMA
- ☐ KE, Ministry of Mines, MiBEMA
- ☐ LB, Ministry of Mines and Energy, MME
- ☐ LB, Environmental Protection Agency, EPA
- ☐ RW, Rwanda Mines, Gas and Petroleum Board, RMB
- ☐ RW, Rwanda Environment Management Authority, REMA
- ☐ TZ, Mining Commission, MC
- ☐ TZ, National Environment Management Council, NEMC
- ☐ TZ, Ministry of Minerals, MoM
- ☐ TZ, Occupational Safety and Health Authority, OSHA
- ☐ ZA, Ministry of Mines and Mineral Development, MMMD
- ☐ ZA, Zambia Environmental Management Agency, ZEMA
- ☐

By the end of the ITP 308, the organisers aimed to have contributed positively to the below six outcomes in your organisations. How did we do? Do you experience changes in your work or at your workplace for each or any of the outcomes?

OUTCOME 1

The ITP has contributed to **Efficient and ethical governance principles within partner organisations leading to a sustainable mining sector with increased accountability.**

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

Do you see positive changes regarding Outcome 1 on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding Outcome 1?
(E.g. Have you changed something in your work after participating in the programme?)

250 characters left

OUTCOME 2

The ITP has contributed to Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

Do you see positive changes regarding Outcome 2 on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding Outcome 2?
(E.g. Have you changed something in your work after participating in the programme)

OUTCOME 3

The ITP has contributed to Partner organisations ensure best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

Do you see positive changes regarding **Outcome 3** on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding **Outcome 3**?
(E.g. Have you changed something in your work after participating in the programme?)

OUTCOME 4

The ITP has contributed to **Partner organisations use transparent, inclusive and meaningful dialogue to ensure full public participation.**

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

Do you see positive changes regarding **Outcome 4** on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding **Outcome 4**?
(E.g. Have you changed something in your work after participating in the programme?)

OUTCOME 5

The ITP has contributed to **Gender discrepancy is continuously targeted within the partner organisations.**

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

Do you see positive changes regarding **Outcome 5** on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding **Outcome 5**?
(E.g. Have you changed something in your work after participating in the programme)

OUTCOME 6

The ITP has contributed to **Partner organisations establish collaborations between relevant agencies or actors towards sustainable mining governance.**

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

Do you see positive changes regarding **Outcome 6** on organisational levels and/or individual level?

- ☐ Organisational
- ☐ Individual
- ☐ Both
- ☐ None
- ☐

In what way has the ITP contributed to your work regarding **Outcome 6**?
(E.g. Have you changed something in your work after participating in the programme?)

When it comes to the Technical Outputs, can you please evaluate the ITP's impact on your work.

After the ITP, I have improved my technical knowledge of mine water and mine waste operations.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

After the ITP, I have improved my technical knowledge related to content evaluation of EIAs.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐

After the ITP, I have strengthen my capabilities to understand and review mining and environmental legislation.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

After the ITP, I have an improved awareness and knowledge about gender equality, conflict perspectives, human rights and anti-corruption.

- ☐ Gender quality
- ☐ Conflict perspectives
- ☐ Human rights
- ☐ Anti-corruption
- ☐ All of the above
- ☐ None of the above
- ☐

After the ITP, I have been encouraged to the inclusion of social and human rights impacts assessments.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

During the ITP, I was introduced to efficient and meaningful communication tools to enhance participatory and stakeholder collaboration and involvement.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

How do you perceive the outcome of your Change Project?

Has your Change Project contributed to any positive changes in your work?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

If you agree with the above, please describe in what way.

If you do NOT agree with the above, please describe why.

Has your Change Project contributed to any positive changes in your organisation? (As far as you can tell)

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐

If you agree with the above, please describe in what way.

If you do NOT agree with the above, please describe why.

ITP challenges, positive aspects and future recommendations.

What challenges have you encountered in implementing the changes promoted by the ITP308?

Which aspect of the ITP308 has been the most useful, and why?

If a similar training programme is developed in the future, what would you recommend we consider, include in the programme and improve on, from previous years?



Management Interview Questions

What is the current state of mining in the country today - economically, socially, environmentally?

What is your organisations' status in the country today?

What challenges are most current in your organisation?

Political directions, then, now and future (since started programme)

What aspects of the ITP308 have been the most useful, and why in your opinion?

Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?

Has the programme affected the relationship between your organisation and the local communities? If so, how?

Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development?

Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved?

Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?

What organisations authorities do you work with in / outside your country?

How have these collaborations contributed to more sustainable mining governance?

How many other similar programmes from other funders?

Should other organisations have been included in the programme?

If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?

Is support needed for specific projects, reviewing, closing, rehabilitating or permitting?

Are gold processing agents / chemical use in ASM still an important topic?

Financial guarantees, trust funds - better now or more of interest?

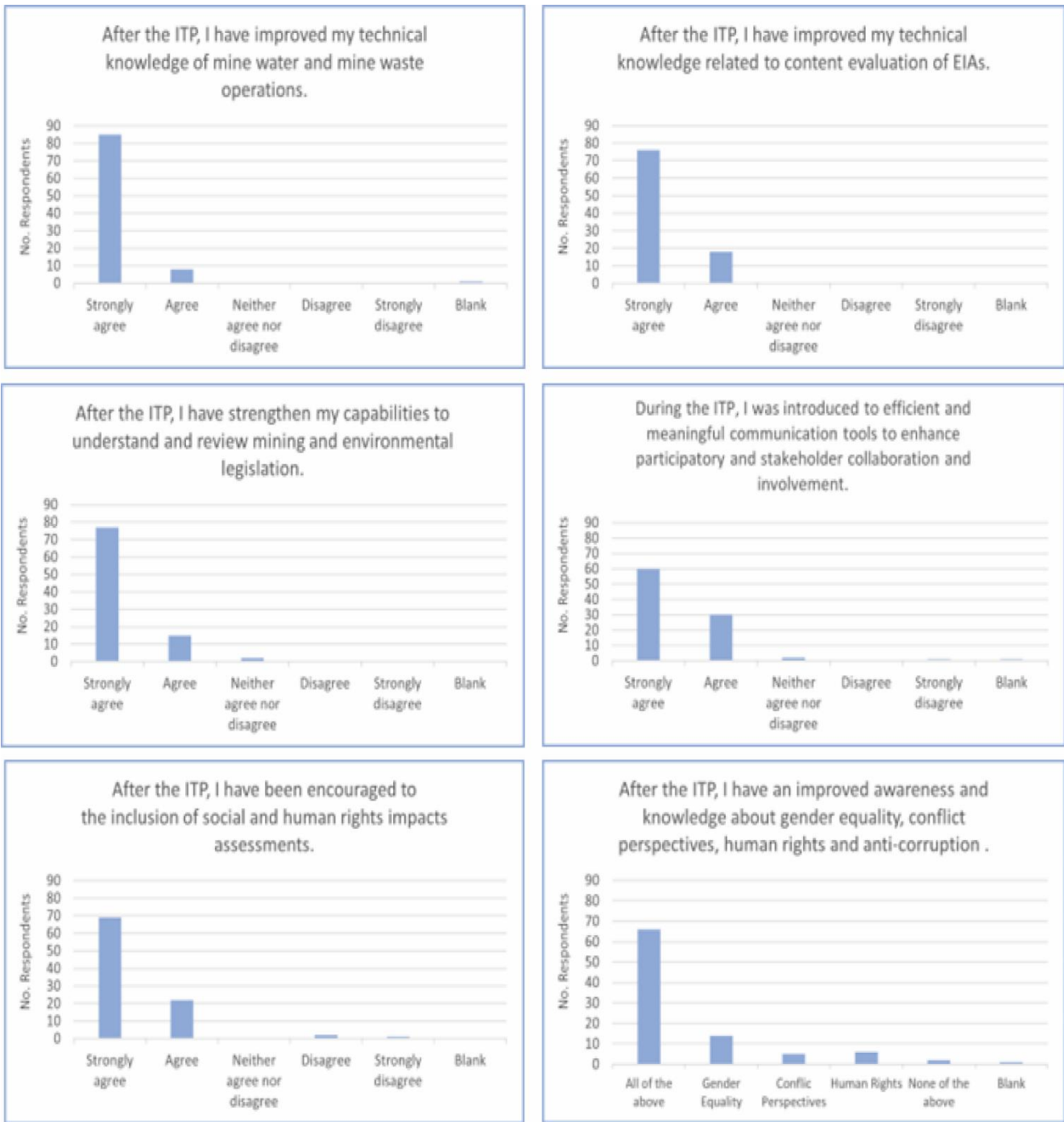
Is data management a subject of interest. Is support needed?

Closure cost calculations a current need for support?

Please rank the time spent on - ESIA, Mine Closure, ASM, Inspection

How do you feel the commitment has been from management/organisation vs participants and projects?

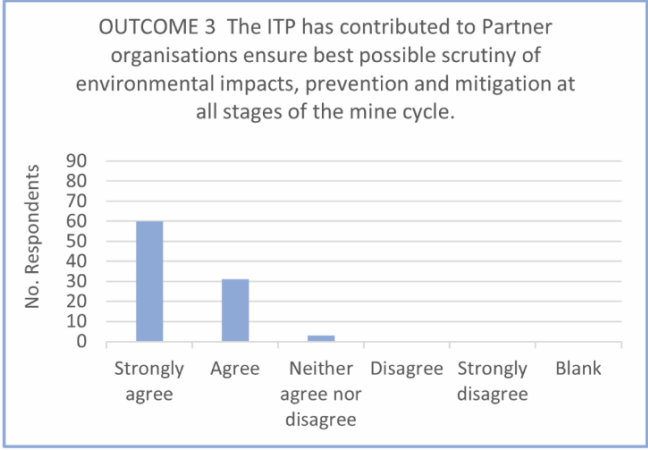
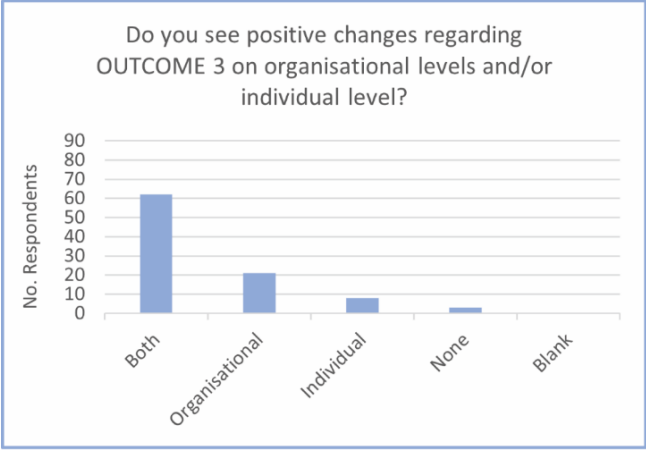
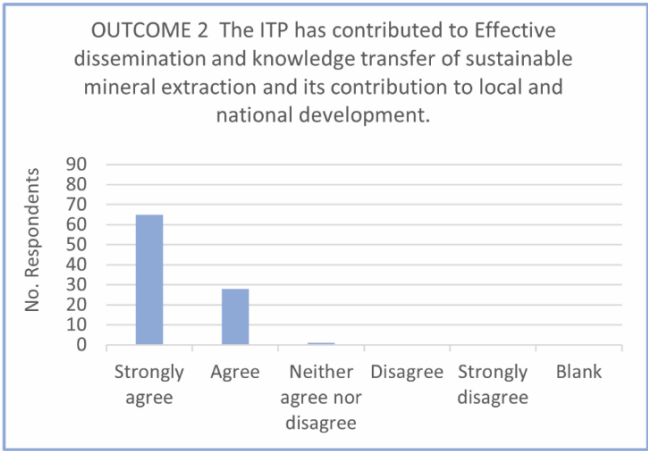
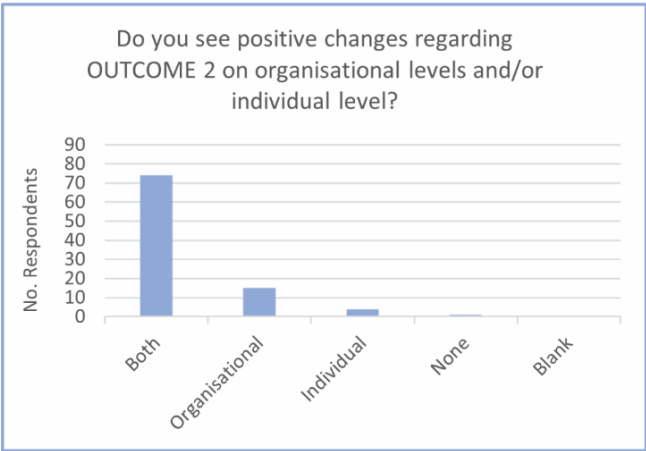
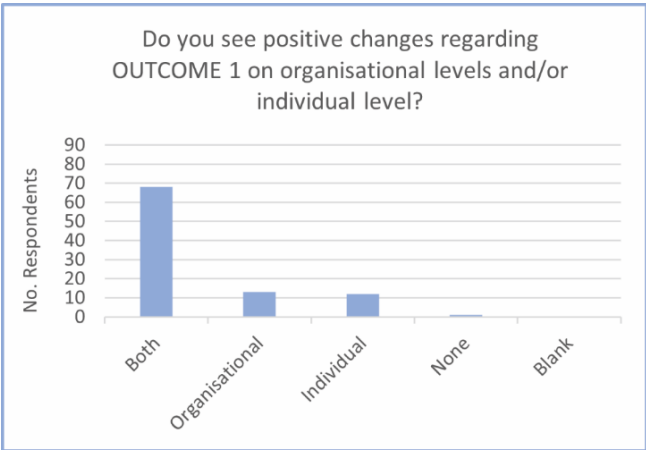
Appendix 7. Survey results– Knowledge outputs



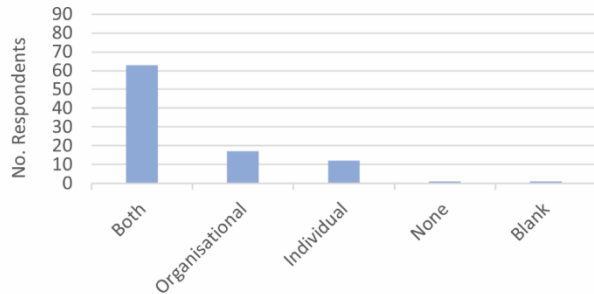
What country are you from?	After the ITP, I have improved my technical knowledge of mine water and mine waste operations.	After the ITP, I have improved my technical knowledge related to content evaluation of EIAs.	After the ITP, I have strengthened my capabilities to understand and review mining and environmental legislation.	After the ITP, I have an improved awareness and knowledge about gender equality, conflict perspectives, human rights and anti-corruption.	After the ITP, I have been encouraged to the inclusion of social and human rights impacts assessments.	During the ITP, I was introduced to efficient and meaningful communication tools to enhance participatory and stakeholder collaboration and involvement.
Tanzania	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly disagree	Strongly disagree
Tanzania	Strongly agree	Strongly agree	Strongly agree	Gender quality	Disagree	Strongly agree
Tanzania	Agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	None of the above	Disagree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Tanzania	Strongly agree	Agree	Agree	All of the above	Agree	
Tanzania	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	Human rights	Strongly agree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Tanzania	Strongly agree	Agree	Agree	Gender quality	Agree	Strongly agree
Tanzania	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	Conflict perspectives	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya		Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Kenya	Agree	Agree	Agree	All of the above	Agree	Agree
Kenya	Agree	Agree	Strongly agree	All of the above	Agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Agree	Agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	Conflict perspectives	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Agree	All of the above	Strongly agree	Agree
Kenya	Strongly agree	Strongly agree	Strongly agree	Conflict perspectives	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Kenya	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Zambia	Strongly agree	Strongly agree	Agree	All of the above	Strongly agree	Strongly agree
Zambia	Strongly agree	Agree	Agree	All of the above	Agree	Agree
Zambia	Agree	Agree	Strongly agree	All of the above	Agree	Agree
Zambia	Strongly agree	Strongly agree	Agree	All of the above	Agree	Agree
Zambia	Agree	Agree	Agree	All of the above	Strongly agree	Agree
Zambia	Strongly agree	Strongly agree	Strongly agree	Gender quality	Agree	Agree
Zambia	Strongly agree	Strongly agree	Strongly agree	Human rights	Strongly agree	Strongly agree
Zambia	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Zambia	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Zambia	Strongly agree	Strongly agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Zambia	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Zambia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Agree
Zambia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree

What country are you from?	After the ITP, I have improved my technical knowledge of mine water and mine waste operations.	After the ITP, I have improved my technical knowledge related to content evaluation of EIAs.	After the ITP, I have strengthened my capabilities to understand and review mining and environmental legislation.	After the ITP, I have an improved awareness and knowledge about gender equality, conflict perspectives, human rights and anti-corruption.	After the ITP, I have been encouraged to the inclusion of social and human rights impacts assessments.	During the ITP, I was introduced to efficient and meaningful communication tools to enhance participatory and stakeholder collaboration and involvement.
Liberia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Liberia	Strongly agree	Strongly agree	Strongly agree		Strongly agree	Strongly agree
Liberia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Agree
Liberia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Liberia	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Liberia	Strongly agree	Agree	Strongly agree	Gender quality	Strongly agree	Strongly agree
Liberia	Strongly agree	Agree	Strongly agree	All of the above	Strongly agree	Agree
Liberia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Rwanda	Strongly agree	Agree	Strongly agree	Human rights	Strongly agree	Agree
Rwanda	Agree	Strongly agree	Strongly agree	Conflict perspectives	Agree	Agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Neither agree nor disagree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Strongly agree
Rwanda	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Agree
Ethiopia	Strongly agree	Agree	Agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	Conflict perspectives	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	Gender quality	Agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Agree	Agree	Agree	All of the above	Agree	Agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	None of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Agree	Agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Strongly agree	Strongly agree	Strongly agree	All of the above	Strongly agree	Strongly agree
Ethiopia	Agree	Agree	Strongly agree	All of the above	Strongly agree	Strongly agree

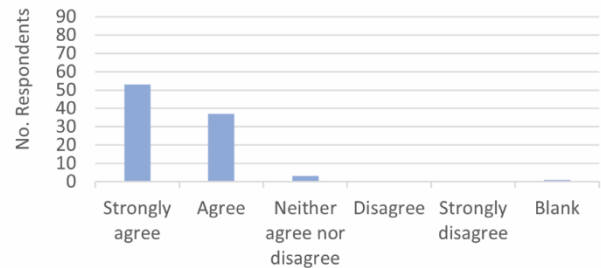
Appendix 8. Survey results– Outcome



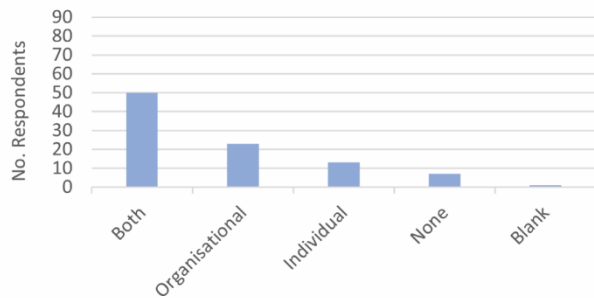
Do you see positive changes regarding
OUTCOME 4 on organisational levels and/or
individual level?



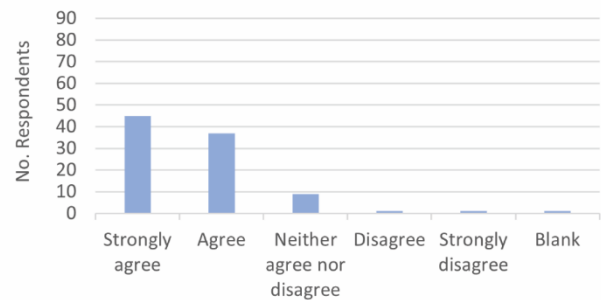
OUTCOME 4 The ITP has contributed to Partner
organisations use transparent, inclusive and
meaningful dialogue to ensure full public
participation.



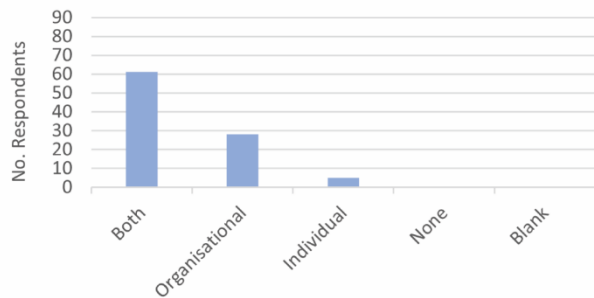
Do you see positive changes regarding
OUTCOME 5 on organisational levels and/or
individual level?



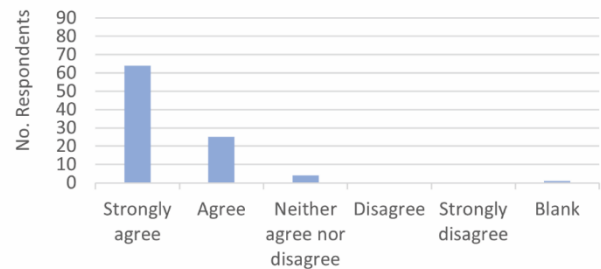
OUTCOME 5 The ITP has contributed to Gender
discrepancy is continuously targeted within the
partner organisations.



Do you see positive changes regarding
OUTCOME 6 on organisational levels and/or
individual level?



OUTCOME 6 The ITP has contributed to Partner
organisations establish collaborations between
relevant agencies or actors towards sustainable
mining governance.



What country are you from?	OUTCOME 1 The ITP has contributed to Efficient and ethical governance principles within partner organisations leading to a sustainable mining sector with increased accountability.	Do you see positive changes regarding Outcome 1 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 1? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Both	ITP has helped me a lot in my work especially in inspection of mines and in mine closure recommendations to different facilities. Moreover in the ESIA study i would check more in the design of the mine pits and TSF and recommend properly.
Tanzania	Strongly agree	Both	Have improved the institutional tools on mining inspection and capacity building of the individuals
Tanzania	Strongly agree	Both	ITP courses helped me alot beacause through that knowledge i obtained on mine waste management,mining closure ,ASM and so on i shared all of them to stakeholders in the industry and happy to see in my community things are changing in a positive way.
Tanzania	Strongly agree	Both	1. Prepared joint inspection checklist for Small scale and Artisanal Gold Miners which will be adopted by the Council and other institution through Environmental Health and Pollution Management Program 2. Gain knowledge in Mining and sustainability
Tanzania	Agree	Both	The training was cross sectoral, working on Environmental Management together with team members from other Sectors who also have gained knowledge through ITP 308 helped to diversify it with other staff members who do not have that exposure
Tanzania	Agree	Both	The ITP training course gave me an opportunity to obtain new knowledge and share experience with other participants on how mining wastes can be managed. As a result specific types of wastes which we didn't had a clear guidance they now have one
Tanzania	Strongly agree	Both	Regarding output no.1, The ITP played a crucial role in equipping NEMC and other Government Institutions that participated in the ITP programmes with the knowledge and tools necessary to gather information during inspections in the Mining areas.
Tanzania	Strongly agree	Both	Properly inspection conducted after ITP training.
Tanzania	Strongly agree	Organisational	Contributed in inspection duties especially in cynide container handling and disposal
Tanzania	Agree	Both	The ITP program has helped in initiating a strengthened partnerships with local communities, NGOs, and government agencies, encouraging a more collaborative approach to mining operations and their impacts to the environment.
Tanzania	Strongly agree	Organisational	The institution is now utilizing the knowledge of developing the ASGM checklist to develop other standard operating procedure . The tool is now helping the inspection to mining areas
Tanzania	Strongly agree	Both	I learnt to use different approaches when regulating small scale and artisanal mines compared to large scale mines, and to ensure that all mines have access to information on environmental compliance
Tanzania	Agree	Both	Yes, based on the field visit experience of different mining areas in Mala, Sweden. I always advise miners to have a plan for progressive rehabilitation and ensure that the environmental monitoring plan is always implemented.
Tanzania	Agree	Both	The guidelines of storage of chemicals plus mining inspection check list makes a different and provides assistance to the inspection team during field visit
Tanzania	Strongly agree	Both	Improved awareness and accountability in decision making on matters arising from mining projects especially dealing with mining wastes.
Kenya	Agree	Both	The change project culminated to publishing of the document which is aiding in administering guidelines for effective decommissioning of a mine site

Kenya	Strongly agree	Both	Hep in developing National guideline on mine site decommissioning and rehabilitation that is being used in the country. Individual I have been able to review EIA s for licensing and conduct Inspections in Mines for monitoring.
Kenya	Strongly agree	Both	Firstly,by development of a check list in mining decommissioning in collaboration with National environmental management authority. Individually,I took the initiative of testing all the petroleum drilling waste to check its effect on the environment.
Kenya	Strongly agree	Both	Our team worked on an " INSPECTION CHECKLIST FOR ARTISANAL AND SMALL SCALE MINING (ASM) ON MANAGEMENT OF MINE WATER AND MINE WASTE" sections of this tool have been used by our Regional mining officers during regulatory and compliance inspections.
Kenya	Strongly agree	Both	I have been nominated a member of county artisanal mining committee that will help ministry of mining and petroleum to regulate artisanal mining impact and make it profitable and sustainable
Kenya	Strongly agree	Organisational	yes we did, the organisation, MiBEMA is in the process of mapping all the abandoned/disused mines in the country so that the ministry can plan on ways to rehabilitate them. so indeed our proposal had a great impact that we are proud of thanks to SIDA
Kenya	Strongly agree	Both	The training build my capacity in human rights based environmental governance of artisanal miners, permitting and conflict resolution among mining governance structures.
Kenya	Strongly agree	Both	Yes, It has improved my inspection skills and understanding on the various assessment parameters. Engaging the change project has increased the level of stakeholders coordination and engagement in ensuring environmental and safety issues considerati
Kenya	Strongly agree	Both	Working checklists for minesites
Kenya	Strongly agree	Both	As an environment inspector working for NEMA Kenya, the ITP 308 course has equipped me with advanced knowledge on the principles and practices necessary for assessing and regulating mining activities more effectively for environmental compliance.
Kenya	Strongly agree	Both	Our mining legislation has ethical governance principles embedded in it, licensing process is transparent, accountable and participatory. We have taken to informing applicants for mineral rights and holders on stages and decisions in all the stages.
Kenya	Agree	Both	National Guideline on Mine Site Decommissioning and Rehabilitation was the change project for NEMA staff who participated in the International Training Programme (ITP) 308 for the cohort that ran from 2018 -2020
Kenya	Agree	Both	The insights gained from the program led me to advocate for sustainable practices in mining operations, aligning them with the principles of ethical governance. i.e. my employer has picked me as the champion of artisanal mining formalization
Kenya	Strongly agree	Organisational	The ITP course has enabled me to be nominated as a Member in the Artisanal Mining Committee of the county Mining. It has also helped me in inspection and issuance of EIA licenses
Kenya	Agree	Both	After participating in the programme especially the change project, I was among those deployed to National Mining Corporation,Kenya (NAMICO), an investment arm of the government in matters mining, for one year to help jump start the corporation.
Kenya	Strongly agree	Organisational	Periodic environmental monitoring and audits are currently being conducted in exploration areas
Kenya	Strongly agree	Organisational	The ITP case has been instrumental in drafting a mine health and safety regulation for the mining industry in Kenya. Moreover, the toolkit developed during the change project continues to aid in drafting an inspection manual for the industry.

Kenya	Strongly agree	Individual	Sustainable Development: The insights I gained at ITP training on managing mine waste and water have reshaped how I approach inspections and audits of mining operations, with an emphasis on eliminating/mitigating long-term environmental impacts
Kenya	Agree	Individual	ITP training equipped me with skills and expertise to properly understand the ethical principles in mining which I have further used to regulate the mining activities through supervision and monitoring
Kenya	Strongly agree	Both	ITP has contributed to my work as we have broadened our scope in who we regulate in mining activities. We are working towards creating an all-inclusive regulatory framework that includes small-scale miners who are not captured in EMCA Cap 1999
Kenya	Strongly agree	Both	Yes, the knowledge & skills gained from the programme has opened my mind to have a better understanding in the area of mine water and mine waste management. I have proposed several changes that are being implemented at my work place
Kenya	Strongly agree	Individual	I haven't changed something for now on functioning of my organisation as I just completed the ITP training course recently. However, I am putting to work the principles acquired and I believe very soon I will change a lot in running our organisation.
Kenya	Strongly agree	Individual	The new knowledge changed my perspective influencing me to consider and prioritize requirements on mine water and mine waste in the designs/layouts in ESIA evaluations to maximize environmental social safeguards to promote sustainable mining.
Kenya	Strongly agree	Both	Application of technical skills, governance structures and stakeholder engagement to make meaningful contributions and accountability to sustain a healthy mining environment in Kenya. Working as a multidisciplinary and not in silos with all .
Zambia	Strongly agree	Both	1. management of the following: -Tailings at the Tailings Storage Facility especially in sensitive environments like water bodies and settlements. - acid mine drainage especially in rain season. formalization of artisanal and small scale mine
Zambia	Agree	Both	As an regulator, I gained in depth understanding of the impacts of mine waste water and how to manage the impacts better. As a result of the knowledge gained I was able to advise industry players more competently and was therefore respected
Zambia	Agree	Both	It has helped in the implementation and improvement of tailing dumps and waste rock inspections and management
Zambia	Agree	Both	ITP accorded me the opportunity to broaden my understanding as well as compare with what other countries are doing therefore helping me to perform my role as an inspector better. Also how to enhance sustainable development for the mining industry
Zambia	Agree	Individual	Everyone is getting committed to participating
Zambia	Agree	Both	Yes, redefining the closure estimates for rehabilitation of mine waste dumps, incorporation of water management at closure, guiding the sector on formulating closure plans and mine site rehabilitation plan. Guideline for Costing Closure Developed.
Zambia	Strongly agree	Both	I m able to professionally critic environmental assessment documents for mining projects as well as issue objective project approval conditions to govern mine waste management throughout the lifecycle of mine.
Zambia	Strongly agree	Organisational	On an individual level, we have been able to inform each other especially as participants on the strategies and emphasis on the Environmental management especially when it comes to the Management of TSFs. it is also an on going sensitization
Zambia	Strongly agree	Both	ITP has contributed strongly on an organization and at personal level. All the guidelines that the organization is using was developed as the change project that was presented at the regional conference in Kigali- Rwanda. This has made my work easy.

Zambia	Agree	Both	After participating in the program, we have devised tools that have been very helpful to both new old officers at the Department and this has improved the quality of our inspections, EIA evaluations and audits
Zambia	Neither agree nor disagree	Individual	Knowledge acquired has helped increase efficiency in ensuring accountability in the mining sector as we conduct inspection so as to ensure sustainable mining
Zambia	Strongly agree	Both	It has helped me to pay attention to things that I did not before undergoing the training
Zambia	Strongly agree	Both	Through capacity-building and promoting ethical standards, it has helped improve decision-making processes, enforce compliance with regulations, and foster responsible resource management leading to a more sustainable mining sector especially in ASM
Liberia	Strongly agree	Both	Yes, we have drafted our regulations for TSF management in Liberia.
Liberia	Strongly agree	Organisational	Institutional collaboration has been strengthened.
Liberia	Agree	Both	The ITP's contribution to my work regarding Outcome 1 is reflected in both my personal perspective towards sustainability and accountability in mining and the new approaches being implemented in my line of work in mining (i.e., Mine closure planning)
Liberia	Strongly agree	Both	The knowledge gained from the ITP training program on sustainable mineral extraction enhance the effective and efficient discharge of work duties between partner organization and is key, leading to a sustainable mining sector for national development
Liberia	Strongly agree	Both	As a supervisor and regulator of mines in Liberia, I had a change perspective on mine waste and my supervision of mines had improved. I started requesting more improved mines waste management from companies.
Liberia	Strongly agree	Both	After gathering all the knowledge and skills from the ITP308 program, I am now part of a technical compliance team to conduct monitoring and compliance on small and large scale mines across Liberia. I am practically applying what I have learned.
Liberia	Agree	Organisational	Not precisely, but there is positive mindset at the senior management level about issues related to mining and environment which has generated the desire to come up with regulations for areas that are yet unregulated.
Liberia	Strongly agree	Organisational	Outcome 1. ITP enhanced my understanding of best practices and provided innovative strategies that aid in the implementation of changes in my work such as collaborations, capacity buildings, decision making processes and sustainable developments.
Rwanda	Strongly agree	Both	After completion of our change project, I obtained the package on how we can manage the tailings and wastewater management. After that we are now still doing the register for all mining companies for better inventory of tailings management in mining.
Rwanda	Agree	Individual	The ITP has guided my implementation of ethical governance practices at my institution. I established transparent environmental reporting, increasing accountability by 39% and enhancing stakeholder trust during and after completing the program.
Rwanda	Neither agree nor disagree	Individual	Recommend the best practice in mine waste management
Rwanda	Strongly agree	Both	obviously there is a big change in my daily work, which reads to sustainable mining, where our main duties as a regulatory constitution is to provide technical advice to the miners on how sustainably mining activities can be done.
Rwanda	Strongly agree	Both	I adopted more sustainable practices based on the principles learned during the course and began collaborating more closely with stakeholders to align our strategies with local needs and regulations.
Rwanda	Agree	Individual	I gaining many skills from the program which has then contributed highly to my work with RMB as an environmentalist. With my group, we have then made important changes on the sustainability in the mining sector in Rwanda which has made changes.
Rwanda	Strongly agree	Individual	It contributes to my work as i am in charge of environmental health and safety . This approach helps me to enhance operational practices but also ensure that the interests of communities and the environment in general.

Rwanda	Strongly agree	Both	
Rwanda	Agree	Individual	The ITP has significantly contributed to my work by altering my approach to how I conduct inspections. Now, I feel better equipped to assess sites with a more informed perspective, especially on the environmental aspects of mine wastes.
Rwanda	Strongly agree	Both	I have seen positive changes on both individually and in my organization because mines produces wastes which pollute environment hence there is need of proper management so as to have sustainable mining sector in future.
Ethiopia	Strongly agree	None	
Ethiopia	Strongly agree	Both	yes we have managed to formulate a guideline
Ethiopia	Strongly agree	Both	We experts acquired ITP's experience contributed to the organization to improve more on mining and environment activities for sustainable development of mining. in addition to this change projects were implemented to support the sector.
Ethiopia	Strongly agree	Both	The training has equipped me with the latest knowledge in mine water and waste management, as the Ministry staff (expert) it helped me to make informed decisions that align with sustainable practices.
Ethiopia	Strongly agree	Both	Yes, Unfortunately we had loose our department due to new organizational structure in the previous year but due to our background that get from on the ITP 308 training we were strongly discussed with the higher officials and department is formed.
Ethiopia	Strongly agree	Both	By support the environmental issues with laboratory
Ethiopia	Strongly agree	Both	The training empower me to contribute for the organization and the community and I have changed previous position which enables to serve more.
Ethiopia	Agree	Both	My understanding in environmental protection related to mining activities has changed and i used this knowledge in activities related to small scale mining of gold
Ethiopia	Strongly agree	Both	Yes i have got good experience for my self and great change in my organization because this ITP programe global wide because when to back my home country what igot from international Training programe applied in my organization thank you
Ethiopia	Strongly agree	Both	1.Awareness training has been given to producers to reduce the damage caused by mineral production. 2. Rehabilitation funds have been raised and standards have been prepared for the miners in the region
Ethiopia	Strongly agree	Both	Aim to provide practical,expert guidance to interest countries on the broad range of governance challenges associate with sustainable development of ASM. Bring together proven standard and operational guidelines relevant to sustainable mineral sector
Ethiopia	Strongly agree	Both	My ministry's governance was increased level of transparency in ESIA, ESMP, Community development & involvement, defining roles & responsibilities for governance within the sector, follow regulations regarding environmental protection & human rights
Ethiopia	Strongly agree	Both	ITP contributed regarding Outcome 1 in different ways. here are some ways ITP contributed; Capacity building, facilitating exchange of best practice, Regulatory Compliance, Policy Advocacy. E.g. I have participated and commented on mining regulation.
Ethiopia	Strongly agree	Both	The ITP has significantly influenced my approach to Outcome by providing new insights and strategies. For instance, after participating in the program, I will revised my methods for data collection and analysis to be more
Ethiopia	Strongly agree	Both	yes, the ITP plays a crucial role in :- - capacity building and training - knowledge sharing - Policy development support - Monitoring and evaluation - Sustainability integration - Ethics and integrity programs - Technological innovation

What country are you from?	OUTCOME 2 The ITP has contributed to Effective dissemination and knowledge transfer of sustainable mineral extraction and its contribution to local and national development.	Do you see positive changes regarding Outcome 2 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 2? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Both	ITP has changed in the way of looking things at the project site during the inspection. And also it helps to transfer knowledge to our others in our organization so as to have common understanding of things.
Tanzania	Strongly agree	Both	The disseminated of knowledge is highly achieved as a larger number of the NEMC environmental Inspectors have attended the program and extended to other workers and operating facilities
Tanzania	Agree	Organisational	
Tanzania	Strongly agree	Both	As an Environmental Inspector, the gained knowledge will enable proper, technical and knowledgeable inspection to the mining area which will have a positive outcome and impact when it come to the institution fulfilling its responsibility to ensure mining and sustainability As an institution we have responsibility to ensure all mining activities are done in a sustainable way
Tanzania	Strongly agree	Both	Yes. Module of Inspections and report writing, useful reviews and comments from us to the ESIA reports submitted by the project proponent and consultants
Tanzania	Agree	Both	The knowledge I gained has been shared with my colleagues, and together we have effectively reached our stakeholders, including miners and other regulators. As a result of this effort, miners have greatly benefited by gaining a better understanding of how to address environmental and social challenges that they previously lacked the means to tackle
Tanzania	Agree	Both	ITP contributed a lot on knowledge transfer of sustainable mineral extraction through participatory engagement, community involvement and policy formulation. These methods helps in effective inspection and monitoring in mining areas leading to enhanced local and national development outcome.
Tanzania	Strongly agree	Both	Transfer of knowledge to other staff in my organization
Tanzania	Strongly agree	Both	Yes, i included some segment in the overall checklist for mine and processing plant
Tanzania	Agree	Both	Personally the program has increased my competence in daily practices, ITP has helped me demonstrate improved technical skills in sustainable mineral extraction methods through good decision-making, problem-solving, and daily operations, leading to more environmentally responsible practices.
Tanzania	Strongly agree	Organisational	The organization is planning to train other institutions on the use of the tool
Tanzania	Strongly agree	Both	It is important to assess who will bear the cost and burden of environmental degradation from the early stages of mine operations, and ensure that mine closure considers long term effects. Additionally, the government and mine operators must work together and the assessment of impacts should include geochemical characteristics as well as social and economic impacts.
Tanzania	Strongly agree	Individual	The training programme was useful to me; I had been using the knowledge to implement it in my duties. Also, after the training we did a project for change of preparing a checklist for joint inspection which was shared with my co worker.
Tanzania	Agree	Both	The knowledge about mineral extraction help realization the importance of collaboration between government bodies on management of mineral extraction activities. It also provided the knowledge on how we can utilize the advancement of technology to improve the inspection & monitoring mechanism and regulations to mitigate the associated environmental impacts. Through which the realization of the importance of trainings to stakeholders regarding the importance of determining mineral geochemistry for a particular ore so as to increase the recovery rates
Tanzania	Strongly agree	Both	absolutely YES. improved my skills in review of EIA and EA projects and improved my skills in inspection of mines.
Kenya	Strongly agree	Both	There is realistic dissemination of knowledge from the institutional level to the community level regarding mine closure and also mine waste management

Kenya	Strongly agree	Individual	Reviewing mine related EIAs inspection of Mines, conducting awareness and trying campaigns
Kenya	Strongly agree	Both	Yes,sensitization of the people living near the project area where drilling waste was consolidated. I also participated in the coming of the environmental health and safety regulations.
Kenya	Strongly agree	Both	The Ministry is working on regulations on Mine Health and safety. I had an opportunity to contribute on TSF management based on what i learnt in this course and the experience i had in Kitwe, Zambia.
Kenya	Strongly agree	Both	Make my inspection work on mining areas more professional and knowledgeable
Kenya	Strongly agree	Organisational	We recently had discussion in the departmental technical whatsapp group and we agreed to have all the outputs from the SIDA be consolidated and shared to all inspectors, then we develop ways to implement them at the grassroot level.
Kenya	Strongly agree	Both	Gained new knowledge alternatives to mercury use. Together with state department of mining, a new mercury free technologies demonstration centre is under development for local knowledge transfer.
Kenya	Agree	Both	Yes mining activities used to be viewed as environmental degrading agent but through itp, the view of sustainable mining with consideration of social, economic, environmental and safety is now well known to stakeholders. That remediation and Restoration of mines sites is achievable and the land can be reclaimed for other uses. Management of mine wastes and mine water is an aspect that has come out clear from the ITP and from the miners to the regulators and the communities as been put to consideration during public participations and EIA process
Kenya	Strongly agree	Both	Effective waste management within minesites
Kenya	Strongly agree	Both	With the guidance of course mentors and input from other experts, I together with my colleague Joshua, formulated a guidelines for inspecting and permitting mine waste facilities. As a result, this has boosted compliance monitoring by enabling inspectors to better evaluate mining operations in relation to relevant legislation. In addition, sharing the course details with colleagues and stakeholders has enhanced collective knowledge and further strengthened NEMA's overall capacity to manage mining related environmental challenges.
Kenya	Strongly agree	Both	As a senior officer i have imparted the knowledge acquired through mentorship to my juniors which has improved their service delivery. They're better equipped in handling and advising investors in mining on sustainable mining practises
Kenya	Agree	Both	National Guideline on Mine Site Decommissioning and Rehabilitation was the change project for National Environment Management Authority (NEMA) staff who participated in the International Training Programme (ITP) 308 for the cohort that ran from 2018 to 2020.
Kenya	Agree	Organisational	Yes, MIBEMA, used to depend on the Kenya National Beaural of Standards for information on mineral production. However, with the knowledge gained, I am part of the team overseeing development of a royalty management system that seek to address such shortfalls.
Kenya	Strongly agree	Both	The knowledge has helped me assist the mining operators on how to handle the mine waste and also how to decommission a mine and develop Environmental Management Plan.
Kenya	Agree	Both	After participating in the programme, I have played a key role in influencing budgets for field projects to include PPEs for Key artisanal miners and the locals we engage during our field visits. I have also participated in censitizing locals on the importance of sustainable mineral extraction whenever we go to acquire land consents for mining licences
Kenya	Agree	Organisational	Conducted stakeholder engagements
Kenya	Strongly agree	Organisational	The organization has mobilized an experienced and qualified technical team of mine inspectors who have completed ITP training. This team is capable of making valuable contributions to policymaking regarding environmental matters in the mining industry. For example, the team has been instrumental in implementing the post-mining land use plan for the Base Titanium mining company in Kwale County, Kenya
Kenya	Strongly agree	Organisational	One of the most valuable takeaways from the program was the emphasis on networking with fellow participants and experts. This has really expanded my professional connections, both within my organization and with agencies and international experts—even in Australia, where I later pursued my Master's. These relationships have been incredibly useful, as we regularly exchange ideas, share new resources, and discuss strategies for improving environmental audits and monitoring in the mining sector.
Kenya	Agree	Organisational	Information sharing done through different forums to various stakeholders involved in mining sector

Kenya	Strongly agree	Both	With the knowledge acquired, I take every opportunity to raise awareness on sustainable mining activities especially among women who are the ones using mercury to extract gold from tailings in Kakamega- Kenya. As an organization NEMA is keen to develop regulatory tools to help disseminate information and create awareness on sustainable mining practices.
Kenya	Strongly agree	Both	My participation in ITP has led to several key changes towards sustainable mineral extraction. I have played key role in the formulation of artisanal mining safety, health and environmental regulations.
Kenya	Strongly agree	Both	I have changed something regarding this outcome in my work. Recently and after completing the ITP training course I met with the ministry officials where I discussed all what I learnt in the ITP training course. I emphasized that one of the key pillars of ITP the training course is sustainable mineral extraction. When sustainable mineral extraction occurs environmental protection is guaranteed. Also I discussed our change project on rehabilitation of abandoned mines. The ministry tasked me and our colleagues to steer sustainable mineral protection within the mining sector and also pledged to support implementation of our change project further. With this I will say for now this outcome has brought a positive change to the organisation and myself. Therefore, I have somehow changed something within our organisation.
Kenya	Strongly agree	Both	This has seen the development of various awareness resources for the mining sector. Knowledge and skills transfer has further gone to the community level particularly influencing mining designs and layout to put in place environmental and social safeguards as well as safety measures. The need for engagement of other expertise including engineers and sociologists has now emerged to be relevant among the mining communities and investors to promote efficient and sustainable mining. This also has brought of how this investments have the potential of increasing productions among the mining communities that can now be visible. Appreciation and justification of new knowledge is continuing.
Kenya	Strongly agree	Both	After participating in ITP 308, I recognized the importance of multidimensional impacts of knowledge transfer in promoting sustainable development especially in our artisanal miners targeting Migori County. Focusing on SDG 12 Target 12.2 achieve sustainable management and efficient use of natural resources. Workshops and stakeholder engagements focused on sustainable mineral extractions, environmental management in the sector, safety of the miners and mines. Mining to improve livelihoods at the same time being mindful of the environment. The program also contributed hugely to the awareness creation of the 2016 legal framework on the regulation of mining activities in Kenya, key in them the Artisanal and Small-scale mining (ASM). Therefore, continued efforts are there to improve the regulatory environment, address challenges faced by the miners be it on equipment, health, markets and enhance the contribution of ASM to local and National development.
Zambia	Strongly agree	Both	the ITP program has contributed to my understanding of what sustainable mining methods and mineral processing methods that are economically and environmentally friendly.
Zambia	Strongly agree	Both	After I left ZEMA, I was involved in the preparation of an EIA for the extension of Kansanshi Mine TSF2 and was able to use the knowledge from the ITP to prepare a comprehensive environmental management plan
Zambia	Agree	Individual	
Zambia	Agree	Both	It has created a platform which has been used by different organisations in my country such as seminars with chamber of mines, ZEMA to share knowledge of sustainable mining
Zambia	Agree	Both	
Zambia	Agree	Both	Participated on the critical minerals strategy and the 3 million copper production strategy by 2030 for the ministry. All these are being implemented at organisational and local level on sustainable mineral extraction.
Zambia	Strongly agree	Both	Sustainable mining practices have been formally communicated to new mine owners through the approval licences being issued. Other officers within the organisation have developed capacity in Mine Waste Management arising from the knowledge shared from the ITP 308 training.

Zambia	Strongly agree	Organisational	The ITP expanded my knowledge in the way i looked at some aspects of management of the environment and since most of our colleagues at the work place have been part of the programme it is bringing a positive outlook and influence from the organizational point of view especially from our sister departments regarding as proactive towards the mandate of our work.
Zambia	Strongly agree	Both	Knowledge transfer received from ITP during the training sessions has helped the organization to start adopting some good practices that are approved by UN.
Zambia	Strongly agree	Both	Because of the knowledge gained from the training, we are now better prepared to regulate our huge industry how to conduct sustainable extraction of minerals. I have conducted even some lectures to various mining houses to this effect
Zambia	Agree	Organisational	The knowledge acquired has improved the quality of inspection conducted and the comments generated as we review various documentation. The how, where and when sampling is conducted has also improved
Zambia	Strongly agree	Both	The department and Individual workers have realized the importance of engaging Project Affected Persons (PAP) and sensitisation on operations and human rights
Zambia	Strongly agree	Both	The ITP has enhanced knowledge transfer in ASM by promoting sustainable extraction practices, empowering miners to boost productivity responsibly, and contributing to both local and national socio-economic growth.
Liberia	Strongly agree	Both	We are currently undergoing stakeholder engagement with relevant line ministries, agencies, organizations, etc.
Liberia	Strongly agree	Organisational	The knowledge gained has strengthened our ESIA processes.
Liberia	Strongly agree	Both	I have learned a great deal about sustainable mineral extraction. When minerals are extracted in an environmentally-friendly and socially responsible way, the benefits to local communities and national governments can be enormous. This empowers local communities and supports national development through inclusive participation and fairer revenue sharing. Another benefit is that the local community or local economy which remains after the mine closes is not affected in an irreversible way. Sustainable mineral extraction ensures that local resources are not destroyed and that local communities are part of the decision-making processes affecting the mine and its post-closure vision as well.
Liberia	Strongly agree	Both	The knowledge gained from the ITP training program on sustainable mineral extraction enhance the effective discharge of my work duties which is key in contributing to local and national development.
Liberia	Agree	Both	We at the ministry of mines and energy, after the ITP program, conducted training for our field staff to enable them train or educate artisanal miners to be able mine sustainably.
Liberia	Agree	Both	I was part of the team responsible (Group 8) to develop Liberia's first draft TSF management regulations. These regulations will help large mines to manage and properly operate their TSF. Being a part of this team enhanced my research and teamwork skills. I was also able to interacted with different stakeholders at various levels. I was effective in providing information to our supervisors on every progress of our change project.
Liberia	Strongly agree	Organisational	The Ministry has a new trajectory to deal with mining and sustainability which involves decentralization of its key activities to all of the political subdivisions of the Country. This will allow the participation of local and community leaders in licensing processes. Community leaders will be trained about mining and sustainability to embolden them in critical decision making in the award of mining rights and the monitoring of those rights.
Liberia	Strongly agree	Both	ITP have provided valuable insights and tools that have influenced my approach to work in line with outcome 2. The new skills and knowledge acquired had developed potential changes that will improved the growth of my organization. frankly speaking, our project has been the first of it kind in this sector. With the use of the collaborative techniques and networking strategy acquired, the implementation of this project is sure. Besides, this knowledge had been share through training and awareness in our organization to build the capacity of many of our colleagues and others in the area of studied. Currently, it is the tool I am using to enhance my knowledge and skills in my work at the Liberian Geological Survey, the Department of Mineral Exploration and Environmental research. One of these skills I have developed is developing a project. From the training, I have developed many projects in my department. The recent one is ,Monitoring and Compliance with respect to exploration and Mining operation in the country.

Rwanda	Strongly agree	Both	I obtained through the ITP 308 trainings the baggage of we can have a sustainable mining in Rwanda for better increase the economy of the country and the local people nearby the mining companies even the whole community of Rwanda.
Rwanda	Strongly agree	Organisational	The ITP has strengthened my work by establishing periods of knowledge-sharing sessions. This initiative improved stakeholder staff understanding of sustainable mineral extraction, increasing compliance efficiency by about 25% within a year.
Rwanda	Agree	Individual	The audit team started an audit of mine projects basing on the checklist developed
Rwanda	Strongly agree	Both	Actually the knowledge and skills i acquired from ITP program has contributed tremendously in my daily work and there is a great improvement to wards safe and sustainable mining activities.
Rwanda	Strongly agree	Both	The ITP has greatly enhanced my understanding of sustainable mineral extraction, leading me to implement new waste management practices in our operations. For instance, we adopted a water recycling system in many companies that significantly reduces environmental impact and operational costs.
Rwanda	Agree	Organisational	I believe ITP has contributed to the overall RMB organization on the knowledge of sustainable mineral extraction as it was also transferred to mining companies as part of inspections.
Rwanda	Agree	Organisational	By sharing best practices in mining sector, innovative technologies, and successful case studies, this lead me understand how mining can drive economic growth and enhance community well-being as well as good environment.
Rwanda	Strongly agree	Both	
Rwanda	Strongly agree	Both	ITP improved my skills in mine wastes management and sustainable practices through expert training . As a result, my organization has also benefited from this knowledge transfer,enabling us to contribute more effectively in improving our mining sector.
Rwanda	Agree	Both	ITP has contributed in effective dissemination and knowledge transfer of sustainable mineral extraction because it provided a golden opportunity to do a change project which help participants as individual as well the outcome of that change project can become an important tool to organization and can lead to the local and national development
Ethiopia	Agree	Individual	
Ethiopia	Strongly agree	Both	we have shared our knowledge gained and compiled a report which exists still in the organization
Ethiopia	Strongly agree	Both	after the ITP participation, I seriously considering how sustainable mineral extraction contributes to local and national development. i also train local communities to understand benefits, contributions and responsibilities during mineral extractions.
Ethiopia	Strongly agree	Both	The training empowered me to advocate for sustainable practices within my Ministry and community, effectively facilitating the transfer of knowledge and best practices. For instance, I gave trainings related to this program, making especial emphasis during preparation of guidelines and other related documents.
Ethiopia	Strongly agree	Both	ITP 308 Training was used for us to train regional to kebele mining bureuc and also Artesinal and small scal miners about about sustainable mineral extracion to get foriegn Currency for the country
Ethiopia	Strongly agree	Both	by transfer knowledge to other Ethiopian regions specially to mining sector
Ethiopia	Strongly agree	Both	The training empower me to provide training for small scale miner how to keep sustainable mining best practice. In addition Mine closure guide line which is developed as return work plan disseminated for companies to consider it during ESIA process resulting in positive environmental, social, and economic outcomes. and I on environmental protection methods. These methods aim to minimize the negative environmental impact during mining operations and promote responsible environmental stewardship after mining activities are completed.
Ethiopia	Agree	Both	My understanding of modern mining activities has changed and it helped me to support local miners
Ethiopia	Strongly agree	Both	Sure ITP is national wide concept to development programe for any participated On the programs because from different experts professional to joined and transformed new technology
Ethiopia	Strongly agree	Both	1. We transfer the knowledge to the stakeholders and license holders by creating awareness. 2. The stake holders and miners were understand the mineral extraction by the awareness given to them
Ethiopia	Strongly agree	Both	Enhance knowledge and skills Networking Opportunities Access to resources:that integrates community engagment to education policy advocacy technological innovation and cultural sensitivities.

Ethiopia	Strongly agree	Both	We organized multiple of workshops and seminars to regional, zonal, district mining leaders and experts as well as ASM leaders about sustainable extraction techniques and technologies. Increased link with EPA to ensure Environmental sustainability; Four mining area universities were participated on the regional workshops; develop ASM management guidelines for tailored communication with local leaders & ASM workers, Organized field visits on successful mining operations to demonstrate effective practices in action and develop a monitoring and evaluation checklist as well as created social media platform (watsapp, telegram group) for networking and Knowledge Sharing
Ethiopia	Strongly agree	Both	As outcome 1 ITP also contributed regarding outcome 2; ITP is providing effective training & is benefiting individuals, countries and organization in creating knowledge. it creates additional consulting job for me. After ITP 308 by knowledge gained from training i have participated and commented on mining guidelines, directives and regulation. it creates additional consulting job opportunity. I have serving my community and government by making awareness, sharing and applying knowledge have got from ITP 308.
Ethiopia	Strongly agree	Both	The ITP has had a profound impact on my work related to Outcome by enhancing my understanding of effective collaboration and communication strategies. After participating in the program, I made a conscious effort to implement more structured feedback loops within my team, fostering a culture of open dialogue and continuous improvement. This shift has not only improved team dynamics but also led to more innovative solutions. Additionally, I've integrated the best practices I learned into my project management processes, resulting in more efficient workflows and better alignment with our goals. Overall, the ITP has helped me cultivate a more collaborative and results-driven environment.
Ethiopia	Strongly agree	Both	yes, after I participate in this program Training workshops :- to organize the equipment and local communities with the knowledge sustainable mining techniques. Public private partnership:- to encourages collaboration between governments and private companies to develop policies that support sustainable mining. Community engagement:- environmental communities are involved in decision making processes to perspective local mining operation Local supply chains :- to focus on sustainability encourages the development of local supply chains, benefiting local businesses and economies.

What country are you from?	OUTCOME 3 The ITP has contributed to Partner organisations ensure best possible scrutiny of environmental impacts, prevention and mitigation at all stages of the mine cycle.	Do you see positive changes regarding Outcome 3 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 3? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Both	In reviewing the ESIA study of the project, consultants and other stakeholders are positive with the comments given about the project which most of them we learned during the ITP Program
Tanzania	Strongly agree	Both	By development of the change projects that has been translated into working tools
Tanzania	Strongly agree	Organisational	Mine water and mine waste management knowledge helped me since it added me with a new skill during inspecting small,medium na large mines and advising them the best way to manage mine waste they used to produce for sustainable mining
Tanzania	Strongly agree	Both	The gained knowledge in types of deposit/ores, mining methods, Proper management of waste resulted from the mining activities including water, waste rocks and tailing will minimize chances of environmental pollution including minimizing of chances of formation of Acid Mine Drainage hence minimizing pollution. Proper designs including location of Tailing storage facilities and waste will minimize the effects. Furthermore inclusion of proper information of Mine closure plan, designs of TSF, waste rock dumps and types of ores/deposits in the EIA documents will minimize the effects. Further more public participation and consideration is important issues to be considered during the Mining activities for harmony operation taking the example of Musha mine in Rwanda

Tanzania	Strongly agree	Both	Yes, following closely conflict resulting to Mining of Limestone & Aggregates in the Urban Area. A case of an Investor who was surrounded by artisanal miners and lost access to his Beach Resort.
Tanzania	Strongly agree	Both	Yes changes have occurred. Specifically enlightening mining stakeholders on how to deal with cyanide empty containers which we prepared a guideline on the same through this course.
Tanzania	Agree	Both	stakeholders effectively determine environmental impacts and implement mitigation measures in different phases of mine operations. this contributes to sustainable mining practices. some of the strategies that make this possible include transparency, capacity building, using new technologies, progressive rehabilitation and monitoring and evaluation.
Tanzania	Agree	Both	Properly environmental assesments and evaluation is being conducted.
Tanzania	Strongly agree	Both	ITP has contributed in water management hance prevention of chemical disposal while dewatering to nearby rivers or surroungings
Tanzania	Agree	Individual	The gained knowledge from ITP has made to the importance of incorporating more rigorous and comprehensive environmental impact assessments (EIAs) before the start of mining projects, by using advanced knowledge or tools and/or adopting global best practices to identify potential environmental risks early on.
Tanzania	Strongly agree	Organisational	The use of ASGM CHECKLIST to be used under EHPMP project platform for dissemination and train other institutions under the project to use the tool
Tanzania	Strongly agree	Both	The training on geochemical characteristics of rocks made me understand the complexity of mine processing and waste streams at every stage, the impacts of mines after mine closure helped understand the importance of time required to ensure that all impacts have been addressed, and that focus should also be on the workforce which should include gender issues, and social cultural aspects of the community such as sustainability of livelihoods after mine closure
Tanzania	Agree	Both	For those projects that submitted for review for issuance of an Impact Assessment certificate, the review team makes sure that all the identified impacts are incorporated into the environmental management plan;
Tanzania	Agree	Organisational	The ITP has help on determination of the possible impacts associated either mining and mineral exploration thourugh which predictio of mine-water waste ang managrment
Tanzania	Strongly agree	Both	improved skills in review of EMP on EIS documents especial proper prediction of possible impacts, best practices of prevention and mitigation measures. also proper mine closure planning.
Kenya	Agree	Individual	The change project was an opener in engaging partners and stakeholders in the mining sector. There is now close collaboration among partners in the extractive sector.
Kenya	Strongly agree	Both	It lead to development the National guidelines that has contributed to more detailed EIAs before the start during operation and closure of Mines. Knowledge for reviw of EIAs, Inspections of mines and compliance assistance to the mining sector
Kenya	Strongly agree	Both	Before commencement of any project,an ESIA report should be submitted to the Ministry. I am part of the ESIA review committee.
Kenya	Strongly agree	Both	Guided by the inspection checklist for ASM on management of mine water and minewaste we developed our field inspections have a seamless flow.
Kenya	Strongly agree	Organisational	ESIA , Environmental Audits and monitoring has become more significant
Kenya	Strongly agree	Organisational	we have always worked closely with the NEMA team especially since out projects are classified as high risk projects in the EMCA 1999. therefore ITP verified that we have to work together in order to maintain a healthy and clean environment.
Kenya	Strongly agree	Both	Stringent mine licensing, monitoring, operational and decommissioning conditions for mine sites have been proposed to ensure sustainable and environmentally friendly mining practises are adopted in Kenya both medium and large scale mining.
Kenya	Strongly agree	Both	As an individual my inspection and review of ESIA's for permitting has improved. From the Change project, the checklist on ESIA review for mining projects for Licensing has been partially adopted by the organisation that has become part of the procedures and parameters considered in licensing and inspections.
Kenya	Strongly agree	Both	Engagement of multiagency inspections teams to ensure sustainable mining

Kenya	Agree	Both	The ITP course enabled me, alongside other colleagues to formulate a national guideline for inspecting and permitting mine waste facilities in Kenya. This guideline informed the licensing process on the essence of risk assessment protocols and stakeholder engagement as important aspects to a more informed environmental regulatory process within the extractive sector.
Kenya	Strongly agree	Both	Kenya's legislative framework has integrated environmental protection in the mine life cycle. What ITP has done is to showcase real life examples in environmental protection and mitigation which is rare in Kenya considering the low level of our mining sector. Now that I am better informed, I've improved quality of scrutiny of environmental protection and mitigation approvals, monitoring and enforcement.
Kenya	Agree	Both	By showcasing, the best practices of partner countries in regulating mining ; By analysing with individuals from partner countries, trends, gaps and opportunities from the best practices.
Kenya	Agree	Both	ITP has fostered a culture of knowledge-sharing. MIBEMA has regularly conducted workshops and training sessions focused on best practices for safety and environmental management, which has improved our team's capacity to address environmental concerns
Kenya	Agree	Both	NEMA developed the National Guideline on Mine Site Decommissioning and Rehabilitation and this is anchored in the ESIA review process whereby as a reviewer am able to identify the impacts and propose the mitigation measures
Kenya	Neither agree nor disagree	None	Not yet but we advocate for Environmental impact Assessments before issuing mining permits and licenses.
Kenya	Agree	Organisational	Mitigation through tree planting and environmental conservation
Kenya	Strongly agree	Individual	The knowledge gained from the ITP course has elevated me to a position where I can contribute to policy decisions. My valuable contributions have helped the ministry achieve its goals. For example, I am a member of the Base Titanium Post-Mining Land Use Committee, currently working on the implementation of the program.
Kenya	Agree	Both	In my role at work, I'm actively involved in the licensing process, where we carefully review the quality of applications to ensure they align with our laws. From the skills I learnt in the ITP, I've been able to propose and implement changes to make our reviews more transparent and inclusive. One of the key improvements has been introducing new ways to collect and share data, which has helped us better monitor and address environmental risks.
Kenya	Strongly agree	Organisational	As a result the National Environment Management Authority (NEMA) Kenya is developing deposit bonds regulation to guide proper decommissioning of mine sites
Kenya	Agree	Both	As an organization we are keen on demanding a viable decommissioning plan is submitted to NEMA for review and follow up. The plan highlights the risks at all stages of mining and best practices in mitigating these risks. The training I received helped me to be able to identify some impacts that may have otherwise been overlooked or downplayed. The training has also boosted my confidence in enforcing where necessary.
Kenya	Agree	Individual	The skills gained from ITP have enabled me to give adequate and professional guidance to artisanal miners who operate in my region in matters of rehabilitating mined out areas and reusing mine waste
Kenya	Strongly agree	Both	Concerning this outcome, I will say I haven't changed something in my organisation currently. This is because our organisation always ensures that before a mining project is executed all environmental impacts are identified and also their levels of risk determined. After identification, prevention and mitigation of these impacts are established and put into consideration during the projects life. However, with the knowledge I acquired during the ITP training course; I am going to improve the quality of decisions I make on mining projects and their impact to the environment. This will bring change to my organisation and the mining sector as well.
Kenya	Strongly agree	Both	All existing and proposed mining enterprises are subject to environmental assessments and auditing. The program has seen the support, review and development of various guidelines and awareness materials targeted for the mining sector. ESIA guideline for the mining sector ASM manual and Mine and Mine site and decommissioning guideline. Keen emphasizes on potential impacts and mitigation are now thoroughly evaluated before consideration of approvals and licensing. Followed up by continuous monitoring. The need for baseline measurement and monitoring of air quality, water, noise and excessive vibration as well as biodiversity profiling is now promoted and can be monitored.

Kenya	Strongly agree	Both	After ITP program, I influenced NEMA to continued engaging multidisciplinary approach to Compliance and Enforcement in the mining sector. Particularly focusing on the Environmental Management Systems (EMS) in line with relevant ISOs standards. This approach aids in auditing, trainings of employees, reporting, assessing, tracking and recommending best practices and Environmental Management Practices (EMPs). The partnerships formed with the relevant agencies and stakeholders, such as the County governments, Department of Mines and Geology, have integrated proactive monitoring, compliance and reporting structures within the mining sector in Kenya. This collaborative effort strengthens the regulatory compliance framework and enhances coordination and among all the stakeholders. These partnerships facilitate rigorous, spontaneous environmental monitoring, assessments and inspections at all stages of the mine cycle. Be it exploration, operations, closure and decommissioning, post-closure monitoring. As a result, partner organizations are equipped to ensure and maintain highest level of environmental standards and scrutiny. They effectively train and create awareness, monitor activities and employ robust mitigating measures at every stage of the mine cycle. Ultimately fostering a more environmentally sustainable mining sector in Kenya.
Zambia	Strongly agree	Both	The ITP program has contributed to the engagement of different organizations from different countries and see how they manage the environment as a result of mining activities. The ITP is helping in integrating different environmental management systems
Zambia	Agree	Both	With added knowledge from ITP, I was able to confidently advise clients on the impacts, prevention and mitigation of mines. This knowledge further consolidated my profession as a metallurgist
Zambia	Strongly agree	Organisational	
Zambia	Agree	Both	Has enriched individuals with knowledge on what and how best an EIS should be conducted therefore aiding in better decisions over the regulation of EIS projects
Zambia	Agree	Both	
Zambia	Strongly agree	Both	Yes, at organisational level, revision of laws and guidelines has been done waiting implementation after enacting the principle law. At individuals level, these aspects are considered during approval of EIS, environmental audits and when updating the Environmental Management Plans.
Zambia	Strongly agree	Organisational	Local Authorities, the Mine Safety Department and mine owners are more informed about sustainable mining arising from the approval licence conditions and environmental assessment documents which now contain sustainable mining practices.
Zambia	Strongly agree	Individual	There has been an emphatic approach and a logical management of our environment at a personal level and organisational level.
Zambia	Strongly agree	Organisational	Mine waste rock dumps and tailings storage facilities are well regulated. Mitigations measures are being applied to prevent the dangers that comes with mine water and waste management by Mining Companies.
Zambia	Strongly agree	Both	During the training, there was a topic on waste characterisation for example, that was a game changer for us especially when conducting the review of the various EIAs and now EPF
Zambia	Agree	Both	The quality of comments generated as we review EIAs has improved. There has been improved response from the industry in how they are preventing and mitigating environmental impacts
Zambia	Agree	Individual	The way EIAs were reviewed in terms of focus on mine waste management has changed and now, there is more focus on the handling of mine waste, which is good for the environment and can be attributed to the results of ITP training
Zambia	Strongly agree	Both	The ITP has empowered especially ASM partner organizations to rigorously assess environmental impacts, ensuring effective prevention and mitigation strategies are implemented throughout the mining cycle.
Liberia	Neither agree nor disagree	None	As of this moment, we are still at the drafting stage of our regulations. We are hoping that when this regulation is approved, it will be implemented for proper environmental impact assessment.
Liberia	Strongly agree	Organisational	ITP programme has built the capacity of regulating institutions to be able to properly manage and regulate that mining is done in a responsible and environmentally compliant way.

Liberia	Strongly agree	Both	Before ITP 308, it was rare to talk about things like acid mine drainage, leachate, mine closure plan, and the geochemistry of waste rock and tailings in my organization. But this course has taught us/me a lot, many of which have now been adopted into our regulatory strategy for things like social, environmental and economic impacts of mining projects on the local population and the local environment. For instance, how do we properly sample leachate from waste rock piles derived from sulphide ore mining to understand the heavy metals liberation potential into the environment (soil and water).
Liberia	Strongly agree	Both	Yes, the knowledge gained from the ITP training program has improved my skills to conduct monitoring and compliance as one of the primary mandates in my department at the MME. E.g. looking at Mine acid drainage, waste stock-piles, TSF, reforestation. reclamation, etc.
Liberia	Strongly agree	Organisational	We at the Ministry of Mines and Energy worked with the GIZ to sponsor and implement program aimed at artisanal miners observing best environmental practices during their operations.
Liberia	Strongly agree	Organisational	Knowledge and skills attained from the ITP program has enabled me to contribute tremendously to my organization technical monitoring compliance team on large and small skills mines. Moreover, working with other members from Liberia to develop TSF regulations has broader my understanding of research, teamwork and organizational skills.
Liberia	Neither agree nor disagree	None	None
Liberia	Strongly agree	Both	As regarding Outcome 3, the ITP has contributed to my work in the following ways: 1. Knowledge capacity has been enhanced in reviewing concession documents with respect to mine life cycle and its impact on the environment in confirmative with International best practices. 2. After participating in the ITP programme, monitoring and compliance has been the focus in regards to the mining laws of the Republic of Liberia. Policy makers has been informed on the significance of monitoring mine waste and the advert effects on the environment. Currently, the draft Regulation was shared with senior management staff and it is been used to guide the work flow in my field of work.
Rwanda	Agree	Both	After the training, so far we are work hand in hand with REMA for environmental protection through green environment in mines.
Rwanda	Strongly agree	Organisational	The ITP has empowered my institution to implement stricter environmental scrutiny measures, enhancing our impact assessment and mitigation protocols, and leading to improved sustainability practices at every stage of the mine cycle.
Rwanda	Strongly agree	Organisational	Sustainable practices and mine reclamation
Rwanda	Strongly agree	Both	yes, i think as an environmental inspector, i always check whether the mining company have all required documents such as EIA and other required documents that are approved by the competent institution or organ and check whether they follow all recommendation and remediation procedures at all stages of the mine circle.
Rwanda	Strongly agree	Both	After participating in the program, I implemented a comprehensive impact assessment framework that evaluates potential environmental risks at each stage. For example, we now conduct regular audits and community consultations to ensure transparency and gather feedback. This proactive approach has strengthened our mitigation strategies and fostered trust with local stakeholders.
Rwanda	Strongly agree	Organisational	RMB has been prioritizing best environmental practices in the mining sector and the ITP programme has been of big help.
Rwanda	Agree	Both	As a result, the organizations will be better equipped to minimize adverse impacts on ecosystems and local communities, ultimately leading to more responsible and sustainable mining practices. Also by implementing best practices for environmental assessment, prevention, and mitigation, where the organizations will effectively identify potential risks and develop strategies to address them.
Rwanda	Strongly agree	Both	
Rwanda	Agree	Both	The change project part of the program really helped me take a step back and identify gaps in our processes. At the end of the project, I felt empowered to initiate meaningful changes like designing checklist tool for mine waste facilities in Rwanda.
Rwanda	Agree	Individual	this outcome has been achieved especially on individual level, because after we have been trained, we visited different activities of the mine including extraction, mineral processing and smelting. we have seen how the wastes from those activities are being managed so this will be a tool in capacity building which can be implemented so as protect environment

Ethiopia	Strongly agree	Organisational	
Ethiopia	Strongly agree	Both	The guideline which we have prepared is helping to mitigate impacts on artisanal mining
Ethiopia	Strongly agree	Both	implementation of change projects on sustainable mining processes help us to do jobs as per environmental standards and guidelines to reduce risks and mitigate if they are happened.
Ethiopia	Strongly agree	Organisational	Participating in the training gave us insights into each stage of the mining process, from exploration to closure, enabling us to identify potential environmental impacts at earlier time, before commencing the operation.
Ethiopia	Strongly agree	Both	We give a mining license and administer them, so as a regulatory body we have seen all the licensee have done environmental impacts, prevention and mitigation at all stages and we also regulate based on environmental management plan of the licensee
Ethiopia	Strongly agree	Individual	
Ethiopia	Strongly agree	Both	The training provides me with the tools and knowledge necessary to effectively review environmental and social impact assessments of mining projects. This ensures that potential environmental and social risks are identified and managed early in the project lifecycle, contributing to regulatory compliance and stakeholder engagement. This training helps for the Ministry and Environmental consultant.
Ethiopia	Agree	Both	I have gained knowledge from the training and I hope to work with the mining industry effectively
Ethiopia	Strongly agree	Both	Yes i have got good experience for my self and great change in my organization because this ITP programme global wide .
Ethiopia	Agree	Both	environmental impacts caused by mining activity is understood by the awareness created and the mitigation method is start to applied in the mineral sector
Ethiopia	Agree	Both	From the environmental views, the mine closure guideline we did as a team will contribute on how to mitigate environmental impact regarding mineral activities.
Ethiopia	Strongly agree	Both	Strictly follow EMP for ASM and detailed ESIA for large scale mining projects before licensing to address potential environmental impacts and propose mitigation measures. Urge to involve local communities and stakeholders in the EIA process to gather diverse perspectives. Created and disseminate ASM -EMP guidelines was developed for sustainable mining practices. Monitoring & evaluation checklist was developed for environmental conditions of the mining cycle.
Ethiopia	Strongly agree	Both	ITP provides effective training knowledge on environmental standards and regulations, best practices, impact assessment techniques, monitoring tools, mitigation planning and other. After ITP 308 as a team at regional and national level we prepared change project on Mine Closure, the compiled document was presented and discussed with my organization official members. some the ideas in change project was included in regulation, Guidelines and directive of mining work. In other way all my organization experts are alerted to Environmental issues and the ways of evaluating and approving EIA documents completely different from the past.
Ethiopia	Strongly agree	Both	The ITP has greatly influenced my work related to Outcome 3 by deepening my understanding of effective evaluation techniques. After participating in the program, I revised my evaluation methods to include more qualitative measures, allowing for a richer analysis of outcomes. I also started to implement regular check-ins and reflective practices to assess not just the results but also the processes involved. This shift has led to more meaningful insights and a greater capacity for iterative improvement. Overall, the ITP has empowered me to approach evaluation with a more holistic perspective, ultimately enhancing the impact of my work.

Ethiopia	Strongly agree	Both	yes, to contributes to partner organizations in several key ways to ensure rigorous scrutiny of environmental impacts and mitigation throughout the entire mining cycle. 1. Guidance and Standards: it provides clear guidelines and best practice standards for management, helping organizations to implement effective environmental oversight. 2. Capacity Building: This offers training and resources to partner organizations, enhancing their capability to assess and manage environmental risks associated with mining activities. 3. Stakeholder Engagement: By promoting transparency and communication with stakeholders, the encourages collaborative efforts to identify potential environmental impacts and develop mitigation strategies. 4. Monitoring and Reporting: It emphasizes the importance of continuous monitoring and reporting of environmental performance, ensuring that organizations remain accountable for their impacts and mitigation efforts. 5. Regulatory Compliance: By aligning with partner organizations meet legal and regulatory requirements related to environmental protection.
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What country are you from?	OUTCOME 4 The ITP has contributed to Partner organisations use transparent, inclusive and meaningful dialogue to ensure full public participation.	Do you see positive changes regarding Outcome 4 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 4? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Both	During discussion and stakeholders consultation the Council normal takes the views and perception of stakeholders about the implementation of the project
Tanzania	Agree	Both	Transparency have been accomplished through establishment of the guidelines which most have been through change projects
Tanzania	Agree	Organisational	
Tanzania	Strongly agree	Both	As the Organization, it is mandated to facilitate the EIA process within the Country, as part of the process public participation is one of the requirement during the process to the side of the proponent /Developer who own the project and The Council to ensure its participation during the site verification visit to avoid unnecessary disputes and as the Council it well observed during the process. This was vividly revealed during the field visit at Musha mining area where the Trinity metal Company considered communities who were initially doing the mining activities with their local knowledge to be part of the mining activities at the Musha tunnel/decline which seems to be helpful
Tanzania	Agree	Both	Effectively participated in the meetings with society of miners in Dar es Salaam (Dacorema) Region on impacts of Sand Mining, Riverbanks cleaning and Regional Committee
Tanzania	Strongly agree	Both	Yes my quality of delivering services related to mining sector regulation has improved significantly
Tanzania	Agree	Both	The contribution of ITP to outcome 4. After participating to the programme, I ensure full participation of all stakeholders who are affected directly or indirectly by the presence of the mine in that area. Local communities are actively engaged in all stages of the project.
Tanzania	Agree	Both	Gaining more confidence
Tanzania	Strongly agree	Both	Partner organization such as neme and government chemist together with the mine commission and the ministry of minerals has jointly come together with the local government to work together ensuring waste management.
Tanzania	Agree	Both	After participating in the ITP, I have adopted more structured and inclusive consultation practices with local communities and stakeholders this includes holding regular public meetings and/or trainings where stakeholders have the opportunity to voice their concerns and contribute to decision-making processes. We have started engaging with stakeholders earlier in the project cycle making sure that their feedback is considered in the planning stages rather than after decisions have been made
Tanzania	Strongly agree	Organisational	The organization are using the tool inclusiveness and ensuring public involvement. Plans to train and disseminate are underway fot different groups

Tanzania	Strongly agree	Both	Gender balance in the workplace can influence representation in terms of decision making and access to services such as changing rooms. Additionally, involvement of local communities can affect acquisition of surface rights, relationship with the local community and development of the community
Tanzania	Agree	Both	Yes, the training facilitators and mentors committed fully to the guidance of participants.
Tanzania	Agree	Organisational	The government bodies including ministry of minerals occasionally gathers stakeholders comments to increase transparent and accountability
Tanzania	Strongly agree	Both	Knowing how other organization i.e. Mine Commission collaborate with NEMC in implementation of mines cycle, identify gaps and challenges in decision making for mining operation on environmental compliance matters.
Kenya	Agree	Both	The mine closure guidelines developed out of the change project have created a level of public involvement in decision making thus ensuring rights of all are taken into account and in a transparent platform.
Kenya	Strongly agree	Individual	Complicated assistance in the mining sector, Due to the availability of the National guidelines the public is educated on the need of public participation and are able to be involved in all the stages of a mine
Kenya	Strongly agree	Both	Nowadays there's more of public sensitization especially in the area where there are ongoing projects.
Kenya	Strongly agree	Both	From what I learnt from this course, issues around, mine water and mine waste management cut across several stakeholders and organisations so far, any conversation we held with the miners it has become critical to bring other players onboard.
Kenya	Strongly agree	Both	Role of NEMA in regulating mining sector has increased which will make it more sustainable
Kenya	Strongly agree	Organisational	yes, currently in my region am in the process of mapping all abandoned sites as well as sensitizing all mineral right and applicants to ensure that they carry out rehabilitation of the mine site failure to which they will face the consequences as stipulated in the laws
Kenya	Strongly agree	Both	At national level, the Government has adopted multi agency approach to address challenges and issues in the mining sector. At individual level I have learnt to nudge the mining community and stakeholders on best mining practices particularly mine waste disposal.
Kenya	Strongly agree	Both	It gave a good platform to understand various stakeholders and that has improved my understanding and that of the organisation on who to be involved as stakeholders and the role of women, youth, community and the indigenous people. This has enabled the organisation improve on the mode of reaching to the public with the relevant information required for the mining related activities in the country.
Kenya	Strongly agree	Both	Engagement of the public in policy making
Kenya	Agree	Both	The Authority(NEMA) has expedited dialogue with mining companies for a better understanding of the compliance regime as a result, there has been better transparency from mining companies regarding their work, thus enabling even surrounding communities and other government and non governmental organizations to objectively monitor the sector.
Kenya	Neither agree nor disagree	Both	Public participation is integrated in our law and decision making processes impacting stakeholders as it is a mandatory constitutional requirement. ITP training has impacted participants with skills/approaches to carry out quality public participation, however, the decision to do public participation some times has been at the discretion of policy leaders. A number of legislation or decisions affecting the public that bypassed due process have been outlawed by the courts
Kenya	Agree	Organisational	NEMA staff are collaborating with County Governments to provide technical assistance in gazetteement and launching Artisanal Mining Committees in Mount Kenya Region, Kenya; Kakamega, Vihiga, Siaya, Turkana, Migori, Kisii, Kitui and Taita Taveta Counties.
Kenya	Agree	Both	Yes, as the lead ASM champion, I have enabled formation of a multi-sectoral team including stakeholders from the private sector to try and develop self-regulation guidelines for artisanal miners in the gold mining subsector, with an aim of reducing conflicts on land lease, participation of women in mining, managing mine waste etc
Kenya	Strongly agree	Organisational	Public participation is enshrined in the ESIA process and hence the locals are able to be told of the impacts of mining prior to commencement of the project.

Kenya	Strongly agree	Both	In every field work I have been part of and that is more than five since training with ITP. We have ensured we have engaged locals in meaningful dialogues regarding the minerals found in their are, how the government is going to go about extracting it and how they will benefit. This is done to ensure full public participation.
Kenya	Agree	Organisational	Effective and tailored communication to stakeholders
Kenya	Strongly agree	Both	The ITP case has been instrumental in drafting a mine health and safety regulation for the mining industry in Kenya. Moreover, the toolkit developed during the change project continues to aid in drafting an inspection manual for the industry. Additionally, the knowledge and skills acquired from the program have significantly helped the ministry manage mine closure programs, thereby enhancing environmental protection and safety
Kenya	Agree	Individual	Enhanced Stakeholder Engagement: Since I completed the ITP, I've taken a much more open and inclusive approach when working with stakeholders, including local communities, environmental groups, and government bodies involved in mining projects. I've been part of programs like post-mining land use and I actively ensure that everyone's voice is heard and considered in the decision-making process.
Kenya	Strongly agree	Organisational	NEMA has engaged the public I public participation forums on mine sites management
Kenya	Strongly agree	Both	As an individual i am able to steer conversations between locals and government officials to ensure fruitful discussions that will bear fruit. Some locals may not understand the technical terms used so I am able to simplify the language for their full participation. As an organization we base our decisions on public participation, and we ensure that the this includes the local administration and all relevant officials.
Kenya	Strongly agree	Both	The exposure from ITP has enabled me to guide my organization to hold meaningful discussions with various stakeholders in the mining sector. We are now able to balance the interests and influences of various stakeholders for better project outcomes
Kenya	Agree	Both	The ITP has positively impacted on me concerning this outcome. Through the training I was able to fully understand that it is important to always perform public participation on every mining project. This ensures all stakeholders are involved preventing occurrence of disputes during the project's implementation. I have disseminated this acquired knowledge on public participation to my colleagues in the ministry and the ministry has pledge to always conduct public participation going forward. This will be a positive change as previously the ministry have fallen a victim for failing to conduct public participation on introduction of new royalty rates.
Kenya	Strongly agree	Both	Disclosure, consultation and public participation are very significant and mandatory. Profiling of engagements, the results and feedback are critical in decision making at all levels of the mining cycle. Concerns are documented and strategic interventions put in place. Communities are and continually gaining knowledge on what their place and responsibilities are in the mining cycle. The promotion of grievance mechanism framework and the identification of focal/liason person /offices are known to communities. Communities can now participate in legislative development and negotiate for shared benefits/ royalties.

Kenya	Strongly agree	Both	One significant lesson that I picked from the program training and that has influenced change in my work, it is the importance of Public participation, partnerships, fostering stronger relationships with the mining communities. Ensuring that all voices are heard and listened to and that they are integral in the decision making process in the mining sector, without this, it is the environment that suffers (degradation, deterioration, mismanagement). After the training, in my Back to office report I gave recommendations amongst them the need to encourage partner organizations and stakeholders in the mining sector on openly sharing information on mining projects, the potential Environmental impacts, compliance on non-compliance levels. This transparency is essential for building trust and ensuring that communities are informed participants in whichever process of the mining cycle. Since then, from the insights I got from the training, it has become a norm now to allow the communities voices be heard in public forums in the information and data and information gathering field visits. To foster inclusiveness and a sense of ownership in the process in the mining sector. By involving them, we are able to better address any issues and concerns that may arise. Additionally, I have applied the insights from the training to ensure dialogues reflect cultural sensitivity and inclusion, especially in the marginalized mining geographic areas such as Marsabit County. NEMA always prioritizes and includes marginalized demographics within the mining sector including women, people living with disabilities and the youth. Therefore, creating a space where these groups can express their perspectives in a sustainable mining regime thus also ensuring that the benefits of the mining activities are equitably distributed.
Zambia	Agree	Individual	The ITP has contributed to ZEMA engaging the Mine Safety Department under the ministry of mines minerals development in conducting compliance inspections and ensuring that safe mining methods are implemented to protect both peoples and the environment.
Zambia	Strongly agree	Both	At Kansanshi Mine, as part of the team preparing the TSF2 Extension EIA, I was given an opportunity to speak to senior management and agree on the best way for dealing with identified impacts. I was able to influence corporate decisions
Zambia			
Zambia	Agree	Individual	It has enriched government officials with knowledge of why stakeholders at all levels are important and why dialogue is essential
Zambia	Agree	Both	
Zambia	Strongly agree	Both	The organisational provides the needed resource for stakeholder engagement and knowledge is shared with communities and various stakeholders at individual level. Thus, the knowledge and skill from the ITP program has provided variable insight that has been shared with other stakeholders at various forums.
Zambia	Strongly agree	Both	Mining projects are subjected to a robust stakeholder scrutiny of upto 105 days before a decision is made. Local residents views are seriously included in the decision making process.
Zambia	Strongly agree	Organisational	Although a full sensitization was not done on a global scale, individual efforts have been put in to sensitize our clients during our routine operations on the requirements needed especially towards, the change project related work.
Zambia	Strongly agree	Organisational	ITP training has given us step by step guide on how to engage with public, through stake holders consultations meeting before a police is issued to the general public.
Zambia	Strongly agree	Both	
Zambia	Agree	Individual	The improvement is still on going, the level of transparency has improved and we are now finding better ways to involve the public on new developments
Zambia	Agree	Organisational	Mines Safety Department (MSD) and Zambia Environmental Management Agency (ZEMA) have developed a strong relationship in ensuring that mine environment is protected
Zambia	Strongly agree	Both	Improved meaningful public participation that has empowered communities and enhanced trust in mining processes and decisions.
Liberia	Strongly agree	Both	The ITP has served as a liaison between our government and our partner organisations in regarding of knowledge sharing.
Liberia	Strongly agree	Organisational	Our ESIA community engagement methodology has been strengthened as experienced how we managed the BMCC and Mbagoima Community dispute.

Liberia	Strongly agree	Individual	Yes, a lot has changed in my work both at the individual and organizational levels. The impacts of the ITP program relative to outcome 4 is clearly visible in our approach and strategy to engaging stakeholders and their various interests. In the mining industry, we do understand that a mine might have a small areal footprint, but the impacts created by this small area can be far-reaching, some irreversible and some reversible. It is therefore important to ensure that all stakeholders are aware of the potential impacts of a project and together they all can have a meaningful dialogue about the best ways to manage the project so as to avert or mitigate some of the major impacts. So transparency, openness and inclusion are integrated into our stakeholders' engagement strategy as an institution.
Liberia	Strongly agree	Both	Yes, our change project toolkits and jingles are being publicly discussed and played on radios locally for awareness. In addition, our training interactions, presentations and toolkits are placed on partnering organizations' servers for public view.
Liberia	Agree	Individual	After the ITP program, I improved the provision of information concerning the mining sector from my office to the public while I also held some interactive engagements with the public through the Electronic media.
Liberia	Agree	Individual	During the development of the draft TSF, I had the opportunities to have meaningful discussions about TSF with local experts in TSF management, stakeholders in project Affected Communities, environmental Groups, as well as supervisors at the Ministry of Mines and Energy who consent to developing and implementation of this project.
Liberia	Neither agree nor disagree	None	This has no direct impact thus far.
Liberia	Strongly agree	Both	As regarding Outcome 4, after participating in the ITP programme, it has increase inter-agency collaboration between the Environmental Protection Agency and the Ministry of Mines and Energy in developing a draft Regulation for the management of Tailing Storage Facility in Liberia. To have a better success story, stakeholder participation was highly endorsed. Currently, partners are been engaged on the strengthening of this document. The road map to a wider publicity is been worked on for the adoption of the Regulation and Guidelines.
Rwanda	Agree	Both	So far we have official documents about checklist and register of envintory in mining of Rwanda.
Rwanda	Agree	Individual	The ITP guided me in establishing some community forums and feedback sessions at the institution. These initiatives promoted transparent dialogue and led to actionable insights, increasing public participation in mining decisions by around 8.7%.
Rwanda	Agree	Both	
Rwanda	Strongly agree	Organisational	Yes, i have participated in solving some misunderstandings or conflicts between some mine owners and their neighbors or their employees, and we have to call all concerned parties to come together and hear the sources of their conflicts or misunderstanding and advised them, and they were fully participation of the concerned parties, and some times those conflicts or misunderstandings were solved peacefully.
Rwanda	Strongly agree	Both	The ITP has greatly enhanced our commitment to transparent and inclusive public dialogue. After the program, we initiated regular community forums to engage local stakeholders in decision-making processes regarding mining activities. For instance, we now hold quarterly meetings where community members can voice concerns and contribute ideas, ensuring their perspectives are valued. This shift has not only improved community relations but also led to more informed and sustainable project outcomes.
Rwanda	Agree	Organisational	ITP has encouraged RMB as an organization to increase their communication and make it transparent and it has been getting better with time.
Rwanda	Strongly agree	Both	By ensuring full public participation in the mining process By prioritizing open communication and stakeholder involvement By allowing for diverse perspectives to be heard and considered in decision-making.
Rwanda	Strongly agree	Both	
Rwanda	Agree	Both	My organization already encouraged full public participation of all stakeholders and the ITP helped to put more emphasis.
Rwanda	Strongly agree	Individual	every topic discussed during ITP training, we have got sufficient time to provide idea, suggestion and to ask different question as well good solution were provided
Ethiopia	Strongly agree	Both	

Ethiopia	Strongly agree	Both	after the session from the training, we have worked on mainstreaming public consultation and engagement in mining projects from initiation to decommissioning phase we can mention few projects who have really achieved a lot through public participation
Ethiopia	Strongly agree	Both	I deeply understand transparency, inclusiveness and dialogue between stakeholders benefit for the sustainable development of mineral extraction and restoration of the environment
Ethiopia	Strongly agree	Both	We have got lessons on how to facilitate open discussions, ensuring that community voices are heard and valued. The training also include methods for addressing conflicts and concerns, fostering a more inclusive dialogue.
Ethiopia	Strongly agree	Both	Before giving the mining we check the applicant was done transparent, inclusive and meaningful dialogue to ensure full public participation after giving the license also we monitor how the licensee participate on social license issues.
Ethiopia	Agree	Individual	
Ethiopia	Agree	Both	The training create platform to share experience of various African countries and best practices of Sweden. Lesson taken from those experience to have public participation during Mining early stage which provide positive outcome for the sustainable mining practice.
Ethiopia	Agree	Both	From the training, he will be able to teach traditional gold producers in Ethiopia
Ethiopia	Strongly agree	Both	This ITP is very important for Organization level and individual level different professional experts and introduced technology on the event for sure good Chance for my self and organization
Ethiopia	Agree	Both	After we got the Training we as Organisation start to engage community in the mining activity take place as region and also the community had participate in the mining development.
Ethiopia	Strongly agree	Both	After ITP training we have prepared change projects on mine closure and present for stakeholders to ensure function and promote access to information, subject only to the specific and limited exceptions as are provided by law.
Ethiopia	Strongly agree	Organisational	Asking of local and community consent before granting of license. No objection/Consent letter from region/local administration was a pre-requisite for license permit. Asking of Public consultation minutes for ESIA approval also highly implemented after ITP program.
Ethiopia	Strongly agree	Both	ITP contributed to my work regarding Outcome 4 through the following ways; building communication skills, identifying and training stakeholders, how to promoting transparency, ethical engagement practices, creating a culture of participation. by equipping partner organizations with this skills and insights ITP plays great role in enhancing my capacity to engage in transparent, inclusive and meaningful dialogue with the staff members, organization and public we started.
Ethiopia	Strongly agree	Both	The ITP has significantly shaped my approach to Outcome by equipping me with new strategies for promoting sustainable practices in my work. After participating in the program, I started to incorporate sustainability metrics into my project planning and execution. This change has encouraged me to consider the long-term implications of my decisions and to prioritize environmentally friendly solutions. Additionally, I've initiated discussions within my team about sustainability goals, fostering a shared commitment to making a positive impact. Overall, the ITP has inspired me to integrate sustainability more deeply into my work, resulting in more responsible and forward-thinking practices.
Ethiopia	Strongly agree	Both	Yes, The ITP contributed on my work regarding to the partner organizations' use of transparent, inclusive, and meaningful dialogue was by providing a platform for marginalized voices to be heard. the ITP contributed to partner organizations' use of transparent, inclusive, and meaningful dialogue was by providing a platform for marginalized voices to be heard. This was achieved through the use of accessible digital platforms, such as online forums and social media, which allowed individuals to contribute to the discussion from the comfort of their own homes. The ITP achieved this by providing a platform for individuals to share their views and engage in discussions with policymakers, which helped to build a sense of ownership and responsibility among stakeholders.

What country are you from?	OUTCOME 5 The ITP has contributed to Gender discrepancy is continuously targeted within the partner organisations.	Do you see positive changes regarding Outcome 5 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 5? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Both	The ESIA process is not gender based, also views and concern of everyone is included
Tanzania	Strongly agree	Organisational	The selection of participants at organizational level have been achieved through gender inclusive
Tanzania	Agree	Organisational	Through this i tried to encourage mining stakeholder to involve even women in there activities and disciurage the bad practise that mining activities is for men only
Tanzania	Strongly disagree	Both	As the ITP does not based on gender discrepancy, as all genders were equally considered in all activities during two training phases. This will continue to be enhanced in all work-related activities at all levels
Tanzania	Agree	Individual	The course on gender helped me understand the importance of equal participation in the mining sector, also i was Able to listen challenges from a woman who owned the Mining Pit and her willingness to comply after previous orders issued to stop degradation
Tanzania	Agree	Both	Yes encouraged more women to participate in the course as some felt it to be difficult a myth they proved to be wrong after they participated in the course
Tanzania	Agree	Both	After participating in the programme I learned that there shouldn't be differences in treatment, opportunities, or outcomes between genders in various contexts, such as the social benefits, employments, involvement, awareness, education and other opportunities.
Tanzania	Strongly agree	Individual	All work can be done by all gender
Tanzania	Strongly agree	Individual	Gender discrepancy is still an issue in African contries, though few effort are been done. we still have a way to go. My self , i believe that, women can contribute a lot in sustainable development and ITP has demonstrated it already.
Tanzania	Agree	Both	The ITP may have encouraged me to implement systems for monitoring gender-related metrics, such as the percentage of women in different roles, pay equity, and gender representation in leadership. This data helps in identifying discrepancies and taking actionable steps to address them.
Tanzania	Strongly agree	Both	Both are benefiting
Tanzania	Agree	Both	Assessment of projects should focus on gender specific issues such as representation in the workplace, cultural norms which might affect access to resources and child labour.
Tanzania	Agree	Individual	
Tanzania	Agree	Individual	ITP training has contributed on providing the ideas for mine closure strategies and importance of post closure monitoring mechanism for mine projects so as to minimize the government burden on the associated environmental impacts in the future for sustainable utilization of our resources. Further the change projects have a provided tool of inspection and management of mine waste for small scale miners.
Tanzania	Strongly agree	Both	Gender balance is well considered in Participation for implementation of our routine works and it has been considered in our review checklist for projects.
Kenya	Agree	Individual	The ITP underscored the importance of addressing gender discrepancy in the mining sector and I can attest of concerted efforts to address the same with partner organizations particularly with the civil society
Kenya	Agree	Organisational	Trainings have enable the women in the artisal mining know other wasy of earning income ine value chain other than use of Mercury ro get Gold which is specifically done by women
Kenya	Strongly agree	Individual	Gender mainstreaming not only at the work place but also when having meetings with the locals,we encourage women to attend and also ask questions.
Kenya	Strongly agree	Both	I have contributed in formulation of policies on social and gender inclusion within the department.
Kenya	Neither agree nor disagree	Individual	Have not evaluated
Kenya	Strongly agree	Organisational	this has been a challenge in the sector, however with the new recruits they have really embraced gender equality which is a good start. we are certain that the future will not be a reflection of the past. this shows that the sector is opening up

Kenya	Agree	Organisational	After the training I was able to work with Artisanal mining committee to restructure the committee to meet the constitutional gender requirements for all legal committees and through UNDP funded programme conducted a training on mine safety which highlighted gender disparity issues in the good mining sector.
Kenya	Strongly agree	Both	Yes. Initially, the industry was viewed and dominated by the male gender and was viewed as dangerous and risky for women. However, in addition to our constitutional requirements, ITP exposed us to the reality that the sector is not only for men but also the women and thus the players have put the issues of gender to consideration. And various policies and been designed to factor in the gender issues in the sector in our country.
Kenya	Strongly agree	Organisational	Observance of the 1/3 gender rule in engaging of the stakeholders
Kenya	Strongly agree	Both	The course has enabled me to promote gender inclusivity principle at the permitting and inspection of mines to create a deeper understanding of gender specific challenges in relation to mining practices, boost efforts toward integrating both men's and women's needs into sustainability assessments for incorporation of gender considerations into extractive sector frameworks.
Kenya	Strongly agree	Both	Gender parity is a constitutional requirement and is gradually receiving acceptance across organisations both public and private. ITP participants are now well aware of the need to observe gender balance in engagements at work and in the field/communities. The role of women in mining has been in the periphery but this is changing due advocacy of gender inclusion by mines officers some of whom are beneficiaries of the programme. Women are being encouraged to take leading roles in mining including holding their own rights and a place in decision making organs.
Kenya	Agree	Both	NEMA Staff are trained and given equal opportunities to provide technical advisory to Artisanal Mining Committee under the Mining Act, 2016 and the National Guideline on Mine Site Decommissioning and Rehabilitation, at the County level
Kenya	Agree	Both	We noticed that there is no facility for lactating mothers (officers at MIBEMA) stationed at Madini House, this prompted me in company of my colleagues to push for one. The key administrators have acknowledged it as a priority for implementation in the next financial year's budget.
Kenya	Strongly agree	Organisational	Gender inclusion in policy development and participation is forms part of the mining activity and thus have to comply with the gender rule
Kenya	Neither agree nor disagree	None	At individual level, it has proven difficult to influence the hiring of women as casuals during exploration phase of field work. Most of the opportunities go to men because they are considered strong and more equal to the task at hand. Other than that, at organisational level, there is affirmative action which exists within our constitution and is adhered to when hiring technical staff. This is in line with ITP outcome 5.
Kenya	Agree	Organisational	Appreciation of the two-third gender rule as enshrined in the Kenya's constitution
Kenya	Strongly agree	Both	On gender issues, all genders are given equal opportunities to perform without discrimination.
Kenya	Agree	Both	Increased Awareness of Gender Inclusion: Participating in the ITP opened my eyes to the gender disparities present in both my organization and the mining industry as a whole. The new understanding motivated me to join a team focused on reviewing and developing more gender-inclusive policies and practices within our organization in 2021 - 2022.
Kenya	Neither agree nor disagree	Both	Yes
Kenya	Agree	Individual	As an individual and as a woman who was trained by some of the best women in the mining industry my perspective was adjusted in that gender issues are key and need to be frequently discussed. During the formation of small-scale mining committee in Kakamega I was able to raise this up and it was taken into consideration and applied.
Kenya	Neither agree nor disagree	None	This is one area where my organization still lags behind. Female participation in Kenya's mining sector is still wanting especially at the strategic level of management. Given time, I believe we will be able to bridge this gap
Kenya	Strongly agree	Both	This outcome has contributed positively by imparting more knowledge to me on gender issues in the mining sector. Gender discrepancies continue to persist in the mining sector. With this knowledge I will champion for gender mainstreaming in the mining sector. This will be through participating in formulating policies that promote gender fairness in the mining sector. This will positively impact myself, the organisation and the mining sector as a whole.

Kenya	Strongly agree	Organisational	Representation of either gender is a key consideration particularly in formalization and registration of cooperatives/enterprises, thereby ensuring benefit sharing on proceeds of mining enterprises to every one in the community.
Kenya	Strongly agree	Both	I would say, I being a woman, the not so common gender in the mining sector in Kenya, be it as a professional or as a miner, having been given the chance by ITP organized by SGU to participate in the training itself is a win on addressing the gender discrepancy in the mining sector. I am now given more chances by my organization to attend to environmental inspections in the Mines and given the chance to give my independent thoughts without the help of a man. This has in the long run cemented my confidence and grown my resilience and the complexity of driving change in the male dominated field. This shows a proactive effort to confront and eliminate gender inequalities within the partner organizations and the broader mining sector. This aligns with the Kenyan 2010 constitution on inclusiveness in organizational practices. Being a woman, a gender that is highly seen as a non-miner gender I have personally worked hard to integrate gender perspective hence gender equality for sustainable development and effective mining sector for the environment. Both within the partner organizations and the miners. Also, the field of geology, Geospatial science is highly male dominated, In my organization I have tried to focus on and mentor young women professional development to mitigate existing disparities in the workforce and the profession and in decision making within the mining sector. By giving internships and industrial attachments in my department. Partner organizations are always encouraged to continually assess gender representation and participation within the mining sector, helping organizations to identify gaps and improve their gender policies. In the mining sector, NEMA continually carries out trainings and awareness campaigns to empower women in the mining communities, helping to close the gap in that workforce. Because mainly in the Artisanal mining, women are really helpful in the cleaning of the ores and such. Therefore, when the gender discrepancy is addressed, the mining sector has a positive change on environmental matters.
Zambia	Strongly agree	Individual	Gender equality is something that the ITP program has helped our organization to improve in balancing up gender. Considering that our everyday work is mostly inclined to men executing the work, more women are been encouraged to participate in inspections other assignments to promote gender equality
Zambia	Agree	Both	As an EIA team at Kansanshi Mine, it deliberated decided to incorporate women specialists as much as possible to ensure that women were given an opportunity to participate in the task of preparing the report.
Zambia			
Zambia	Agree	Individual	With exposure of how the Western world has achieved gender equity in especially not so common sectors such as the mining industry its motivating to help encourage specially women participation
Zambia	Agree	Both	
Zambia	Neither agree nor disagree	Both	There has been more females that have joined the institution from the time the ITP programs and many have been recommended to participate in the ITP from the Department. Further, at individual level working with different gender offers different perspective and provide opportunities who you can assign for certain works considering the gender sensitivity of an issue at play.
Zambia	Strongly agree	Both	Impacts on gender have to be adequately evaluated throughout the life of the mine. The women, childred and the ederly are particularly prioritised for protection from adverse impacts of mining.
Zambia	Agree	Organisational	there has been a positive participation from both genders in the fight against Environmental MisManagement
Zambia	Strongly agree	Organisational	It was a belief that female gender was not allowed to work in underground mines. After ITP program has changed the perception on the organization, both female and male gender is treated the same.
Zambia	Agree	Individual	
Zambia	Agree	Organisational	The knowledge has helped in allowing the revising of the mining regulations which contributed to this discrepancy by restricting women in the sector . We now have more women been included thus reducing this discrepancy.
Zambia	Agree	Both	There has been more sensitivity to gender issues both at personal and institution level in regards to human rights and gender inclusiveness
Zambia	Strongly agree	Both	In my work environment, we have seen increased participation of women, fostering diversity and inclusion.
Liberia	Strongly agree	Both	From the knowledge acquired from this training, gender is now a major priority at my agency. The support for gender issues has been cardinal for all divisions at the agency.

Liberia	Strongly agree	Organisational	Females have gotten more confident to participate in technical discussions and contribute their expertise.
Liberia	Agree	Both	In our organization, women are beginning to play important roles now, from the senior management level to the technical level as well. Women are employed as geologists, mining engineers and managers, and their input and contributions to policy formulation and regulatory supervision are becoming more and more important. They occupy such roles as GIS specialists in the mining cadastre, senior project geologists, managers for entire divisions and even as senior ministers, to name a few. Women are earning similar salaries as their male counterparts in similar roles. However, I think more needs to be done to enhance women's participation in our organization and in the mining industry at large.
Liberia	Agree	Both	yes, teachings and awareness being carried out on local radio in local dialects to minimize gender based violence in mining areas and support human right laws.
Liberia	Strongly agree	Both	The Ministry of Mines and Energy activated its gender bureau to begin to do gender engagements with operators and residents of artisanal and small scale mining communities.
Liberia	Strongly agree	Both	Gender inclusiveness was a key part during the change project of group 8. As one of the key members working on the draft TSF management regulations, I emphasized strongly about gender mainstreaming in our stakeholder implementation plans and meeting. This helps us gathered view from women who were strongly impacted by TSF failure In Liberia.
Liberia	Agree	Organisational	No changes as of yet but this is something that the Ministry ascribes to in its recruitment policies.
Liberia	Agree	Organisational	Not much change has been done in my organization, because after the change of government, restructuring and appointments are still taking place. However, with the knowledge acquired, from the ITP programme, I am cognizant of mitigating or minimizing gender issues in the work arena. More besides, at the organizational level, there has been some changes. A female now serves as the Deputy Minister for Administration while there are others serving as Directors for various departments or sessions.
Rwanda	Strongly agree	Both	Women in mining is a good practice of ensuring gender in mining.
Rwanda	Agree	Individual	The ITP has enabled the institution to implement gender-sensitive policies, promoting women's participation in decision-making. We now conduct gender equity training and actively support female representation in mining roles, targeting gender discrepancies effectively.
Rwanda	Neither agree nor disagree	None	
Rwanda	Strongly agree	Organisational	yes , but on the issue of gender balance in Rwanda, its not a big issue because there is a policy which request that any institution or company is required to have at least 30% of their employees should be of female sex. so for us what we do is just to follow up and check if this policy is implemented and advise the concerned parties to implement that policy.
Rwanda	Strongly agree	Both	The ITP has significantly influenced my approach to addressing gender discrepancies within our organization. After participating in the program, I established a mentorship initiative specifically aimed at supporting women in mining and environmental management roles. For example, we now offer targeted training sessions and leadership development opportunities for female staff, which has increased their representation in decision-making positions. This focus on gender equality has not only empowered women but also enriched our organizational culture and effectiveness.
Rwanda	Agree	Organisational	RMB has been conducting trainings with different mining companies to explain on the importance of the consideration of both men and women in job opportunities.
Rwanda	Strongly agree	Both	It encourages organizations to implement policies and practices that support women's participation and leadership in the mining sector. It helps to empower women, ensuring that they have equal access to resources, opportunities, and decision-making processes.
Rwanda	Strongly agree	Both	Involvement of both men and women in the program
Rwanda	Strongly agree	Both	My organization was already promoting gender equity, but the ITP reinforced our commitment .
Rwanda	Strongly agree	Both	ITP contributed to gender equality because both male and female participated in the training, this create safe working environment which play a big role in organization even on workers.
Ethiopia	Strongly agree	Both	
Ethiopia	Strongly agree	Both	same as outcome 4 by integrating Gender discrepancy with our partners

Ethiopia	Strongly agree	Both	after the ITP participation, we seriously concerned to follow ethical guidelines to avoid gender discrepancy, women and child abuse.
Ethiopia	Agree	Both	There was no training topics regarding gender. However, indirectly the program contributes to more sustainable and inclusive practices within the mining sector.
Ethiopia	Strongly agree	Both	Yes the training was important for us ithe daily activity of our work how the licensee use geneder inclusive to have a sustainable mining sector to the country.
Ethiopia	Agree	Organisational	
Ethiopia	Strongly agree	Organisational	Contaminated mine water—polluted with heavy metals or toxic substances—can severely affect local water sources. Women are more likely to suffer health consequences, such as exposure to contaminated water during household chores, caring for sick family members, or facing long-term health issues due to polluted environments. The training enhance my knowledge how to safeguard the environment and downstream water and I applied it in my daily routine work.
Ethiopia	Agree	Both	To encourage men and women who work in mines to benefit equally
Ethiopia	Disagree	None	Yes i have got good experience for my self and great change in my organization because this ITP programe global wide because when to back my home country what igot from international Training programe applied in my organization .
Ethiopia	Agree	Organisational	The participation of female is become increase in mineral development due to this the gender equality is being verified
Ethiopia	Strongly agree	Both	My country pay attention towards gender equality. Access to public service is to be provided on general terms of equality, without distinction of any kind as to race, color, sex, language, religion, political or others. Also, ITP 308 also contributes on my skill gap when I come Sweden last time I'm ordinary expert but know I promoted to Team Leader this show gender mainstream applied in may organizations.
Ethiopia	Strongly agree	Organisational	Last year we provide 36 washing machines for ASM cooperatives. The major criteria in the selection of these cooperatives was the numbers of women members and in leading position. In doing so, ITP program have its own positive impact.
Ethiopia	Strongly agree	Both	The issue of gender discrepancy is national issue that the government as country wise playing attention to and ITP is also great input for this. we are working on it by making awareness and giving gender equality training.
Ethiopia	Strongly agree	Both	The ITP has had a meaningful impact on my work related to Outcome by enhancing my skills in stakeholder engagement. After participating in the program, I recognized the importance of actively involving stakeholders in the decision-making process. As a result, I implemented regular feedback sessions and outreach initiatives to ensure diverse voices are heard and considered. This shift not only improved stakeholder satisfaction but also led to more informed and inclusive outcomes. The ITP encouraged me to view stakeholder relationships as collaborative partnerships rather than just transactional interactions, ultimately enriching the quality and relevance of my work.
Ethiopia	Strongly agree	Both	yes, The ITP has been criticized for our work to regard its contribution to the persistence of gender disparities in the partner organizations emphasis on technology transfer and capacity buildings It has often overlooked the specific needs and challenges faced by women in these organizations.

What country are you from?	OUTCOME 6 The ITP has contributed to Partner organisations establish collaborations between relevant agencies or actors towards sustainable mining governance.	Do you see positive changes regarding Outcome 6 on organisational levels and/or individual level?	In what way has the ITP contributed to your work regarding Outcome 6? (E.g. Have you changed something in your work after participating in the programme?)
Tanzania	Strongly agree	Organisational	Joint inspection with different organizations is done and discussion on how mining activities are conducted, impacts and woy forward is discussed
Tanzania	Strongly agree	Both	There has been collaboration established between organizations. For example, in Tanzania, the program has brought together NEMC, the Mining Commission, and the Ministry of Mines. Through a shared understanding of the challenges in mining, a collaborative inspection has been one of the key outcomes, along with the sharing of these challenges. Additionally, there has been coordination at the international level, as NEMC Tanzania has increased collaboration with NEMA Kenya and ZEMA Zambia.

Tanzania	Agree	Organisational	As i mining commission officer i work with other organisation like NEMC on supervising and advising our customers on issues related to mining and environment as you can not separate them
Tanzania	Strongly agree	Organisational	The Council through the Environmental Management Act, 2004 and its subsequent Regulations enhance collaboration between the Council, other relevance organization and other actors in different projects including mining sector for sustainable mining. The ITP program also show the importance and collaboration of other relevance agencies as it includes different institutions, and these was reveled during the training. After the program will put more emphasis on close collaboration with other institutions and key mining actors from the miners, processors and government institions
Tanzania	Strongly agree	Both	There is a close collaboration now between the officers who participated example from Mining Commission - Tanzania and the National Environment Management Council
Tanzania	Strongly agree	Both	Yes something have changed first between ourselves as participating institutions in the country but also with fellow participants and institutions outside the country. This made it easy working together in regulating the sector but also in case of issues that require experience from outside it became easy to access information
Tanzania		Both	After participating in the ITP programme, collaboration between different institutions relevant to the mining sector has been intensified. The collaboration is not only between institutions but also at individual level.
Tanzania	Agree	Both	Several stakeholders are involved in all work
Tanzania	Strongly agree	Organisational	I spoken before, the issue of environmental management is a cross cutting issue where by different institution such as ministry of water, local government, minerals, energies, government chemist ect. my study included them all
Tanzania	Agree	Organisational	The ITP has encouraged me to foster more open dialogue between my organization and external actors, ensuring that concerns related to environmental and social sustainability are addressed collectively.
Tanzania	Strongly agree	Both	Organization and individual technical collaboration are going on to improve performance
Tanzania	Agree	Both	Mining is cross cutting thus requires involvement of different stakeholders. For instance joint inspection checklist should involve Ministry of Mines, Government Chemist
Tanzania	Strongly agree	Both	The partners were getting in touch with the trainee through social media, Also, had visited our institution NEMC and met with our Directors.
Tanzania	Agree	Organisational	The importance of working as a team as government bodies for management of mine projects. However, the are some gaps that i have come to realize that if improved may increase the participation of government bodies on management and monitoring of mine projects for sustainable development
Tanzania	Strongly agree	Both	Nowadays when we conduct inspection regarding mining projects issues, we team up with all relevant stakeholders like Mine commission, OSHA, LGA, GCLA . This has improved our accountability on responding to encountered issues promptly.
Kenya	Strongly agree	Both	There has been enhanced collaboration amongst partners with particular focus going to establishing artisanal mining committees across Kenya and capacity building of such committees being undertaken by the Mining offices.
Kenya	Strongly agree	Individual	Inspection of Mines is now being done as a multiagency by the government instead of each agency going on its own for inspections
Kenya	Strongly agree	Both	Collaboration with Nema in all matters concerning environment.
Kenya	Strongly agree	Both	I HAVE BEEN NOMINATED BY THE DEPARTMENT TO BE PART OF A TEAM DRAWN FROM VARIOUS AGENCIES TO WORK ON A FRAMEWORK AIMED AT SELF REGULATION FOR ARTISANAL MINERS ENGAGED IN GOLD MINING.
Kenya	Strongly agree	Both	It has contributed to professional network both at individuals and organisations interaction, promoting learning experiences
Kenya	Strongly agree	Organisational	they is an MOU between the GOK and Australian Government where officers are been allowed to study mining governance. this will help in understanding the legal framework and the implementation process. especially on the section of collaboration for success
Kenya	Strongly agree	Both	Through UNDP, and NEMA, we have formed an inter agency inspection team comprising of key relevant agencies such as state department of mining, occupational health and safety, ministry of interior, county government, Kenya forest service, human rights organisation and local mining leadership to support governance and safety in the mining sector.

Kenya	Strongly agree	Both	By its nature and various institutions, players and government agencies. Involving the regulators in the ITP programme has boosted the coordination and involvement of various institutions, agencies and communities in the policy formulation, improved good practices, inspections and enforcement.
Kenya	Strongly agree	Both	All-Government approach in implementing government projects and programmes
Kenya	Agree	Both	Through the guideline, there have been more joint integrated inspection of mines by relevant government agencies regulating the extractive sector. This has bolstered knowledge sharing, improvement in communication and resource pooling to enhance sustainable mining practices.
Kenya	Neither agree nor disagree	None	Collaboration between agencies has been on need basis when an issue comes up and a multi agency approach is the most effective way of dealing with it. With ITP training identifying relevant agencies for collaborations is now easier after appreciating the roles different stakeholders play in sustainable mining
Kenya	Agree	Organisational	National Guideline on Mine Site Decommissioning and Rehabilitation through the National Project Technical Committee has highlighted stakeholders to include post-mining land owners/managers and relevant regulators; including County Environment Committees at the County level.
Kenya	Agree	Both	Having visited the Migori region late last year for fieldwork report, I noticed that most mineral dealers were non-compliant and feared the state or officers from the Ministry. I was able (in company of the Regional Mining Officer - Migori) to organise a meeting that sought to bring the miners on board. We agreed on record prompt keeping on mineral production and sales, with the out-coming being revenue for the MIBEMA. However, this has slowed down due to limited funding for capacity building exercises.
Kenya	Strongly agree	Organisational	The relevant stakeholders in the mining sector (including government agencies, the private sector, investors, the civil society and the general public) forms part of the policy makers and ESIA review
Kenya	Strongly agree	Both	I have participated and contributed towards collaboration between our agency various actors towards sustainable mining governance during our change project, during land consent acquisition and during public private partnership negotiations.
Kenya	Strongly agree	Organisational	The ministry is working closely with NEMA in ensuring environmental sustainability in the extractive sector
Kenya	Strongly agree	Both	We closely work with the National Environment Management Authority to ensure that there is conservation of the environment while mining takes place.
Kenya	Strongly agree	Organisational	Strengthened Inter-Agency Collaboration and Information sharing: Participating in the ITP together with officers from National Environment Management Authority (NEMA), there has been more reaching out and building collaboration leading to unified approach for sustainable mining practices and timely information sharing. Together, we've been able to address mining-related projects in a more effective and inclusive way.
Kenya	Strongly agree	Both	We now work closely with the County Government and non state actors to develop co-operatives for proper management of artisanal mine sites
Kenya	Strongly agree	Organisational	ITP has created a platform for all relevant organizations and partners to exchange information and hold discussions. This has enabled us as an organization to see where efforts are duplicated and how best to handle that. My wish is that this will help redirect resources to where it is needed the most and where positive impact of sustainable mining practices will be felt the most.
Kenya	Agree	Both	Beneficiaries of ITP, including me, have influenced my organization to build strong relations with other sectors and organizations to achieve sustainable mining governance. The collaboration with environmental agencies is a key achievement.
Kenya	Strongly agree	Both	ITP training course has immensely added to my knowledge on how different actors and agencies can effectively collaborated to ensure sustainable mining governance. Sustainable governance of the mining sector is guaranteed when all relevant actors in a mining project are engaged. My organisation ensures all relevant agencies are involved when implementing a new law, policy, regulation or a guideline. Through the relevant mining laws, it also ensures before a mining project is implemented all relevant actors are involved. Through my earlier knowledge and the acquired knowledge from ITP, I will continue to fully urge on the need to ensure all relevant agencies and actors are involved in implementation of policies and mining projects.

Kenya	Strongly agree	Organisational	The establishment of partnerships and programs with UNDP, Ministry of environment and County governments and NEMA has seen the running negotiation of projects geared towards supporting mining communities.
Kenya	Strongly agree	Both	ITP created and encouraged the holistic approach on collaboration to address the environmental, social and economic challenges in the mining sector. For example, recently, NEMA has adopted collaborative approaches with the mining Department to solve environmental issues from mining in different parts of the country. Multi stakeholder inspection teams. These teams conduct joint inspections of mining sites combining regulatory (NEMA), technical, social and environmental expertise. This is something that I picked from the training, since we formed the collaboration with the Mining and Geology department that we were with in Sweden for the training. To make sure that compliance is achieved both in the mining regulations and the environmental policies.
Zambia	Strongly agree	Both	I engaged ZEMA management to promote and facilitate more joint inspections with other institutions such as Mine Safety Department, Water Management Authority, Communities and other key stakeholders. The participation of key stakeholders is helping in ensuring sustainable mining.
Zambia	Agree	Both	ZEMA started working more closely with the Mines Safety Department in addressing issues around dumps in the mining environment
Zambia	Strongly agree	Organisational	It has brought about the interaction of key stakeholders involved in the implementation of sustainable mining
Zambia	Agree	Both	Through creation of meetings or seminars where the agencies share knowledge and agree on how to best approach different matters
Zambia	Agree	Both	Yes, I and co-workers engage stakeholders to work hand in to facilitate sustainable mining practices through workshops and seminars
Zambia	Strongly agree	Both	There has been nomination to work with various organisation like the ZAMNEX, which the Ministry has seconded me to. Thus, at individual level, interacting with other stakeholders to improve and enhance the conversation around mine closure in Zambia, is very fulfilling.
Zambia	Strongly agree	Both	It is a legal requirement to engage all appropriate authorities in the decision making process with regards to approval of mining projects. Organisations now make informed decisions rather than the Environmental Agency working in a silo and making Independent decisions.
Zambia	Strongly agree	Organisational	Most of the participants are able to recognise that the concept of what the ITP introduced is actually what ideas need to be implemented by most of our organisations and actors at the end of the day.
Zambia	Strongly agree	Organisational	There is a strong skill and knowledge transfer that my organization has benefited from the Agency through ITP program. I wish to state that this is a very good program.
Zambia	Strongly agree	Both	Because of ITP, we now have better collaborations with ZEMA. As a matter of fact, we devised the National Guideline on the Management of WRD and TSFs together. We now also are able to interact with other organisations from other countries and share information as we look to ensure sustainable mining
Zambia	Agree	Both	Partnering with other organisations especially in the aspect of illegal mining has been achieved to reduced environmental impacts and ensure sustainable governance. This is ongoing and we are optimistic it will be achieved
Zambia	Strongly agree	Both	As indicated before, the program has contributed to strong relationships/collaborations between institutions and personally have contributed and benefited from the collaborations
Zambia	Strongly agree	Both	My work environment actively promotes such partnerships to enhance sustainable mining governance.
Liberia	Agree	Individual	There is level of coordination especially among individuals but there are still some issues at organisation level that needs improvement.
Liberia	Strongly agree	Organisational	Cooperation between Liberia's Ministry of Mines and Energy and Environmental Protection Agency has been strengthened.

Liberia	Strongly agree	Individual	A few government institutions play pivotal roles in ensuring sustainable mining governance in our country. Before ITP, active collaboration and engagements among these agencies were less and functions were fragmented to some extent. But with the opportunity and learning experience from the ITP program, collaboration has been sharply enhanced, especially between the Ministry of Mines & Energy and the Environmental Protection Agency of Liberia, but also including other agencies of government. We are now discussing the establishment of joint monitoring and inspection efforts in the areas of tailings, waste rock, surface and ground water pollution and underground mine operations, just to name a few. Beyond these technical and scientific collaboration fronts, we are also considering strong collaboration at the policy level of natural resource governance, something which is already gaining traction within our different organizations, all geared towards sustainable mining governance. We are also working along with the mining companies, the local people and other stakeholders along these lines.
Liberia	Strongly agree	Both	The ITP training has improved collaborative efforts between the MME and EPA as the knowledge gained and our change project toolkits are being used by the two organizations for compliance for sustainable mining to safeguard environment.
Liberia	Agree	Both	After the ITP program, the issue of collaboration between institutions, especially, the Ministry of Mines and Energy and the EPA got improved. Joint inspections of mining operations even started.
Liberia	Agree	Organisational	Engaging with environmental groups such as the Environmental Society of Liberia, Petra Resources, local TSF (Tailings Storage Facility) experts, and other donor-funded partners has been an integral part of my learning journey during the development of the Group 8 change project. These collaboration has provided invaluable insights into sustainable practices, environmental stewardship, and community engagement strategies that are crucial for implementing this project. My engagement with these diverse environmental groups has significantly enhanced my learning experience during the development of the Group 8 change project. These collaborative efforts have not only informed my understanding of environmental issues but also empowered me to contribute meaningfully towards sustainable mining.
Liberia	Strongly agree	Organisational	This is standard practice at the Ministry where collaboration with partner organizations and stakeholders on matters of mining and sustainability is a priority.
Liberia	Strongly agree	Organisational	The ITP programme has enhanced collaboration between the Ministry of Mines and Energy and the Environmental Protection Agency in forming synergies in the roles and functions of both entities in the implementation of mining and environmental laws of the Republic of Liberia aimed at attaining sustainable mining practices and resource management.
Rwanda	Strongly agree	Both	We just now have mining taskforce in all provence, this include different partners for enforcing environmental protection, tailings management and sustainability in the mining industry
Rwanda	Neither agree nor disagree	Individual	The ITP has facilitated at my institution in forming strategic partnerships with environmental and regulatory agencies. We now collaborate on joint initiatives, enhancing sustainable mining governance through shared resources and expertise, now so big achievement so far but may lead to holistic oversight.
Rwanda	Agree	Organisational	Working collaboratively with partner institutions (REMA&RMB) and knowledge sharing
Rwanda	Strongly agree	Both	yes, because currently we have at least once in a month a joint field visit where all concerned agencies or institutions do a field visit at some randomly chosen mining companies to check whether they comply with all regulations established, like environmental aspects, social aspects, security aspects, mining aspects and so on, and after we sit together and discuss on observed issue and come up with one joint report which is shared to all agencies or institutions participated in this visit.
Rwanda	Strongly agree	Both	The ITP has significantly enhanced my ability to foster collaborations between various agencies for sustainable mining governance. After attending the program, we spearheaded a multi-stakeholder partnership that includes government agencies, mining associations, and local communities to address mining challenges. For example, we now hold joint workshops to share resources and develop best practices, ensuring a coordinated approach to sustainable mining. This collaboration has led to more effective policies and a unified response to environmental and social issues in our mining operations.

Rwanda	Agree	Organisational	Since the beginning of the ITP programme, RMB has put sustainable mining governance in front, they have also ensured good collaboration with the relevant agencies which has been very fruitful.
Rwanda	Strongly agree	Organisational	NA
Rwanda	Strongly agree	Both	
Rwanda	Agree	Both	The ITP approach encouraged my organization to engage other actors in the sector to work together in promoting sustainable practices.
Rwanda	Agree	Organisational	ITP provided the training on mine water and mine waste management, this has been important especially for my organization because it oversees mining activities, hence they have to monitor how the waste generated are being managed so as to have sustainable mining sector.
Ethiopia	Strongly agree	Both	
Ethiopia	Strongly agree	Both	by liaising with regional and district mine offices to create synergy in action taken to create a sustainable mining practice through awareness creation and communication
Ethiopia	Strongly agree	Both	The ITP program help to understand well how sustainable mining can not be achieved with out collaborations between stakeholders
Ethiopia	Strongly agree	Both	The program facilitates networking among participants from different countries of mining organizations, fostering relationships that can lead to collaborative efforts in sustainable mining.
Ethiopia	Strongly agree	Individual	We collaborate from the regional to kebele level mining office and also the collaboration of licensee to local people with the fulfil of interests of the local people. Example the licensee participate in the construction of local people living house and supporting children to get school and facilities
Ethiopia	Strongly agree	Both	
Ethiopia	Strongly agree	Organisational	After the training we collaborated with regional Mining office and Environmental Protection Authority. The training plays a crucial role in enhancing collaboration among organizations, including mining companies, regulatory bodies, local communities, environmental agencies, Create with standardized knowledge on mine waste and water management practices.
Ethiopia	Agree	Both	Encouraging mining companies and organizations to do sustainable work with ITP
Ethiopia	Strongly agree	Both	The way of contributions on my working this ITP change on my self by getting share experience and attended on events
Ethiopia	Strongly agree	Organisational	The mineral development is being developed in a legal manner as it is being worked in collaboration with stakeholders and developers to meet sustainable development
Ethiopia	Neither agree nor disagree	Both	Yes I have, first we prepared change project on mine closure, then we present for stakeholder for discussion and after discussion we made collaboration with stockholders on towards sustainable mining governance.
Ethiopia	Strongly agree	Both	During the guideline preparation and dissemination we created a link with EPA, Regional and district mining office and ASM leaders. We also have a social media platform for continuous communication
Ethiopia	Strongly agree	Both	Once ITP provides us the knowledge and significance of collaboration establishment between relevant agencies or actors towards sustainable mining governance we made collaborations with different stakeholders.
Ethiopia	Strongly agree	Both	The ITP has significantly influenced my work regarding Outcome 6 by enhancing my approach to leadership and mentorship. After participating in the program, I adopted a more inclusive leadership style, focusing on empowering my team members and encouraging their professional development. I began to prioritize regular one-on-one check-ins and set up mentorship opportunities, which have fostered a more supportive and growth-oriented environment. This shift has not only boosted team morale but also improved overall performance. The ITP reinforced the idea that effective leadership is about nurturing potential, and this change has positively impacted both my team and the outcomes we achieve together.
Ethiopia	Strongly agree	Both	After I participated in this program I assure some knowledges to add on our work environment. there are some relevant key: It has contributed to establishing collaborations through its support for the development of voluntary certification schemes. It established partnerships with various governments, NGOs, and private companies to promote sustainable mining governance.

Appendix 9. Interview summaries

ETHIOPIA (MoMP)
What is the current state of mining in the country today - economically, socially, environmentally? The current state of mining in the country doing better attracting some large scale mining for gold, tantalum, coal, chromite(some of them under mining and some under development stage),lithium and the artisanal and small scale mining become huge and contribute positively for the economy, however the mining area not managing well, and no health and safety management,
What is your organisations' status in the country today? Currently the Ministry is well recognized by the government and taken one from five pillar of the economy.
What challenges are most current in your organisation? Security, skill and knowledge gap, senior expert turnover because of salary, environmental administration
Political directions, then, now and future (since started programme) Politically direction for Mining is good and taken as one of the pillar for the economic development
What aspects of the ITP308 have been the most useful, and why in your opinion? Technical training on Mining and environmental law, environmental management, project management, conflict resolution because all those training touch the challenge we have in Ethiopia. Some of the challenge we are facing is Environmental pollution from gold mine, conflict rose between the company and the community, Project management skill....
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?
Has the programme affected the relationship between your organisation and the local communities? If so, how? Yes, we did outreach programs, and public consultation when the ESIA is reviewed, community development activity around where mining activity is underway.
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development? Yes, the development of Mining closure guideline, ASM environmental guideline developed by ITP program and the skill and knowledge gained from the program contributed to the mining governance. Community outreach program and community participation during dialogue help the community
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved? Yes, public dialogue during environmental and social impact assessment reviewing process, community development activities and training those activities are impactful.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?
What organisations authorities do you work with in / outside your country EU-Africa partnership (PanAfGeo project), Japan international cooperation Agency and New Zealand Government on Geothermal issue, generally collaborations are very limited
How have these collaborations contributed to more sustainable mining governance? The capacity building has positive impact for sustainable development
How many other similar programmes from other funders? CIRDI Summ project was supporting, however now it ceased, JICA for geothermal issue, New Zealand gvmt.
Should other organisations have been included in the programme? Yes
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?

Mining Leadership, Mining project management, Effective Negotiation
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting? Yes, rehabilitation of the abandoned Artisanal miners' site and replacing Mercury with other suitable chemical for artisanal gold extraction. Geoscience data Management.
Are gold processing agents / chemical use in ASM still an important topic? Yes, the challenge with ASM is still continuing, especially the application of Mercury illegally.
Financial guarantees, trust funds - better now or more of interest? Financial Guarantee and fund
Is data management a subject of interest. Is support needed? Yes, Geological data, Mining companies' data, Miners' data, researches, digitalisation is one of the interests the country and the organization in need for the development project.
Closure cost calculations a current need for support? Highly needed,
How do you feel the commitment has been from management/organisation vs participants and projects? The commitment on both side is very good, however the outreach was very limited due to budget limitation.

KENYA (NEMA)
What is the current state of mining in the country today - economically, socially, environmentally? Advisory and technical. Complex, positive and negative attributes. Marginalised individuals working in the sector. ASM larger than 'real' mining. Issues gender, youth, child etc. difficult. PPE and technical knowhow limited. Chemicals as well. Compensation of resource is poor- taken advantage of the asm workers. Brokers are taking advantage of asm. A lot of child labour working with chemicals. Equipment is not proper. Mines not documented. ASM committees new. Safety and security issues in the ASM industry. abandoned mine sites cause challenges (environment, social). Potentials for mining to improve and be a good revenue for individuals. Mining needs to be better regulated and better carried out. County and national levels need to be seamlessly working together. Capacity building required. More transparency and include the ASM workers more. <i>Economically</i> - human dimensions first and then government financial gain. Coffe sector could be a role model with cooperatives (peer learning). Daily sector cooperatives have helpt members a lot. investment in yourself. brokers need to be more honest. Individual empowerment. formalise yourself and you will benefit. Mining associations are the cooperatives. Transparency will improve the industry. Large scale mining <i>Environment</i> - communication with mines and rules and regulations have improved the cooperation for the environment. Challenge with large mines- expectations- social parts create an issue at decommissioning. Government could package the opportunity of other livelihoods. Dual income- risk less. Somewhat distrust with government. Improvement on cooperation is needed.
What is your organisations' status in the country today? Environment is central for the country. Difficult to move ahead environment agenda-improved techniques, etc. costly, and individuals remove themselves from it. Clearer for everyone why a healthy environment is needed. Better and higher quality data for the sectors. Not training in NEMA but communicate and guide towards compliance of current rules and regulations. Awareness raising. Framework required for public participation- a wish for NEMA. Sensitization. It has become better with time. Communication why NEMA exists and mining sector is part of the public which NEMA want to work for. Compliance first- communicate that. Policemen earlier now we are in contact with chairman. Co-chair meetings. Talk about data, specific for the area. Gradually improved interactions with communities- county offices grow. Trust was built by communication and engagement. Also enforcement changes- compliance plans. There to support, not find errors. Workload increase, not more finances from government- no money available. Government think NEMA is important but resources are scarce. 450 in total.
What challenges are most current in your organisation? increase in workload and tasks, but not much increase in budget, if at all. Build capacity in environmental risk assessment. Social Impact assessment. Public participation model.

Political directions, then, now and future (since started programme)
previously unaware of the importance of mining, now more aware. Mining has now a ministry and been elevated in politics and integrated with the environment. All establishments have an environmental desk /officers- link to NEMA for ex. Percentage of GDP already in play, value addition is current.
What aspects of the ITP 308 have been the most useful, and why in your opinion?
Change projects. Mainstream into practice- experiment- taking root, or not. Translate our cp into the real world.
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?
Governance sector, e.g artisanal miners committees. Large and small scale /asm- can call anytime. Structural change to the better. Enhance collaboration with the organisations.
Has the programme affected the relationship between your organisation and the local communities? If so, how?
Collaborative with stakeholders miners, mining companies, local communities. Information sharing, collaborations.
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development?
Governance sector, e.g artisanal miners committees. Large and small scale /asm- can call anytime. Structural change to the better. Enhance collaboration with the organisation.
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved?
See above in green.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?
State department of mines much stronger than before. By law before, by wish now. Local communities- soft topics focus. Enforcement is expensive and creates negative outputs. Hard enforcement gone down. Better dealing with local communities and miners.
What organisations authorities do you work with in / outside your country
All ministerial departments, UNDP, SIDA, UNEP, Interpol, East African Region network for compliance and enforcement, UK environmental agency, Kemi, Naturvårdsverket, Danish environmental protection agency.
How have these collaborations contributed to more sustainable mining governance?
Work, not outside of work so it along the lines of what NEMA needs EGP project, ITP change projects,
How many other similar programmes from other funders?
Technical issues mostly. EGP. (Danish EPA- extended producer responsibility)
Should other organisations have been included in the programme?
Unclear at this stage. NGO/CBO could also have been important.
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?
Current structure flexible and room for individuals to work. Pre-coming onboard strengthen process. Organisation anchorage.
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting?
See above, public participation etc., technology, mine closure being done, Ai related to large project- can it be used. New techniques. Subjective and qualitative needs to be more quantitative+ manual PP
Are gold processing agents / chemical use in ASM still an important topic?
Still a problem
Financial guarantees, trust funds - better now or more of interest?
Conversations have improved- understanding of others perspective. Risk is high if from a bank point of view. Alternative instruments- PPP. Lending institutions gradually get into the industry.
Is data management a subject of interest. Is support needed?

Data, Ai, technology
Closure cost calculations a current need for support? For the financial guarantee- forms are different. Which ones to include.
Please rank the time spent on - ESIA, Mine Closure, ASM, Inspection Inspections (monitoring) is at the top but is should not be in an ideal setting.
How do you feel the commitment has been from management/organisation vs participants and projects? We commit, but they must give strong justification that it is a win win scenario.

LIBERIA (EPA)
What is the current state of mining in the country today - economically, socially, environmentally? Mining pivotal role. 665.4 USD million (2023 June) economic, Iron ore most important 27% (2022) Liberias foreign export. Environment lots of challenges. Negative impacts Economic and social- environment.
What is your organisations' status in the country today? Positive- gvt, local people, more information to public and SH improved, beginning to feel the presence of the EPA, sustainable mining practices. Massive organisational change in Liberia after change in govmnt. Decentralisation. Improved number of people, more awareness, more permits, internal revenue has improved, external not improved.
What challenges are most current in your organisation? Logistics: monitoring equipment (financial resource), HR capacity, Data management
Political directions, then, now and future (since started programme) Decentralisations, 10 counties before (inspectors) 15 in total- 14 (inspectors) now 15 in total. More compliance awareness inspect on ground, more inspectors. More permits as well. Reduction of political interference with new political change, same focus mining and the environment
What aspects of the ITP308 have been the most useful, and why in your opinion? Dissemination of information through John etc., Mine waste management capacity- class A gold mining with pollution. Improve the approach of the handling of the gold mining by class A TSF- management improved-redesign, new. Financial bond implementation challenged, ITP programme topics have encouraged regulation
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work? QGIS- training- Use the tool and identify and map mining and hotspots, compliance, data analysis
Has the programme affected the relationship between your organisation and the local communities? If so, how? Cumulative, social component of ESIA's, more bottom to top approach after ITP. Previously the other way around. Women and children and youth have more impact. Improved SH involvement. MOU developed
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development? Cumulative, social component of ESIA's, more bottom to top approach after ITP. Previously the other way around. Women and children and youth have more impact. Improved SH involvement. MOU developed. Mining industry.
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved? Cumulative, social component of ESIA's, more bottom to top approach after ITP. Previously the other way around. Women and children and youth have more impact. Improved SH involvement. MOU developed
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP? MME, MME/EPA/Agriculture ministry, disaster management agency, maritime authority, national fishery, defense, - Ivory Coast counterpart- INTERNATIONAL. 3 underground, we have 1, different starting points

(MME/EPA) now work with MME /EPA, use same vehicle. Joint training mining inspector and the mine inspector training,- MME and EPA. Collaboration.
What organisations authorities do you work with in / outside your country MME; NPI, Forest..., MoDefence, MoJustice, Fisheries, Commerce, Atomic regulation Agency,GIZ, UNDP, IAEA
How have these collaborations contributed to more sustainable mining governance? GIZ tools (gps etc), Inspectors at counties, Radiation safety policy
How many other similar programmes from other funders? GIZ-policy formulation and basic tools, UNDP, Cost of implement policies resources required.
Should other organisations have been included in the programme? National disaster management authority- More organisations improve Liberia, Forestry development authority, (MoInternal affairs, MoJustice)
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years? Circular economy to waste management (prevention may not always work) Promote greener economy mine reclamation, decommissioning, Change projects out of Gold,
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting? Circular economy to waste management (prevention may not always work) Promote greener economy mine reclamation, decommissioning, Change projects out of Gold, resource capacity, logistical challenges, database and storage management
Are gold processing agents / chemical use in ASM still an important topic? Ratified the Minamata convention last year. Opportunity for funding. Cyanide and Mercury issues. Borax capacity building.
Financial guarantees, trust funds - better now or more of interest? Need to work on, but law bound, no one knows of any account at this stage- Enforcement required and a guideline
Is data management a subject of interest. Is support needed? Yes. IT required. Analog and paper based.
Closure cost calculations a current need for support? Support in this required.
How do you feel the commitment has been from management/organisation vs participants and projects? Projects- support and commitment, Participant- commitment, Commitment from mgmt not there fully, Competing priorities from Mgmt.

LIBERIA (MME)
What is the current state of mining in the country today - economically, socially, environmentally? Beneficial and challenging, positives and negatives, finance input plus, environment 'issues' negatives incl social. Logistics and finance. Conflicts- mining and local communities (CSR issues)
What is your organisations' status in the country today? Relevant and key organisation (energy missing in some parts- electricity). MME perceived negative some times- mining incidents, failing to enforce the laws, government important, companies think MME need to do more, e.g. more incentives to operate in country, tax protection.
What challenges are most current in your organisation? Financial resources lacking in mining sector, absence of tech capacity, political influences (staff rotation and changes, political agendas and change)
Political directions, then, now and future (since started programme)

Changed due to elections.under the president should be removed and be otherwise (JK PW visit, functions not there)- restored to the ministry level and increase/ return of functions. Via ministry of mine rather than presidents office, less opportunity for corruption
What aspects of the ITP308 have been the most useful, and why in your opinion? training in technical aspects, all challenges in mining,broader understadning from larger mines (as well as small), collaboration between MME and EPA (normally higher level policies etc, at tech and field level), consideration of existing policies due to CP and discussions
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work? Some extent, reorganising based on the knowledge gained during the programme, org better positioned.Position change because of increased knowledged gained in ITP (individual positive and negative depending on individual)
Has the programme affected the relationship between your organisation and the local communities? If so, how? Nothing clearly and super visible only dependent on ITP
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development? Reorganisations due to knowledge, increased capacity, changed behaviour in SH engagement and field visits (inspections e.g.)
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved? not directly but a part of the approach is the vision of the ITP. Extra push for holistic approach which is also the ITP 'vision'. Boost.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP? MME- EPA, Inspections should be done together for ex., speak the same language and be more efficient, clearer to the miners. Sr mgmt level discussions ongoing, boost of ITP CP and collaborations ('grass root' level recommend upwards).
What organisations or/and authorities do you work with in / outside your country Foreign embassies (Swedish, UK, US), GIZ, UNDP, Sida, Academic institutions Uni of Liberia, Chamber of mines (all mining companies and mineral explorations companies- umbrella org), Civil society
How have these collaborations contributed to more sustainable mining governance? GIZ in training on how to do mining more responsibly and more efficient, Laws and regulations improve, local population capacity building, HR issues increased knowledge
How many other similar programmes from other funders? Related GIZ ASM programme, ITP unique for MME in certain ways
Should other organisations have been included in the programme? Local mining organisations
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years? Theory- practical is good, Reverse the structure- longer field visits and regional conference and less theory. Not soo much exams. More physical meetings, longer opportunities to interact.
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting? Regulations and laws need to be reviewed and changed?, develop new regulations (i.e TSF), resources around for field visits etc., decentralising mining administrations- and permitting process (encourages illegal ways of doing things as centralised) Capacity building and resource additions. Decentralisation started with new administration. For a year.
Are gold processing agents / chemical use in ASM still an important topic? Still important topic
Financial guarantees, trust funds - better now or more of interest?

Laws there but enforced or practical is of issue. Support to work on this to be improved.
Is data management a subject of interest. Is support needed? Huge support needed. Bringing information online, digitizing etc. IT for platforms etc.
Closure cost calculations a current need for support? Yes, absolutely, more in depth discussion than ITP yielded
How do you feel the commitment has been from management/organisation vs participants and projects? Some level, acceptance of project -yes, support in terms of finances and logistics- not so much (no resources available) Participants have similar challenges.

RWANDA (RMB)
What is the current state of mining in the country today - economically, socially, environmentally? Significant growth due to its contribution. Economy- export revenue earnings, last seven years 2017 373million USD, 2024 1, 750 000 USD (initial plan was to 1, 500 000 USD). 70 000 in the mining sector, increase due to more mecahnising. Government exploration which attracted investment- now privatisation from 2009. Tax money into the government, employment. Validation- encourage investors. Smelter, refinery etc. Gemstone cutting etc. Socially- employment, CSR- each company (legal requirement) capacity based, annex to the mining . First licence then CSR investigation. Social contribution from Government. tax from the sell of mineral, 10% tax government directing to support livelihood to community around mine. Ministry of finance verify amount at end of year, water sanitation facilities eg.construction, houses, buildings. Employment provided company- Environment: Improvement but still have work to go. Especially of TSF and waste management. Sluicing is challenging- poor recovery , topography is a problem. Erosion from tailings is problematic. Improvement in sedimentation ponds for example. Heavy penalties when material going to rivers. Rehabilitation- progressive rehabilitation required. New programme environment will be more included than in 2017.
What is your organisations' status in the country today? Pereption changed over time. Improvement from miners point of view. Pressure on RMB to manage the mining sector. Proper data analysis before mining takes place. Meaning Government do the initial analysis. There is a PR plan to communicate more with local communities to understand how Mining is done and legal rules and regulations.
What challenges are most current in your organisation? Staff turnover, compared to the expected work. Shortage to staff big problem. <i>Implementation agencies- Policy agencies-</i> RMB more implementation. Low level salary, annual resources are limited. Index needs to be addressed, increase technicians, adequate financial resources to run the organisation.
Political directions, then, now and future (since started programme) make more money, mining 2017- more money, today, new ambition position country as mineral processing hub. Feasibility study for the hub to be realised. Continue mechanisations, value addition. Digitalisation- GIZ via EU GIMICS digitising all the procedures around mining. Responding to government decree to digitise. Government services from the public needs but now even further. Responsible mining- health and safety Improving how we work with supervision, and also legal aspects. Guidelines associated with training of miners, to ensure sustainability. Social issues also included. Audit by national auditing general licenses and X- processes are good, inspections good, not too much follow up on social concerns.- Improve this is a request. Please put more effort socially responsible.
What aspects of the ITP308 have been the most useful, and why in your opinion? Notice- touching on the needs of RMB- issues of waste and management- gap in the country- learning filled. Technical aspects regarding environment and applied to mining require special skills- despite having education- not enough. You cannot be inspection of all sectors. Not same knowledge- additional input to team to do their work. Critical knowledge gathered. Field visits- exchange perspectives. Theoretical before, ours included field visits. People are connecting the theory with practice.

Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?
Guideline TSF looking to include in how to manage. Revised mining law in 2024, review implementing the law. Annex to the environmental regulation. Part of the inspection- technical assistance.
Has the programme affected the relationship between your organisation and the local communities? If so, how?
Positively through increased knowledge and increased softer knowledge too.
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development?
Inspection is carried out by most participants. Professionalise the mining industry. Production safety and environmental - Part of the progress is due to ITP (not only but partly)
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved?
Programme PR and new and improved approach to dealing with local communities. Training of miners, journalists, public dissemination.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?
Close collaboration with REMA
What organisations authorities do you work with in / outside your country
Developing partners, GIZ, EU,(digitisation- sustainable mining sector in Rw) Belgians (exploration), Sweden, GTK (best practice- also in GIZ), China geological Survey (exploration work), ESG and PanAfGeo. Government org- NGOs-Workers union, right of workers. REWU
How have these collaborations contributed to more sustainable mining governance?
Digitisation, capacity improvement, awareness for people for rights and obligations, improve the legal tools such as guidelines (TSF ITP)
How many other similar programmes from other funders?
PanAFGeo, GIZ ongoing.
Should other organisations have been included in the programme?
Private sector, Rwanda Water Board
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?
Private sector, Rwanda Water Board, Rwanda miners association should be included (Foreign ones have skills, the public ones have more skills only than the smaller ones 70%, Private sector need this (incl mining sector)
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting?
Circular economics to the mining industry in Rwanda, handling the climate change and change to green technology. Assistance with this is required. Mine closure plan guideline is required and included how to calculate closure cost.
Are gold processing agents / chemical use in ASM still an important topic?
Not really, processing in general, re-mining
Financial guarantees, trust funds - better now or more of interest?
Of interest, how do you estimate mine bond. Environmental guarantee. EIA mitigating impact closure plan. The cost is calculated by miners. Cash, bank guarantee.
Is data management a subject of interest. Is support needed?
Data management is needed. How to work with geological data Geological data for investment purposes (GTK).
Closure cost calculations a current need for support?
Yes

How do you feel the commitment has been from management/organisation vs participants and projects?

Top management and Middle Management. Top management change in the middle of the programme 2024. New management more work not aware of the programme, commitment from middle management. Head of department used to sit and plan who should be in the training.

TANZANIA MoM, MC

What is the current state of mining in the country today - economically, socially, environmentally?

Economic good, high collection of revenue from mines awareness from the miners, social awareness from local communities, environment improving awareness, foreign currency investment. 50% in mining sector 40% revenue from mining sector (small-scale miners). Buying centers and markets. Social also included women and youth in special programme. Provide with license and link them with investor and owners of mining equipment. Agriculture not so well off, small return gives a lot and you have to work less.

What is your organisations' status in the country today?

Good for MC, zonal offices all over country, increased since 2017, Mineral markets, mining center, more and more funds, budgets increasing almost double, vehicle field equipment. Positive reputation throughout the country.

MoM doing well. Work documents increased. Mine management. Vision 2030 intent to provide strategies in how to improve management of mining sector, operations and institution. Mine closure guideline. Progressive very well with number of documents to guide the sector. Mining association work together with MC and MoM. Good dialogue.

What challenges are most current in your organisation?

One challenge- MoM understanding of legal frameworks among investors and stakeholders. Politics sometime an issue. HR numbers and competence.

MC, funds vehicles, conflicts miners vs miners conflicts, staff competence

Political directions, then, now and future (since started programme)

Polycys has not changed so much since 2009. Emphasies environmental mgmt mineral value addition, supporting small-scale miners, political will to move agenda forward. Presidential support. Amendment 2017 chock for many. Small changes in policy 2020 and continuously. Revenue collection 2015 161 billion TZSch, now 340 billion TZSch. Environment number one from President. Local content- complain about not getting benefits from mining. Summary positive political direction.

What aspects of the ITP308 have been the most useful, and why in your opinion?

Checklist, MC, different ways of reporting in the zones, now same format and official

Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?

Checklist

Has the programme affected the relationship between your organisation and the local communities? If so, how?

investor and regulator conflict due to misunderstanding, indirectly related to knowledge gap in skills and verifying the documents, No more conflicts on document evaluation and approval due to improved knowledge. Positive impact. mining operations improvement, produce more gold and through the environmental aspects. Work together. Even owners of the mines wanted to join.

Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development?

investor and regulator conflict due to misunderstanding, indirectly related to knowledge gap in skills and verifying the documents, No more conflicts on document evaluation and approval due to improved knowledge. Positive impact. mining operations improvement, produce more gold and through the environmental aspects. Work together. Even owners of the mines wanted to join.

Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved?
Difficult to pinpoint. Checklists and guidelines.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?
Improved work, more collaborations, partnerships to serve the stakeholders, bringing
What organisations authorities do you work with in / outside your country
IGF, MMMD, Finland, UNDP, World Bank, South Korea, UK Geological Survey of Sweden, EU, USA, Japanese. Alternative methods with Mercury , mineral security partnership- Critical Raw materials. Graphite project associated with EU, infrastructure problem. Capacity building in Japan in Environment.
How have these collaborations contributed to more sustainable mining governance?
Investment climate has improved, revenue improved for individuals and government, capacity building and awareness amongst small scale miners.
How many other similar programmes from other funders?
3 to 4
Should other organisations have been included in the programme?
Ministry of Water, GCLA, Universities, Local government authorities, district and environmental officers
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?
Digitalisation, environmental management systems, self-reporting in Tanzania, financing the change project - few competitive projects, ESG- mining governance, funded by someone else.
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting?
ESG, Digitisation and self-reporting in Tanzania, Mine closure, Heap leaching pads construction and closure, municipal waste dumps/ tailings dams and heap leaching
Are gold processing agents / chemical use in ASM still an important topic?
Yes
Financial guarantees, trust funds - better now or more of interest?
Interest to work with these things. Environmental performance bond (VP office) for everything not only mining and rehabilitation bond MoM strictly for mines, what difference
Is data management a subject of interest. Is support needed?
Digitalisation and self reporting
Closure cost calculations a current need for support?
YES
How do you feel the commitment has been from management/organisation vs participants and projects?
Budget could have improved. They are coming to the commissioner. Allow people participate

TANZANIA (NEMC)
What is the current state of mining in the country today - economically, socially, environmentally?
Contribute much to the country, Mining sector fastest growing. Formal and informal sector. Small scale-semiformal, formal larger scale with mining licenses. Employs a lot of people (mining). Through the entire value chain. More and more women. Children too, but not wished. Guided by law the environment sector, large to small scale. EIA before mining start. Challenge with small scale due to limited funds. Environmental protection plan first for small scale. EPP approved MoM or MC so not included in EPP or the monitoring. Mine closure also challenge in general without opportunity. 250 staff, 150 technical at NEMC. Economically fine, socially better and picking up, compliance picking up via education.

What is your organisations' status in the country today?

Doing its mandate environmental management act 2024?? Overseeing EIA process for projects, research, compliance and enforcement of law. Public awareness. Promotion of conservation activities. Under the vice president's office. Important with environment in Tz today. Growing, recognized, reforms to better reach grassroots. Zonal offices from 2009- 12 today. Decentralised- delivering service faster, due to closeness. Understaffed. 340 aim- short of 190. Students come and go and assist due to shortage of staff. Supported financially by government for salaries. Charge for environmental services- in the mandate, but complicated to get people to pay and for them to understand. Improving system for revenue collection. Database for that. All facilities what should pay are registered. Communicated via SMS and e-mail. Earlier manually. Compliance monitoring and educating them. Prepare also projects and proposals that can get funded. Mainly addressing climate change. 7 government partners also contribute to the same projects.

What challenges are most current in your organisation?

Staffing, employment done by someone else- not NEMC. Finance is difficult for salaries. In the move to become an authority (not currently). If authority- work better structure ourselves and see if there are opportunities for more income. Currently not legal mandate to enforce. if proper mandate to enforce- perhaps more income. Compliance level is low in country. Power for enforcing within is limit, ie others need to complete enforcement process. 5 years perhaps before NEMC own authority

Political directions, then, now and future (since started programme)

Mining industry economically supporting the country economy. Support continue. Investors growing. Promoting locally and externally- due to political will. Incentives to investor. Bridge - we want to develop but it is at the expense of the environment. President- inspection of the mining sector, urging the mining companies sector to comply to the environmental laws. She tasked NEMC etc to do inspections. The VP work together across government organisations.

What aspects of the ITP308 have been the most useful, and why in your opinion?

The knowledge they came back. Field visits. Change project- transforms what they done during the training into something useful. Improving their abilities to do EIA evaluations, research proposals- finding gaps- based on the knowledge received. Assessments. Monitoring and evaluation. Ideas change from before

Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work?

Checklist- small scale miners group, small and large scale checklist, terms of reference for the mining sector (knowledge used)

Has the programme affected the relationship between your organisation and the local communities? If so, how?

Raising awareness on issues, impacts of mining on the environment. We need to adress the environmental challenges and help the communities.

Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development?

It all comes from the knowledge. **Improve the decision making process.** We have seen it helpful in advancing the knowledge otherwise we would not have continued send people to the programme..

Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved?

Change in processes are taking place.

Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP?

Mining Commission and the Ministry of Minerals- speaking one language, networking

What organisations authorities do you work with in / outside your country

Inside- Any related to the work. GCLA; OSHA, Meterological agency, MC, MoM, Ministry of health, Collaborative research with Universities, Most of the sectors. Fisheries, forestry etc. TZ railway firms. Outside- WWF, UNEP, World bank, Sida, OGDZ, UNDP, EU, DPGE (partnergroup on environment), Exchange visits with EPA Kenya and Uganda for ex., EPA Ghana,

How have these collaborations contributed to more sustainable mining governance?
Enviromental Health (Befrina project) looking for extension and more project- World Bank. t.ITP,
How many other similar programmes from other funders?
Enviromental Health (Befrina project) looking for extension and more project- World Bank. t.ITP,
Should other organisations have been included in the programme?
GCLA, Ministry of Water, Ministry of Health
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?
Enforcement issues, Mining sector project. What is the key aspects in mining projects, decision making levels. ESIA all stages of the process- what should the official look at
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting?
ESIA process, mine closure and rehabilitation
Are gold processing agents / chemical use in ASM still an important topic?
Yes
Financial guarantees, trust funds - better now or more of interest?
Environmental performance bonds this year. Still an issue.
Is data management a subject of interest. Is support needed?
Not really, more and more work online and digitally so less of a need today compared to 2017.
Closure cost calculations a current need for support?
Confusion about the ownership of the bond and what they should go to. Implementation ?
How do you feel the commitment has been from management/organisation vs participants and projects?
Commitment high. They have been allowed to go to training. Gap- following up what has been done and done after the training and the change projects Feedback management- participants should have been more, staff should also give more feedback. Focal points good, engage management and keep them more in the loop. Official challenges, DG level, Feedback afterwards- train the trainers.

ZAMBIA (MSD)
What is the current state of mining in the country today - economically, socially, environmentally?
Important, crucial, to economy, many activities are not regulatory (CSR, SLO). Not enough with operator driven initiatives. Accountability is not enough in this situation. Large greenfield have better policy, small and medium scale less so. Social acceptance is almost universal, companies promise a lot. Conflict come when operations commence. Enacting local content support. Expectations from communities arte high and seldom met. Local suppliers are few and get a small share. Zambianisation is underway. Environmentally focus has been funding of mine closure and rehabilitation, a change in mindset in larger companies is happening, EPF is in place (Environmental Protecting Fund), legislation has changed, a guideline for mine closure cost is in place, guideline on mine closure is being developed.
What is your organisations' status in the country today?
The presence of inspectors is increasing in all the country, past five years environmental, geoscience, engineers are more present in LSM and ASM, general improvement in monitoring, mine closure cost training is ongoing. The coming mineral comission will increase presence even more.
What challenges are most current in your organisation?
Not enough staff, lack of funding, MoM is one of the least funded inspite of economic importance, capacity building on critical areas is needed, laboratory equipment and laboratories are missing. Geology, geotechnical practice and experience is limited. Servicing a growing industry, technology is developing fast, regulators are not keeping up, safety letters are made to cover new aspects not covered by regulation,
Political directions, then, now and future (since started programme)

Yes there has been change. Announcements are several, 3Mt target for copper production is emphasized, overly ambitious target, regulatory reforms are happening, focus on regulation and development is changing. Overall Economic perspective has changed but not as much in exploration and environment. Local content is now in place and similar changes are now coming.
What aspects of the ITP308 have been the most useful, and why in your opinion? Mine waste facilities learning has been most valuable, safety letter in TSF has resulted, skills of inspectors has improved, closure cost estimates have changed, TSF and OP rehab were costed low before compared to infrastructure, that is now reversed, ARD impact awareness has improved,
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work? Developing mine site rehab guidelines now, progressive rehabilitation is now monitored, rehabilitation is accounted for more now,
Has the programme affected the relationship between your organisation and the local communities? If so, how? More positive compared to previous dominating negativity, communities have better understanding now, resistance is still there, communities are more aware, Zambia remains with high SME sector, operators have community liaison officer more now, enhanced focus on gender inclusivity in Zmerip project much thanks to ITP308, informing women and children in stone crushing etc.
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development? Collaboration with different countries has led to a different evaluation of EIA and similar documents, ITP learning might not be in living documents but has greatly influenced following regulatory practices and guidelines, safety letters is an example. ITP guidelines were test documents and important drafts when other documents have been developed. Collaboration with Zema has improved. Missing Warma in the ITP.
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved? Environmental fund management has been well communicated and transparent. Previous decisions were made for the public without much feedback. Workshops have been held with management on community dialogue requirements.
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP? Not only ITP, also in other parallel projects, OHS institute, Zmerip, Collaboration in inspection, center of excellence of inspection, Copperbelt University, Technical working group with Zema Warma on TSF. ToR, guidelines, in collaboration with others.
What organisations authorities do you work with in / outside your country In country, Zema, Warma, EIZ, Chanbor of Mines, CBU and many more. Outside, WB, JICA, chinese and japanese government, training in China, collaboration with Ghana and Tanzania on gold sector, regional perspective with Zimbabwe and Tanzania, African Union, Vision 2064, NEPAD.
How have these collaborations contributed to more sustainable mining governance? Revising of regulation, Zema-MSD duplication of duties has reduced, developing of guidelines and dividing responsibilities between government authorities.
How many other similar programmes from other funders? UNDP programme on industrial minerals, Chinese government capacity building, Jica master level remote sensing, Australia, World Bank, Czechoslovakia.
Should other organisations have been included in the programme? Warma, see below.
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?

MoGEE as well, MoLabour, OSH Institute, Universities, a larger number of relevant stakeholders, student industry experience, more beneficial with a bilateral programme, different legislation in countries are large, makes training difficult, resources would be better used if focused on specifics.
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting? Yes, support is required. Future land use, land planning also for mining in relation to agriculture etc. Mine site rehabilitation, lead contamination, assess contaminated land, Mumbwa mercury, cyanide, ARD in NW province, consolidate what has been done in the 9 training, actualise final outputs, combine change projects and advance quickly, support for finishing projects.
Are gold processing agents / chemical use in ASM still an important topic? Yes it is. Mercury is still here, clustering marketing centres, formalise and license cooperatives,
Financial guarantees, trust funds - better now or more of interest? Still interesting, progress been made, intro in regulation of guarantees has happened, more guarantees are considered. Bank guarantees has largely failed. Local banks cannot guarantee beyond their value.
Is data management a subject of interest. Is support needed? Yes. Keeping information and hard data, mapping, abandoned mines, accidents, monitoring data, software, control room and server room exists, linkage between teams, information sharing. E governance act.
Closure cost calculations a current need for support? Much has improved. Benchmarking is needed with Europe, Chile, Australia. ARD is new and need assessment in NW Province. (Kalumbila and Lumwana), new rocks).
How do you feel the commitment has been from management/organisation vs participants and projects? Attending and participation is well supported, change projects have lacked support, could have done more, have not presented results upwards, distribution of knowledge has been too limited. Funding has been limited.
Additional comment <i>Are there too many initiatives? A definitive overload but at the same time needed learning and improvement.</i> <i>Two additional issues. Program ITP308 was good. New inspectors have come, not educated, new inspectors should go through a training programme for inspection etc. If the programme was continued the new inspectors would be equipped to carry out their duties. Open them to research and change. Secondly - many change projects brought out key aspects of monitoring but budgeting did not cover change project costs. A programme should come with funding for change projects. Results will then be easier to produce. Inspections can be impeded by inspectors collecting data for change projects instead of inspecting. Next programme should develop needs with management for guidelines not leave it to participants.</i>

ZAMBIA (ZEMA)
What is the current state of mining in the country today - economically, socially, environmentally? Not all entities are legally compliant, colleagues from the Asian region are cutting corners, degrading area, clearing without asking. 20ha land cleared without permits, there is policy to reach 3Mt Cu (currently 0.85Mt), increasing production comes at an environmental cost while providing jobs, . Biggest challenge is environmental, Europeans and others are compliant and follow procedures. On a trajectory where mining is growing in all areas. 5-10 years ago it was pristine, now it is changing, Luapula Manganese. Socially and economically ok, environmentally not so good. NW Province many foreign ASM operators. Security forces moved in. Eastern Province, gold, mercury. Policy wise improving, technically some challenges. Zema and MSD cannot manage. industry is growing fast.
What is your organisations' status in the country today?

Zema is very visible. Also issues beyond the Zema mandate is brought to Zema. Zema is respected and known. If inspections increase improvement can happen. Zema is looked at when accidents happen. Geographical extent of Zema is not good. Takes time to reach places. Funding is limited. Increase compliance monitoring is needed. Inspectors are too few. Industry is growing fast. 10 projects are considered every month. 8 stations in the country, honorary inspectors have been introduced.
What challenges are most current in your organisation? 1st resources, human resource, technical tools, transport, need drones and such, emergency response plans, online continuous monitoring. Political directions, then, now and future (since started programme). Yes. From 2022-3 changes improved concerning fines, sanctions, closure. Political support, respecting professionals need to improve. Political pressure still exists and independence of authority can be affected.
What aspects of the ITP308 have been the most useful, and why in your opinion? Knowledge transfer most important, interaction with other countries and authorities. Learning from others, empowering inspectors. Change project forces research and learning.
Are you aware of any new practices or tools that have been adopted to prevent or mitigate environmental impacts due to ITP work? It is visible in reports and reviews who has passed the ITP. Higher quality. TSF checklist is in use.
Has the programme affected the relationship between your organisation and the local communities? If so, how? EIA process is very consultative, public is more aware of their rights. The public still wait to report problem when it has happened, ie., late. Interaction with the communities has increased. Zema directs the communities to contact NGOs.
Are you aware of any examples of how the knowledge from the ITP has contributed to local or national development? Not quantifiable, the feedback is encouraging, Zema are certain the impact has been positive. Quality of reporting and review has improved.
Has your organisation adopted new approaches to ensuring transparent, inclusive, and meaningful dialogue with the public due to the ITP? If so, can you provide examples of how public participation has been improved? Difficult to quantify but yes. During projects consultation and data collecting is done with authorities and communities. In technical meeting the ITP guidelines are referred to. It is not the manager to teach, training is done by many. Sharing and debriefing is regular at Zema. Collaboration with other authorities has increased,
Are you aware of any new collaborations or partnerships that have emerged with other agencies or actors as a result of the ITP? MSD collaboration, Warma, relationship has improved. And also with others.
What organisations authorities do you work with in / outside your country see above, outside, Sweden, KEMI advisor embedded, UNIDO is very good, NEMA and more sister organisations, FAO (very very good), and more. Laboratory in Ndola (World Bank), Radiation Protection Authority and more, Finnish government (forest, climate), JICA.
How have these collaborations contributed to more sustainable mining governance? Knowledge sharing, Warma, MSD, is important. More is coming. Sino Metals accident will trigger more collaborations. Mining companies offer future training currently considered (TSF), also Chamber of Mines.
How many other similar programmes from other funders? Zamnex.
Should other organisations have been included in the programme? Local authorities (give land), Forestry Dept., Warma, Radiation Protection Authority. Maybe more.
If a new, similar program is developed in the future, what would you from an organisational management point of view include in the program, and improve from previous years?

2018 the mentor only came once. Mentor visits where too few, should have been quarterly. Lecturing should be applied to African context (ice, sea etc.).
Is support needed for specific projects, reviewing, closing, rehabilitating or permitting? Not necessarily, most inspectors are young, apprenticeship was good in the past, medical profession is doing better with practical training (hands-on), technology is evolving we need to keep up. Mopani had a good concept, closure happens now (progressive and integrated closure) lets do that again.
Are gold processing agents / chemical use in ASM still an important topic? Yes it is. Kasempa 2000 informal operators. Hg, CN. More places are there. Kasenseli.
Financial guarantees, trust funds - better now or more of interest?
Is data management a subject of interest. Is support needed? Yes it is. Much data is generated. Data management is poor. Systems and software is missing. Hardcopies is in use. Every month 100 projects are considered in all sector. Lack of centralised data. Extremely important, maybe most.
Closure cost calculations a current need for support? It is still relevant for Zema but MSD is in charge. Closure costs and assurance is still important to Zema.
How do you feel the commitment has been from management/organisation vs participants and projects? Commitment from management has been good but workload is very high. Work assignments first. Learning and project work is easier when away from the office. Management support was not complete (maybe 70%)
Additional comment <i>A) EIA process is too quick. B) Is there a initiative and programme overload? Learning is needed and the extra load is acceptable to become better. Catching up is necessary. Extra load is maybe not actually there as long as it is well integrated.</i>

Appendix 10. Regional Conference Day Schedule

Where: CityBlue Creekside Hotel and Suites, Mombasa

When: 9-16 on the 28th of March, Lunch and tea/coffee breaks included

Preliminary Agenda

- **Welcome by the Geological Survey of Sweden**
- **Mattias Fackel, UnearthAB** (former SGU)– Introduction to good mine closure practices
- **NEMA, WAR, MiBEMA**– Role in mine closure, what is the mandate, what are their roles after mining activities stop, what are the opportunities and challenges with Mine Closure in Kenya from each organisations' point of view.
- **LUNCH**
- **Mining Associations**– What are their point of view of Mine Closure, what are today's challenges and opportunities as they see it, what do they need from government authorities to improve and what can they give to government to help them improve?
- **Albert. A Musando, Lafarge Eco Systems, Bamburi Cement Plc.**– Success aspects and/ or pointers, hurdles to overcome etc in creating Bamburi Haller Park. Best practice, laws and regulations, etc. Discussion with other countries about their experiences.
- **Base Titanium** – Experience from Ongoing Mine Closure in Kwale
- **Closing remarks**

Appendix 11. Field Visit Schedule, Sweden May 2025

Date	Activity	Location
Saturday, May 17	Arrival in Luleå	Luleå
Sunday, May 18	Welcome dinner and meet and greet at 17.30	Luleå
Monday, May 19	Visit at Luleå University of Technology (LTU)	Luleå
Tuesday, May 20	Field visit to Aitik Copper Mine	Gällivare
Wednesday, May 21	Luossavaara-Kiirunavaara AB (LKAB) mine	Kiruna
Thursday, May 22	Travel from Kiruna to Malå via Storforsen Nature Reserve	Kiruna – Malå
Friday, May 23	Visit to Boliden area and Fäbodtjärn	Malå area
Saturday, May 24	Visit Skellefteå	Skellefteå
Sunday, May 25	Cultural Activities	Malå area
Monday, May 26	Conference Day 1	Malå
Tuesday, May 27	Conference Day 2	Malå
Wednesday, May 28	Time to go home	Skellefteå Airport

Appendix 12. Final Conference Days Schedules, Sweden, May 2025



MINING & SUSTAINABILITY
THE SWEDISH-AFRICAN PERSPECTIVE
Tjamstan Hotel, Malå, Sweden

Malå 26 - 27 May

AGENDA

26 May: Presentations by ITP 308 alumni about the impact of the programme on their organisations and work. Country evaluations.

27 May: Swedish business and government representatives discuss the Swedish-African perspective of sustainable mining.



MINE WATER & MINE WASTE MANAGEMENT



Conference Day 26 May

Laven Conference Facility

ITP 308 Country Evaluation Day

09:00-09:15	Introduction, SGU
09:15-09:45	ITP 308- The reason for being, Sida
09:45-10:30	Country presentation, Kenya
10:30-11:15	Country presentation, Rwanda
11:15-11:45	FIKA
11:45-12:30	Country presentation, Tanzania
12:30-13:15	Country presentation, Liberia
13:15-14:15	LUNCH
14:15-15:00	Country presentation, Zambia
15:00-15:45	Country presentation, Ethiopia
15:45-16:00	Conclusion of ITP evaluation day
16:00-16:30	FIKA
16:30-18:00	Visit to SGU drill archive by bus
19:00	Conference dinner at Tjamstan Hotel (pre-event confirmation required)

Conference Day 27 May

Laven Conference Facility

Government & Business Perspectives

09:00-09:20	Intro, SGU & Malå Municipality
09:20-09:50	Sida's new operational strategy, Helen Holm, Sida
09:50-10:00	A new partnership on Raw Materials, Eva Ahlner, Vinnova
10:00-11:00	Perspective of Zambian Mining Ecosystems, Patience Mususa, NAI
11:00-11:30	FIKA
11:30-12:30	Mining workplace research, Lena Abrahamsson, LTU
12:30-13:30	LUNCH
13:30-14:15	Working for environmentally sustainable mining, Malin Eriksson, SEPA
14:15-14:45	Towards a sustainable yet competitive Swedish mining sector Susanne Gylesjö, Svemin
14:45-15:10	FIKA
15:10-16:15	SLO, CSR & ESG- what's it all about? Karl Westerlund, SGAB
16:15-16:30	Concluding remarks, SGU

Appendix 13. Response–Cowater Evaluation of Sida’s ITPs as Instruments for Supporting Effective and Inclusive Institutions

Recommendations to ITP partners

Ensure greater focus on organisations rather than individuals in ITP design and delivery, e.g. by anchoring ITPs in organisational analysis and engaging with their leadership early on in the process

-Securing organisational anchoring is essential for ensuring strong managerial support. Defining change projects and confirming internal funding in advance helps establish commitment before the programme begins. However, leadership turnover can undermine continuity, especially when incoming managers are unfamiliar with the programme. Without formal agreements, such as MoUs or LoIs, it becomes more difficult to demonstrate institutional commitment and maintain the programme’s priority over time.

Target decision-makers for participation to secure influence on policy and resource allocation, and keep them involved as steering committee members

-The programme focused on government institutions but could strengthen its impact by involving more senior staff with decision-making authority and budget responsibilities. While steering committees could support this, they require significant time commitments, making regular meetings and project progress difficult to maintain for high-level managers.

Devote more time and resources to regional experience sharing and recruit (and build the capacity of) regional and country mentors, to promote locally driven change

-The programme already incorporates substantial South–South experience-sharing, but extending joint time and adding more workshops, similar to those held in Tanzania and Zambia in 2025, would further strengthen learning. Recruiting regional or country mentors at the outset would have been difficult, as expectations of the mentor-role were not yet defined. However, the introduction of organisational focal points proved highly effective. Initially, the programme operated without them, but the pandemic and reduced travel made it increasingly challenging to follow up with cohorts and engage management. Recognising that most other ITPs used focal points, SGU adopted the same approach. Before the pandemic, this had felt less necessary due to more frequent country visits. Selecting focal points from the alumni network, with endorsement from Directors General or senior managers, significantly improved communication and programme continuity. It ultimately became one of the programme’s most successful decisions.

Extend the duration of each cohort to 18 months to ensure sufficient time for completion of change initiative work and secure follow-up, including proper hand-over to the next cohort

-We do not share the evaluator’s view on extending the programme period. Maintaining participant engagement does not become easier over a longer timeframe, and because the projects rely heavily on individual responsibility, prolonging the duration would likely increase workload without improving results. We do not believe an extended period would have yielded measurably better outcomes; instead, it would have added unnecessary strain. Moreover, policy development cannot realistically be completed within 18 months either, and requires sustained work regardless of project length. With funding of change projects and improved anchoring of change project themes with management, greater progress could be achieved within the existing 12-month model. Handovers were generally manageable, though challenges occasionally arose when cohort members were based in different regional offices.

These issues were often mitigated through established communication channels and support structures but it is admittedly a challenge.

Consider what more can be done to ensure that change initiatives are completed, e.g. seek senior management commitment to allow participants sufficient time for change initiatives, cover in-country costs for such work, or limit the scope of change initiatives

In this there is 100% agreement, and as previously mentioned one way is to increase pressure on the organisations to sign a commitment to support with monetary resources as well to be able to work that requires funding as well. To have stronger demands for participating organisations. There were understandings now, but still they were not followed, and organisers have no power to enforce this agreement. Perhaps an ultimatum to ensure the organisations really are invested in the programme? Alternatively, limit the scope of change initiatives as they are often on a grander scale in government authorities. However, this could be counterproductive as this is what we are seeking by collaborating with mandated institutions.

Create a structured hand-over process between cohorts to ensure continuity and knowledge transfer and organise training-of-trainers to pass on learning throughout participants organisation

-Imposing collaborative processes is challenging when participants are geographically dispersed and have limited internet or mobile connectivity. Many ITP 308 change project groups worked across distant regional offices, making meaningful virtual collaboration difficult. Although training-of-trainers was suggested and often incorporated into change projects, it could be strengthened by formally integrating it into the programme design. Requiring each participant to conduct a training-of-trainers or knowledge-transfer session before receiving their certificate would promote broader dissemination of skills and reinforce organisational learning.

Invest in creating alumni networks for participants to share progress, challenges, and best practice post-programme, and promote continuous collaboration (and allow some funding for alumni activities)

-The WhatsApp groups for each cohort functioned as the programme's informal alumni networks. During mentor visits, regional conferences, and training events, all available alumni were invited to participate in social gatherings, such as group dinners, which helped strengthen personal relationships and continuity across cohorts. Alumni were also included in selected regional conferences. As noted earlier, the current 'Final' WhatsApp group continues to serve as the ITP 308 alumni network.

Identify and pursue synergies between change initiatives and other donor-funded activities (including Sida-funded ones) to promote sustainability and scalability

-This should be identified as part of the country analysis prior before project design suggestion is submitted to Sida. This aspect was partially addressed in ITP 308 but offers considerable room for improvement. Senior alumni contributed significantly to advancing several change projects, yet effective coordination requires organisers to understand ongoing national initiatives prior to commencement of the project, information that has often been difficult to access. Stronger collaboration with other Swedish-funded projects in the same regions could be beneficial, though earlier efforts, such as outreach to Kvinna till Kvinna, did not lead to concrete cooperation. Swedish embassies may hold relevant insights and could play a more active role in facilitating such connections. In some cases, parallel aid programmes implemented activities similar to the ITP change projects, creating overlaps that, once discovered, were more frustrating than helpful.

Further develop ITP MEL systems to capture outcome-level results, and document lessons learnt and best practices on an ongoing basis

-As noted earlier, this issue was jointly identified with Sida, and the subsequent adjustments significantly strengthened programme outcomes, reporting, and day-to-day work. However, having templates and examples available before the programme began would have been highly beneficial. Given that 307 ITPs preceded ITP 308, it is reasonable to assume that several had well-developed MEL systems that Sida could have shared as good-practice models prior to programme start.

Recommendations to Sida

Develop a portfolio-level ToC for ITPs and an accompanying set of global indicators to guide ITP design, monitoring, and reporting

-This would be highly appreciated and would also help Sida staff to compare programmes as well. It would also not be so difficult to change projects for Sida supervisors.

Revise ITP guidelines and criteria for assessment of ITP proposals to incentivise ITP partners to implement the recommendations of this evaluation

-It is often difficult to anticipate certain challenges before implementing the first programme, and even when such elements are included in the design, their purpose may not yet be fully understood. Nonetheless, incorporating them early would support smoother and more effective programme implementation later on.

Consider both technical competence and programme management capacity when selecting ITP partners (this could motivate Swedish public agencies to pair up with consultancy companies and similar actors, as required)

-Definitely something to consider but should be considered on a case-by-case basis.

Give ITP partners sufficient time and guidance for ITP design, especially ToC development, to ensure that change pathways and assumptions are well-researched, realistic and documented

-Not having been involved in the initial design process, it is difficult to comment in detail. However, from both a financial and organisational perspective, it appears that additional planning time would have been beneficial. Although NIRAS was engaged at the beginning of the programme, continuous involvement throughout its duration would have helped ensure that reporting, MEL processes, and other administrative components were established in a way that fully supported the programme's objectives and the organisers' needs. This approach was eventually adopted with great success, but ideally it would have been in place from the inception phase through to programme completion. There is a definite need to improve on the ToC.

Allow more flexibility in the use of ITP funds, e.g. for covering costs of in-country work on change initiatives and alumni activities

-Yes. Also, the individuals from the country where events are held should also be insured.

Facilitate strategic engagements between ITP partners (and targeted organisations) and Swedish embassies to further explore synergies with bilateral contributions

-This would be appreciated and as also mentioned, all embassies were invited to the final evaluation meetings in each country, where programme achievements from the seven-year period were presented. The intention was to show-case the work Sweden had done in the country and encourage future collaboration between the participating organisations and the embassies upon the completion of the ITP 308 cementing Sweden's continued support in sustainable mining. Perhaps a few 'musts' regarding embassy collaborations when organising ITPs in their countries for both parties.

Ensure that ITP partners further develop their skills in integrating cross-cutting perspectives in ITP design, planning and implementation

-There is certainly more work to be done in this area; however, integrating softer dimensions such as poverty or gender into change projects within a highly technical programme like the ITP 308 presents challenges which should be considered. Forcing themes that do not align

with the main objectives seem pointless and a waste of resources. These aspects often risk becoming secondary objectives, overshadowed by the programme's strong technical focus. Ensuring they are meaningfully incorporated in change projects may be too difficult task. However, supporting a change in behavior by leading by examples and holding lectures about these softer topics could be beneficial.

Project Report

(Complete at the end of the change project)



Project name:

Guidelines on tailings management in the mining sector in Rwanda

Country:

Rwanda

Teammembers:

Sheriffa Shengero, Bienvenu Mizero, Pacifique Abimana, Yves Mugoboka, Charles Cyiza, Joyeuse Ukeye.

Introduction and background

Why was this important to our organisation? ($\frac{1}{4}$ page)

The mining sector plays a pivotal role in the economic development of Rwanda as it is the second largest export revenue earner in the country. However, waste generated from mining activities could have a very negative impact to the environment when there is no related guidelines. During this change project, we have developed the first guideline on tailings management in the mining sector in Rwanda. This will be an important guideline in Rwanda that will provide guidance to mining operators on appropriate tailings management by enlightening the best practices to be used based on the type of the mining license they have.

Goal

Goal of organisation and ITP308 beyond the 10 months of the project. The long term vision. ($\frac{1}{4}$ page)

RMB as government institution mandated to overseeing mining sector in Rwanda is striving to transform mining sector from small-scale mining towards modern and sustainable mining sector. This will require the used of modern technology, and environment and climate compatible mining. Hence, RMB aims improve mining sector for it to contribute to the national green economy while protecting environment from pollution. RMB will continuously build its workforce capacity through ITP 308 to equip them with knowledge required to implement its mandate. The long term vision of this guideline is for it to be approved as the national guideline on tailings management in the mining sector in Rwanda.



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Organisational and technical challenges. What did we want to correct or change? (¼ page)

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There is a need to improve communication between ITP308 organizers and institution that nominated the participants.

Significance for people and the environment

How will this project improve or change the environment and society? (brief)

This guideline will provide knowledge for appropriate design of tailings storage facilities and their management which minimize risks from poorly managed tailings for the surrounding population and protect the environment from pollution.

Significance for organisations, companies or individuals.

How will this project make business more efficient, sustainable and profitable? Will it? What impact does it have on others in a business sense? (brief)

This guideline will make business more efficient in the mining sector because as mine operators put in place tailings storage facilities for better management of tailings and the environment is protected, they will spend less money on paying fines and invest more and hence get more profits. This will boost the economy more and also boost other businesses as well, eg: dry and non-hazardous tailings can be used for construction of roads, houses and bricks



Stakeholders

Who is affected, who benefits, who is informed? Individuals, organisations, authorities, communities, companies. (¼ page)

This guideline will affect the population surrounding mine concessions as well as the relevant stakeholders.

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(Complete at the end of the change project)



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Guidelines on tailings management in the mining sector in Rwanda

Country:

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Teammembers:

Sheriffa Shengero, Bienvenu Mizero, Pacifique Abimana, Yves Mugoboka, Charles Cyiza, Joyeuse Ukeye.

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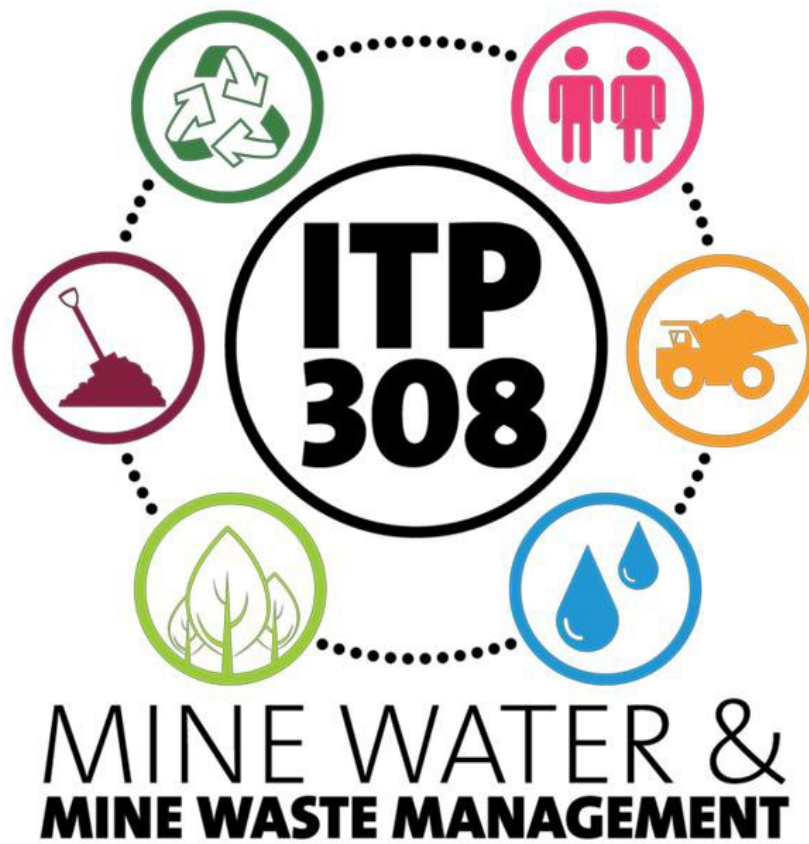
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Project Report

(ITP308 GROUP-6 LIBERIA CHANGE PROJECT)



Project name: Environmental Stewardship Minimum Benchmark
Training Toolkit for Artisanal and Small – Scale Gold
Mining

Country: Liberia

Team members: John K. Jallah Jr, Mercy Z.B Zeanbo, Mildrid
Chuka Piah, Nyenatina K. Tuan, Steward Borbor,
Lawrence Gban

1.0 Project summary

The artisanal-small-scale mining (ASM) sector of Liberia has attracted both local and foreign miners because of the low level of regulation and the fast income it provides. However, the new Mineral and Mining Law of 2000 allows only Liberians to venture into Class C mining operations. The low level of regulation and enforcement mechanisms undermines the potential of the ASM Sector in Liberia to support social and economic growth and the improvement of livelihoods in rural communities that have very little or no access to basic services and income-generating activities.

The limited capacity with respect to governance and regulation in the sector has led to negative environmental impacts, conflict, and abuse of women's and children's rights, among other things. Meanwhile, the two lead institutions for regulating mining activities in Liberia are the Ministry of Mines and Energy (MME) and the Environmental Protection Agency of Liberia (EPML).

The goal of the project is to develop and institutionalize an Environmental Stewardship Minimal Benchmark Toolkit with the intent to:

- Guide ASM on sustainable mining practices
- Improve inter-ministerial coordination between MME, EPA, and other local authorities for the regulation of Artisanal Small-Scale mining.
- To improve the level of knowledge on sustainable mining practices among artisanal miners through training and capacity building
- To mitigate and reduce the risk of environmental degradation and pollution to forest resources, agricultural land, and freshwater ecosystems.

To achieve the goals of this project, the following actions were taken:

- Publication of the learning outcome and planned project in print and electronic media, as well as the Environmental Protection Agency Website.
 - **See figure 1 for link and publication, under "highlights of activities."**

- Presented the project concept and solicited endorsement from both the Environmental Protection Agency (EPA) and the Ministry of Mines and Energy (MME).
- Convene a separate stakeholder engagement meeting as part of the strategy to obtain support and finance (GIZ, MME, EPA, Ministry of Internal Affairs, Association of Gold and Diamond Dealers and Brokers, UNDP, Swedish Embassy in Liberia) (*see figure 2(a) engagement with MME and GIZ*).
- A reviewed and revised information leaflet developed by Liberia ITP-308 Group-4 is *seen in figure 3*.
- Reviewed existing regulatory instruments (the 2000 Mineral and Mining Law and the Environmental Protection and Management Law).
- Reviewed existing documents (Handbook for ASM Miners, Mercury Awareness Toolkit).
- Research and interviews were conducted during the site inspection.
 - **Accomplishments and Results:**
- Development of the Environmental Stewardship Minimum Benchmark Training Toolkit, which is also attached to this report.
- Undertook awareness and distribution of the modified Information Leaflet in five of the thirteen counties in Liberia, specifically covering major ASM hot spots during Nationwide Environmental Compliance monitoring, *as seen in table 1*.
- Also distributed copies of the Information leaflets Under the European Governance Program (EGP) during the Inter-Agency (MME, EPA, FDA, SCNL, AGDDB, etc.) monitoring team, which was intended to document ASM governance issues and challenges, *as seen in Table 1*.
- Drafted a jingle for radio awareness.
- Validation of the toolkit and distribution with both EPA and MME for inputs prior to finalization

1.1 Summary highlights Major Activities

<https://frontpageafricaonline.com/news/liberia-six-liberian-technicians-benefit-from-natural-resources-governance-training-in-tanzania/>

<https://thenewsnewspaper.online/six-liberian-technicians-benefit-from-natural-resources-governance-training/>



Figure 1: Publication of ITP-308 training program by several local mediate outlets

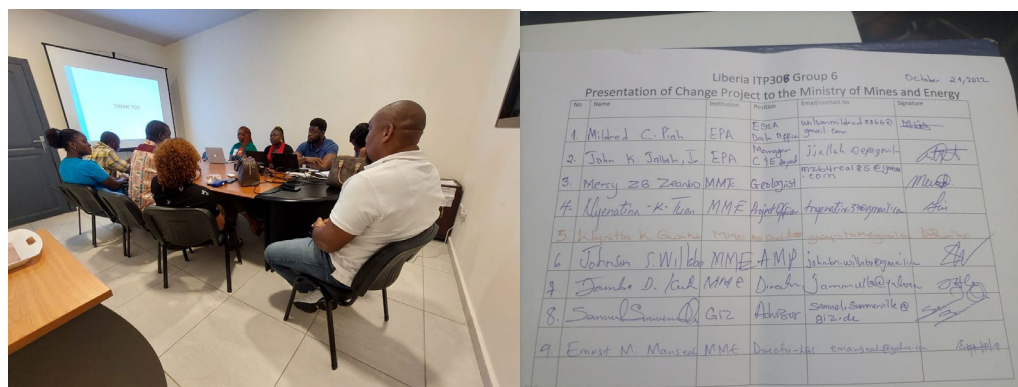


Figure 2(a) engagement with MME and GIZ, presentation of project concept

Know Your Activity
Artisanal and Small-Scale Mining
(Class C Mining)

Location: Grand Gedeh County, Liberia

What is Artisanal and Small-Scale Mining?
Artisanal mining is the mineral extraction done generally by individuals, small groups of individuals, or cooperatives working with hand tools or very basic forms of machines. It is also referred to as Class "C" Mining under the Liberia Minerals and Mining Law 2000.

WHO CAN DO CLASS C MINING?
The government say any Liberian who is 18 years old and above. Man and Woman get equal right to do class C mining.

WHO CANNOT DO CLASS C MINING?
Non-Liberians cannot do Class C Mining.
Children that are under the age of 18 years cannot do Class C mining.

WHAT DO YOU NEED TO DO CLASS C MINING?

You need paper from the government people. The paper is called a License or Permit. You can get license from the Ministry of Mines and Energy and a permit from the EPA (for mining cooperative)

To get the paper you need to:

- Obtain clearance from the mining agent.
- Fill the application form and Provide proof of citizenship.
- Attach two (2) passports sized photos.
- Pay USD \$150.00 for your license fees.
- Pay USD \$150.00 for survey fees.
- Apply to EPA for permit.

DOs OF CLASS C MINING

Get your license before you mine and always make sure your license is valid. Use manual tools to do your work. Close all pits after mining in the area, put grass.

DON'Ts OF CLASS C MINING

- Do not use earth moving equipment (ex. excavator)
- Do not cut down trees that can be by-passed.
- Do not use chemicals (mercury)

Do not use children under 18-years to mine for you.
Do not leave pits open after mining
Do not destroy, change, or divert the water way.
Do not dig under the pit banks
Do not use dredge to mine

BENEFITS OF DOING CLASS C MINING THE GOOD WAY

You protect the environment and the water you use in your household will be clean and safe for you. Your children will have good land to replant crops and the water will be clean for fish and other animals to live in.

EFFECTS OF DOING CLASS C MINING THE BAD WAY

Your environment will not be safe. Your water will be polluted, the fish and other animals might die. You might experience flooding and even get sick and die.

WHO TO CONTACT FOR PROBLEMS AND INFORMATION?

The Ministry of Mines and Energy Capital Hill
Monrovia, Liberia
Help Desk: 0770132540

The Environmental Protection Agency
4th Street, Sinkor
Monrovia, Liberia
Help Desk: 0777797160
BY: ITP Training Program Group 4 & 6 of Liberia

Figure 3: modified Information Leaflet distributed for awareness raising.

Table 1: Engagements at Cities, Towns and Mining Districts

Stakeholders Engagement, Awareness, Education and Distribution of Information Leaflet
Superintendent Office, Grand Bassa County, sharing of Information Leaflet while providing awareness and education
Engaged with the Office of the City Mayor, City Buchanan, Grand Bassa County

Engagement at Central Rivercess C Mining District; Mining Agent



Distribution of information leaflet to Mining Agent and District Commissioner at ITI Nyenee Mining District



Engagement with CEO of St. John River Class C mining operation, Grand Bassa County
GPS Coordinate: (29N 0485331, UTM 0719658)



Sam Sumor Town GPS Coordinate (6.421859, -9.494357) Interagency engagement with Artisanal Miners, and utilization of the information leaflet	
Other Mining Towns visited: • Barsee-Giah Town GPS Coordinate (6.338367, -9.635938) • Isaac- Injuah Town GPS Coordinate (6.417079, -9.576827) • Gbowreh Town GPS Coordinate (6.122057, -9.524492)	

2.0 Learning and adaption

The project plan included several stakeholders and actions for its implementation. However, due to some challenges and opportunities along the way, the following adjustments were made:

2.1 Challenges:

- Reduction of the list of stakeholders due to the delay and difficulty in receiving feedback, input, and funding from stakeholders.
- Availability of funding support as per targeted budget and program activities deliverables as initially outlined.
- Completion of the toolkit in time to conduct trainings within at least two ASM hot spot in the Western Region of Liberia
- Project timeline for implementation not matching with partner's workplan activities and budget approval timeframe.

2.2 Opportunities:

- Instituting components of the project activities within the EPA workplan, specifically on monitoring and engagements (Nationwide Environmental Compliance Monitoring) to inform the development of the toolkit, conduct awareness, and distribution of the information leaflet.
- Leveraging on the Liberia Land Authority awareness program on land issue in mining by sharing copy of the information leaflet with outstation land office staff in Grand Bassa.
- Inspectors of the MME raised awareness using the leaflet during Inter-Agency Monitoring Mission to document ASM governance issues and challenges and explore possibility for setting up Participatory Environmental Monitoring Committee in Rivercess and Grand Bassa County
- Utilizing existing documents (guidelines & checklist) on ASM operations and prior knowledge from the ITP Training in development of the toolkit

Amidst the challenges and opportunities, each team member was determined to achieve the desired results. Technicians at the EPA took advantage of their frequent and regulatory compliance monitoring to create awareness of the project, while technicians of MME used their ongoing ASM project and additionally worked with mining agents in disseminating to the miners involved with ASM operations. In addition, The Ministry of Internal Affairs was very instrumental in ensuring community entry at administrative and mining districts, towns and villages while engage with local leaders, mining chairman, and owners of ASM operators in propagating awareness messages.

3.0 Results and accomplishments

As a result of this project, the two regulating authorities (EPA & MME) have strengthened their collaboration in regulating activities of ASM along with the Association of Gold and Diamond Dealers and Brokers. The distribution of the information leaflets which is an ongoing process aid both miners and local leaders on the DOs and DON'Ts of mining, the procedure to acquiring government approval, and emergency hotlines of regulatory authorities in situation of environmental emergencies.

The Ministry of Mines and Energy are now more conscious about the formation of mining Cooperative as being a better option to enable ASM operators fully comply with the Environmental and Management Laws of Liberia (EPML). Hence the issue of Formalization of the sector is being engaged. A specific guideline on ASM operation has been developed under the EGP program, Mercury Awareness Toolkit developed with support from GIZ, and the Environmental Stewardship Benchmark Toolkit further compliments these efforts. And we are endeavoring to ensure that Environmental

Inspectors, Mining Inspectors, Mining Agents, Gold and Diamond brokers, Land survey officers, and Township Commissioners are assessable to this toolkit.

The revised Information Leaflet was made available to ASM communities as well as other regulating authorities and stakeholders, please see **table 1** for details. This was also inclusive of a hotline contact for both MME and EPA. As a final report, the team developed an Environmental Stewardship Minimum Benchmark Training Toolkit for Artisanal and Small – Scale Gold Mining in Liberia. This toolkit will be made available in every ASM hotspot and shared with all relevant stakeholders.

This toolkit will provide the requisite education and guidance to ASM operators on smart mining, restoration techniques, and education on the health implications of unsustainable mining practices. The project (ASM toolkit) further goes to highlighting six key governing principles in addressing issue of ASM mining:

- Who? The local expert designing the toolkit and their respective role.
- Target Audience? The key beneficiaries; Civil Society and advocacy group, mining communities and miners
- The Message? Don'ts, shouldn't, DOs,
- Value proposition? seeks to drive home the begging question of “why not”?
- Credibility? shift in thought due to the Trust and Credibility in the message.
- Differentiation? Change in Attitude and Perception Change in Results

Moreover, due to the current lack of formalization of the ASM sector in Liberia, it is extremely difficult to control and manage the detrimental effects of miners in accordance with the EPML. With the use of this toolkit, miners will become more aware of how to manage and reduce their environmental footprint while adhering to the mining guideline on ASM operations. Moreover, a key recommendation and ongoing engagement with sector actors is gearing towards formalization of the ASM sector in Liberia.

The ITP Section of the Formalization of the ASM Sector provides guidance on the procedure and emphasizes the importance of the collaboration of regulatory authorities, communication among stakeholders, and education on sustainable mining for miners. This is evident in the number of awareness campaigns created among miners and the level of collaboration among stakeholders, especially between the EPA and MME.

Additionally, using the IGF Guidance for Managing Artisanal and Small-Scale Gold Mining to analyze the ASM context in Liberia by undertaking sector assessment and impact assessment provided insight into national circumstances to practically inform the development of the toolkit.

4.0 Future prospects

We envisaged that this project would be a steppingstone for the formalization of the ASM Sector in Liberia. As a result, the following measures were or will be put in place to ensure the internal and external use of the product produced during this project and to ensure that the effort of this project is continued:

- Following the development of a back-to-office report about the training, a formal communication was sent to both the head of institution, MME, and EPA, introducing and soliciting endorsement of the project concept.
- At EPA, the project concept was presented at the Environmental and Social Impact Assessment Technical Review Committee, while at MME, the project was presented to the Department of Mine, represented by the Assistant Minister of Mine, and the Geological Survey Division.
- The revised leaflet and the Toolkit were presented to all technicians who conduct inspections, compliance monitoring, and environmental investigations to complement the aspects of engagement and awareness.
- Moreover, upon completion of this Change project, plans are underway to ensure that this toolkit is disseminated to the targeted audience across the country. This will be considered under the Environmental Awareness Program at the EPA's Department of Intersectoral Coordination, which hosts environmental clubs in schools and communities. Earlier this year, Training of Environmental Inspectors was conducted, both on the ITP 308 Training Outcome and the Information Leaflet.
 - The Ministry of Mines and Energy also uses this information to educate miners at ASM Hotspots. The leaflet was shared with the Association of Gold and Diamond Dealers and Brokers, Commissioners of Administrative Districts, Mining Agents, Land Survey Officers, and at Mining sites visited.
- This toolkit will also be presented as part of the planned EGP program for 2023, titled "Enhancing Capacity of Stakeholders for Improved Environmental Monitoring of Artisanal Small-Skills Mining (ASM)". This UNDP support program is being led by MME and EPA, along with members of the multiagency committee on Artisanal and Small-Scale gold Mining.
- The leaflet is part of the working tool for site inspection at mining sites.
- The Toolkit will be shared with all stakeholders, while the formation of an ASM Taskforce is a future consideration.
- Other key organizations that work with ASM operations are the UNDP EGP support program, GIZ, the Society for the Conservation of Nature (SCNL), etc.
- The European Governance Program (EGP) implemented through UNDP has necessitated the establishment of an ASM Working Group, involving a wider stakeholder group with EPA and MME serving as lead counterparts. This collaboration, coupled with individual entities' regulatory mandates, provides an alternative means for the continuity of this project through capacity building.

Each member of this team is passionate about sustainable mining and is willing to put in all efforts to ensure that the ASM Sector is formalized in Liberia. Fortunately, our roles within our institutions give us the opportunity to be involved in supporting the efforts of this project.

The technicians of the Department of Compliance and Enforcement of the EPA will ensure that the Toolkit and Information Leaflet form part of the working tool of the Department and will continue to enforce the creation of awareness and training opportunities to miners. The technicians from the MME are actively working in every ASM Hotspot, and they will ensure that miners operate legally and sustainably. As technicians of the lead authority for mining regulations in Liberia, they are also willing to continue the support of efforts towards formalizing the ASM Sector in Liberia.



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(Complete at the end of the change project)



Project name: *Training Program for Mine Water and Tailings Management for Small and Medium Scale Miners in Tanzania*

Country: *TANZANIA*

Team members: *Zena Kongoi, Eng. Gabriely Senge, James Mniko, Gladness Malisa & Tilisa Mwambungu*

Project summary (1/2 page)

Describe your project in a few paragraphs - its goals, how it has been carried out (what main actions have been taken), who has been involved and the main accomplishments and results. Why was this important to our organisation?

Most of small and medium scale gold miners in Tanzania engage in improper wastes management practices due to either lack of financial resources or technical expertise or simply lack of awareness on the effects of such practices on environment degradation and water pollution. With an increased public awareness on the importance of environmental protection, small and medium scale miners are faced with increasing pressures to adopt the sustainable mining practices for environmental protection.

Goals of this Project:

We tailored a Training Program with an ultimate goal of increasing awareness and capacity of small and medium scale miners in managing mine water and tailings wastes by adopting best practices and thus promoting sustainable mining operations and environmental protection in Tanzania. Specifically, the Training Program is intended to test the previously prepared *Guidelines, technical drawings and brochures* for mine water and tailings for small and medium scale miners in Tanzania as baseline for pilot training in selected areas.

Main actions that have been taken:

In the course of undertaking this change project-

- We reviewed the previously prepared *Guidelines, drawings & brochures* by ITP 308 G1, G3 & G4 as a baseline for the pilot training;
- Conducted preliminary site visits at pilot areas (Mwakitolyo and Nyandolwa in Shinyanga district; Mwime in Kahama district) to identify actual site requirements;
- Consulted with target stakeholders (miners associations, owners of processing plants – VAT leaching, CIL, CIP, Elusions, sluicing tables to identify actual needs and gaps;
- Identified topics of interests to be covered, how, when and where;
- Maintained internal consultations with supervisors and colleagues within own institutions, ITP 308 Change Project supervisor; as well as initiated external consultations for future project continuation and possible financing.



What have we accomplished?

- **Developed a Training Program** as an essential working tool to be used by both Authorities in while training small and medium scale miners on mine water and tailings management;
- **Amalgamated the prepared Guidelines, brochures and technical drawings** for mine water and tailings management into one baseline document;
- **Prepared a Lobbying Document** for future project continuation and financing that will be submitted to the interested parties that include Ministry of Minerals, Mining Commission, NEMC, Mercury Abatement Program; Bulyanhulu Gold Mine etc; and
- **Prepared the power point presentation** as reference training materials (on-going).
- **Conducted a small training program at Nyandolwa (Shinyanga) and Mwime (Kahama)** to test the prepared Guidelines before actual training (Photos attached).

Why was this important to our organisations?

- Enhanced institutional capacity and strategies on overseeing mine water and tailings management from small and medium scale mining operations;
- Be able to effectively fulfilling our core functions in managing sustainable mining operations; and
- Joining hands with other stakeholders on mine water and tailings management by expanding the scope of project implementation to other ASM concentrated areas.

Learning and adaption *(1/2 page)*

Explain if, and how, you may have adapted the project's focus or actions along the ten months of implementation.

Reflect on what challenges or opportunities emerged that called for adjustments of your project.

During the 10 months of the Change project implementation, we encountered financial constraints to conduct field visits, stakeholder engagement, training facilitation (printing training materials, transport, food and drinks). This resulted for us conducting a very small and unstructured training program at Nyandolwa (Shinyanga) and Mwime (Kahama) areas (**Photos attached**). Again, due to financial constraints, we weren't be able to conduct trainer of the trainers program with colleagues from the Ministry of Minerals, NEMC and OSHA zonal offices at Mwanza as planned. Instead, we managed to engage only the District Environmental Management Officers at Shinyanga District.

This prompted us to start thinking outside the box and decided to approach external organisations or donors for project funding and possibly continuation. To-date, we have managed to unofficially engaged the Assistant Commissioner for Small Scale Development at the Ministry of Minerals, Coordinators of the Mercury Abatement Project and management of Bulyanhulu Gold Mine who showed interests to be engaged on the project and/or funding. That is why we decided to adjust the focus from a simple pilot training program at Shinyanga and Kahama districts to a possibly full-fledged Training



Program that will cover selected small scale concentrated areas in Tanzania rather than just Shinyanga and Kahama districts. The interested parties are currently to receive official submission of project proposal (Consent Note) and its final draft of Training Program.

Again, we encountered a challenge on different geographical locations of the ITP 308 participants (Dar es Salaam-Mbeya-Shinyanga-Kahama) resulting into difficulties on coordination and conducting a pilot training program. To overcome that, we decided to distribute tasks accordingly to accomplish our planned tasks though at times it proved to be very difficult.

You may also reflect on your own roles in designing and initiating the project. What skills, approach and actions have the team members applied in this process?
During designing and project initiation, we mostly applied Technical skills, task specific skills, organisational skills, negotiation skills just to mention a few.

What other persons /groups of people /organisations have been instrumental in progressing with the project, and what were their contributions?

For sure, our ITP 308 Change Project Coordinator Mrs. Jonnina Karlsson has been instrumental in shaping and making the Training Program a reality. We will always be grateful for her steadfast support and mentoring even when we started doubting ourselves that we won't be able to accomplish the project.

Our supervisors in our organisations have been very supportive, giving us time and resources such as company vehicles to conduct preliminary site visits at Shinyanga and Kahama districts.

Moreover, Assistant Commissioner for SSM, Coordinators of Mercury Abatement Program have been very encouraging on this project

Results and accomplishments *(1-2 pages)*

Provide a more specific account of what results and accomplishments have come out of your project and the actions taken so far - large and small - and explain the significance of these results vis-à-vis the problem the project sought to address.

Explain:

1. Who (what organisations, groups, etc) have benefited from engaging in the change project design and activities so far and in what ways (e.g. learning, capacity development, gaining traction for prioritizing a certain issue/problem, etc)?
 - Small scale miners' associations – learning, capacity development
 - Owners of mineral processing plants and sluicing tables – learning, capacity development



- Our own organizations (TMC, NEMC) – capacity development, prioritizing
2. What “deliverables” have been produced by the project and how have these been presented? (E.g. Guideline? Toolkit? Operating procedure? Technical document?) To whom and how have the deliverables been made available and accessible? (Please attach any documentation/ products to substantiate this result.)
 - **Amalgamated Guidelines**; will be available for all
 - **Training Program** will be available to authorities and small and medium scale miners;
 - **Lobbying Document** to be available to all potential donors, project financiers
 - **Power point presentations and case studies** available for all
 3. State the project’s relevance and significance to addressing challenges around sustainable mine water and mine waste management in your country.
 - Increased awareness and capacity of small and medium scale miners in managing mine water and tailings wastes by adopting best practices and thus promoting sustainable mining operations and environmental protection in Tanzania.
 - Enhanced institutional capacity and strategies on overseeing mine water and tailings management from small and medium scale mining operations
 - Testing the prepared *Guidelines, technical drawings and brochures* for mine water and tailings for small and medium scale miners in Tanzania as baseline for pilot training in selected areas.
 - Offers possibilities for joining hands with other stakeholders on mine water and tailings management by extending the project implementation to other ASM concentrated areas and thus promoting sustainable mining operations.
 4. State the project’s relevance and significance to your organisation’s capacity to fulfil its functions related to mine water and mine waste management and if and how the project has increased your or other organisations’ prioritisation of the problem you sought to address and if so, how is that demonstrated?
 - Enhanced capacity on inspection and close monitoring of mine water and tailings management for small and medium scale operations
 - Increased awareness campaigns and understanding on mine water and tailings management for small and medium
 - Improved and streamlined application and permitting procedures for mine water and tailings management; and
 - Promotion of best practices on mine water and tailings management for cost effective operations.



5. What governance principles and/or key approaches to mine water and mine waste management introduced in the ITP have impacted on the design and implementation of your change project. In what ways is this evident?

Stakeholder engagement

Compliance

permitting

Future prospects (1/2 page)

Provide an analysis of how your project and the results may be built further upon within your organisation or by others. Identify measures already in place and/or needed for this to happen. Consider for example:

1. How has the project and the accomplishments/progress to date been communicated *within your organisation*. To whom and how?

Internal communication and training of the trainers within own organizations

2. How has the project and the accomplishments/progress to date been communicated *externally*? To whom and how?

Informal engagement with Assistant Commissioner for SSM at the Ministry of Minerals, Coordinators for Mercury Abatement Program, Management of Bulyanhulu Gold Mine. They are all waiting for official engagement by submission of the Consent Note and Final Training Program, which is planned for 3rd week of August, 2023

3. What needs to be done to continue the efforts of this project? Who needs to be engaged?

We have initiated communication with Assistant Commissioner for Small Scale Mining Development at the Ministry of Minerals, Coordinators of Mercury Abatement Program, Management of Bulyanhulu Gold Mine for project continuation and funding, and the prospects are very promising.

4. Have any decisions or steps been taken already by your organisation to ensure continued efforts? If so, what? Which of these decisions/ or steps will come into effect immediately?

Note yet. However, presentation done at NEMC Zonal Office Mbeya has shown commitment to incorporate the Training Program into their Annual Action Plan for SSM Training starting 3rd & 4th quarter of this financial year 2023. We also expect engagement of TMC and NEMC once the Training Program has been finalized ready for consumption.



5. Who / what organisations have the motivation and capacity to build on the efforts of this project?

- Ministry of Minerals;
- Mercury Abatement Program;
- Management of Bulyanhulu Gold Mine
- Tanzania Mining Commission
- NEMC

6. In what ways have collaboration between different organisations been initiated towards continued efforts of this project? How is this demonstrated?

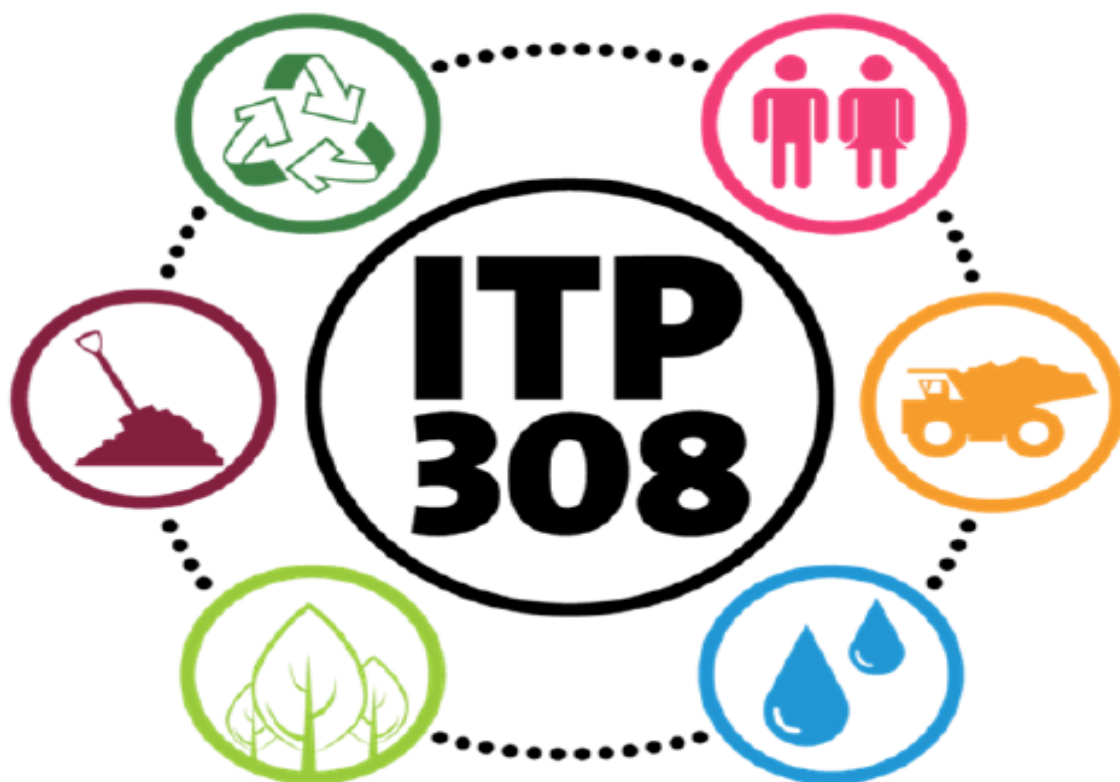
Unofficial engagement has been done, we are expecting to officially submit the Consent Note and Final Draft of Training Program in the 3rd week of August, 2023.

7. Do you foresee that you and your team members will continue involvement in this project and/or in work that addresses the problem you had identified? In what ways? (1/2 page)

Definitely yes. We anticipate to participate in one way or another in the continuation of the project whether through external funders (Mercury Abatement Program, Bulyanhulu Gold Mines) or within our respective organisations (TMC, NEMC) by incorporating the Training Program into our Annual Training Programs.



PROJECT REPORT



**MINE WATER &
MINE WASTE MANAGEMENT**

Project name: National Guidelines for Design and Management of Tailing Storage Facilities (TSFs) and Waste Rock (WR) Dumps in Zambia

Country: Zambia

Team members: Lucy Nsakasha, Joinani Siame, Numbi Makonga, Nelly Kayuni, Mwenzimutimbwa Phiri, Maybin Malambo

Project summary

Zambia has in the recent past between 2019 and 2020 experienced the collapse of Tailings Storage Facilities (TSFs). Pollution which emanates from poorly managed TSFs as well as waste dumps poses a great danger to nearby communities and water bodies. The statistics relating to the collapse of TSFs and environmental issues arising from mine waste facilities have proven to be on the rise. Dust emanating from Waste Rock dumps (WRD) and TSFs has also presented a number of determined effects on the communities and the environment.

Zambia does not have a standard guide for review of site selection, design, construction, management, inspections, rehabilitations and closure of waste rock dumps, overburden dumps and tailings storage facilities. This leaves mining and environmental inspectors without a reference for technical guidance during inspections of TSFs and dumps, leading to poor reports and flawed decisions during permitting.

The guideline '*National Guidelines for Design and Management of Tailing Storage Facilities (TSFs) and Waste Rock (WR) Dumps in Zambia*' is the project under development by the Ministry of Mines through Mines Safety Department,

Mines Development Department and Zambia Environmental Management Agency (ZEMA) to properly offer guidance to both the inspectorate team and the end users of the TSFs and WRD in order to curb these environmental impacts.

Goals for this project

These include:

- To provide legal backup and framework for effective enforcement of regulations governing the safety and environmental concerns emanating from Tailings Storage facilities (TSFs) and dumps in the mining industry;
- To ensure that the management of Tailings Storage Facilities (TSF) and Waste Rock (WR) Dumps from mining and extractive industries in Zambia is undertaken in a manner that is safe and protects the environment;
- To promote the adoption of the best international approved industry standards and practice, and continual improvement in tailings management; and
- To accord developers/owners a good reference tool for proper management of the facilities.

Activities conducted and accomplishments

Progress has been made on the project so far and the following is what has been completed:

- The meeting with ITP 308 groups 1, 2 and 3 was held in January 2023 with the view of getting guidance on reviewing and including points where necessary in the development of National Guideline for Management of TSFs and WRD. Points were raised and written down to be included in the guidelines and presented to stakeholders during the fore planned workshop.
- An engagement meeting with the representatives of the United Nations Development Project (UNDP), Environmental Protection Agency of Sweden (EPA) and Geological Survey of Sweden was held in order to lobby for funds to facilitate the stakeholder engagement meeting to be held in April 2023. The request received a **positive feedback** from UNDP to finance the project during the engagement meetings and any related costs as stated in the agreed budget.
- Draft invitation letters to the stakeholder's engagement meeting were written and waiting approval and dispatching.
- The first National Guideline draft was also written and sent to the experts through our mentor for further comments and guidance.
- The review of the first draft by the experts through UNDP and EGP was completed and suggestions made.
- The ITP308 group 6 went through the suggestions by UNDP and EGP and concluded that the suggestions were good and that they should be acted on. These suggestions include the following:
 - There is need for further improvement of the draft, a more constructive external stakeholder consultations should be done.
 - Before the guidance is presented to external actors in the business sector and the mining industry, a more

rigorous technical review by both TSF experts and experts in policy and legislation is also required.

- The group welcomes a targeted peer to peer support for a technical review from SEPA and SGU to look at the content and structure of the draft.
- The internal meeting with technical team to review the draft by both TSF experts and experts in policy and legislation is yet to take place as the group already engaged UNDP to draft a program on how it will be conducted, due to the fact that the project is on-going and needs more time before it is completed.

This project is so important to our organization in so many ways of which, chief among them is the alleviation of environmental impacts caused by spillages from TSFs, dust from WRD and other related environmental hazards caused by these facilities.

Learning and adaption

The project's initial timeline was planned with enough spacing to carry out each activity as planned step by step. However, lots of findings that lead to changes taking place were encountered. The project was initially planned to be implemented as part of the Environmental Regulations and Mines and Minerals Development Act of Zambia, however, looking at the process involved in attaining this goal, the project's scope was changed to implementing the guidelines as part of Zambia legislation in form of a safety letter.

In the course of the past Ten months of the project, experience of another tailings dam failure at a certain mineral processing licensed area occurred.

Tails found its way into the stream and contaminated it heavily. Team Zambia realized that it's important to scale up the project in order to ensure that this tool is put to use as quickly as possible.

The contamination of the stream lead to the realization that other factors such as allocating the tailings dam some good distance away from water sources should be included. The design of the tailings dam should be specified and monitored. Tailings dam operators should be trained by regulatory team from Mines Safety Department (MSD), Mines Development Department (MDD) and Zambia Environmental Management Agency (ZEMA) before engaging them on the assignment. Therefore, a part of training operators of TSFs and how to handle the contamination would be suggested in the internal workshop to be held with experts on the later date and get the feedback.

ITP308 group 6 (team Zambia) which comprises of Engineers with Metallurgical and Mining skills, have been working hand in hand with the United Nations Development Project (UNDP) on the best way in which this project can be implemented. A presentation of the project to UNDP from team Zambia was conducted, detailing the intention and how to progress from stage to stage. UNDP became instrumental to the project from the time the organization was engaged in the significant part of funding of the project and the involvement in the planning of events to be conducted and other contributions such as the review of the draft and suggestions of the best way to go which is agreeable with team Zambia.

Results and accomplishments

In the quest to achieve the objectives of this project, the timeline had to undergo many changes as the project requires more time to be accomplished. The actualization process of the guidelines has commenced and the following are the results and accomplishments from the activities the team has done so far:

1. Successful meeting with ITP 308 groups 1,2 and 3

The meeting was held in January 2023. The result of the meeting was satisfactory as the team had a fair share of the collective knowledge of all the ITP308 groups' accomplishments and contributions. The team's adoption of the positive suggestions and agreeable ones towards the project and the best way the team can quickly get the guidelines put into effect by means of the safety letter was a great accomplishment.

2. Successful Engagement meeting with UNDP

The project requires funding to progress and see accomplishment. Team Zambia sort for funding and the best suggestion was to engage United Nations Development Project (UNDP) as this particular organization has had previous involvement in the projects undertaken within the Ministry of Mines. The meeting with the representatives of the United Nations Development Project (UNDP), Environmental Protection Agency of Sweden (EPA) and Geological Survey of Sweden, to lobby for funds from UNDP was made possible with the help of Anna Apler the mentor for Team Zambia working on this project. The major accomplishment of this meeting is that team Zambia received a positive feedback from

UNDP on part of funding the project. The EPA and UNDP promised to offer more help in the progress of this project in terms of planning, reviewing and making suggestions on the progress of the project if that is welcomed by Team Zambia of which the idea was very much welcome.

3. Draft invitation letters

The letters requesting for the stakeholders engagement meeting have been developed and waiting approval and dispatcher.

4. First draft for national guidelines compiled.

The team successfully managed to compile the first draft of the National Guidelines and submitted for review to UNDP and SGU through the team's mentor. The named organizations reviewed the document and submitted their feedback. The greatest achievement in this regard was the feedback from which the team received, the guidance in the way to approach this project. UNDP suggested to draw up the program of holding an internal stakeholder workshop through which rigorous review of the draft should be undertaken before the document is presented to external stakeholders.

Future prospects

The project still has a lot of work to be done. This calls for the adjustments in the timeline to accommodate the whole process. There were so many challenges that came along such as difficult in communication, transport, getting hold of relevant officials for each particular task as this part of the year had been very busy, and other factors that hindered the implementation of

the project. This is due to the change of the Ministry of Mines to Mines Regulatory Commission process going on. However, in order for the project to be implemented, the following are the future prospects of the project.

1. Internal stakeholder engagement workshop between Mines Safety Department (MSD) Mines Development Department (MDD) from Ministry of Mines and Zambia Environmental Agency (ZEMA).

This will be the next item to look at in the progress of this project. After the first review of the draft by the experts from UNDP and SGU, a suggestion was made to make intensive review on the draft before presenting it to external stakeholders. A meeting between team Zambia and UNDP was held in May 2023 and the plan was put in place. UNDP will develop the plan on how the internal stakeholder engagement meeting (which include MSD, MDD and ZEMA) will be held and the venue where it will take place. A list of officers to attend this internal stakeholder engagement meeting for rigorous review of the first draft was compiled and submitted to UNDP. Once the review is done and the second draft compiled, it will be submitted to the experts from UNDP and SGU for further review. Then, if the document will be commended for external presentation, members of the mining houses will be called upon to attend the workshop for their submission.

2. Stakeholder engagement workshop

Once the internal activities on working on the draft are completed and the draft ready for external presentation, the stakeholder engagement workshop for both internal and external stakeholders will be held. Some of them include ZEMA, MDD, UNIVERSITIES, MSD, ZMERIP, Mining Houses and many more stakeholders having personnel with expertise

in line with the project's goals. Stakeholders will be engaged in order for them to have an input in the project. A draft will be presented and allow them to produce their comments, addition and other submissions. These will be taken note of and put into consideration. Their input in this project is very significant as they are also the end users of the guidelines.

3. Compilation of the comments

A workshop will be held in line with the timeline to look at all the submissions from external stakeholder engagement workshop. The team from MSD, MDD and ZEMA including the itp308 groups working on the project will come together in order to do a selective compilation of the comments/contributions obtained from stakeholder's engagement workshop. A compiled draft will then be forwarded for expert's review to SGU and UNDP. Once the draft undergoes all reviews and pass in terms of international standard, a copy will be sent to all stakeholders who were engaged in the previous workshop for their final review and commenting. After this exercise, proofreading the final draft will be conducted and shared to ZEMA, MDD and MSD. Then a submission for the signing of a Memorandum of Understanding between ZEMA, MDD and MSD to launch the National Guidelines in terms of the Safety Letter (of which in itself, the letter will be used as legal law) will be done and await the launching.

4. Launch of the national guidelines

The guidelines will be launched before implementation. The timing will include finding a slot in one of the national event such as the Mining Indaba. All the necessary logistics and stationery needed will be put in place such as fliers, T-shirts, booklets, banners as stated in the budget. The heads of MSD, MDD and ZEMA as well as the Permanent Secretary from the Ministry of Mines will be invited to open the launching ceremony.

Team Zambia and the rest of IT308 groups that took part in such trainings will be looking forward to the involvement and completion of this project.

**Project name: INSPECTION CHECKLIST OF ARTISANAL AND
SMALL SCALE MINING (ASM) IN MINE SITE DECOMMISSIONING
AND REHABILITATION IN KENYA**

Country: KENYA

Team members: Godfrey Mwelelu

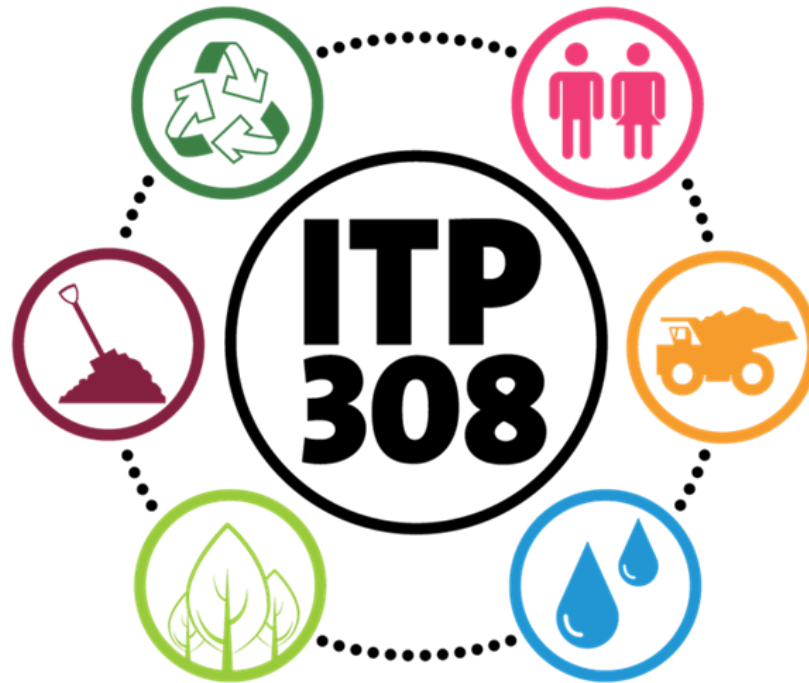
John Maniafu

Hellen Kutwa

Anthony Maina

Denis Mogusu

Project Report



MINE WATER & **MINE WASTE MANAGEMENT**



PROJECT SUMMARY

Our project sought to align with the mandates and requirements set forth in both Environmental Management And Coordination Act (EMCA 1999) and the Mining Act, 2016 by aiming to strengthen the inspection and monitoring of mining operations at the decommissioning stage. Our work is building on the guidelines developed by Group 1 Kenya during their course.

Our journey involved a thorough examination of various aspects of the project's decommissioning phase. We identified key decommissioning phases and the activities that are likely to be undertaken at each phase. This was included in the checklist and it covered everything from pre-closure considerations to the actual decommissioning activities and post-closure planning. Further collaboration between mine inspectors, community representatives and environmental representatives allowed us to bring a well-rounded perspective to the draft checklist.

The checklist's main focus is ensuring the safety and stability of decommissioning sites and paying special attention to securing open pits, stabilizing slopes, re-vegetation, mapping out risk sites and properly managing hazardous materials and waste water.

By using this checklist we would like to achieve proper identification of potential hazards and address them promptly using the right methods as per the Kenyan laws and regulations. Including the evaluation of waste rock and tailings management methods that are being used on the



project site will help ensure that the site is not only safe but also environmentally responsible and restored to a habitable state. The post-decommissioning phase in the checklist involved setting up a long-term monitoring plan including who is responsible for the implementation of the plan. It also included regular infrastructure inspections by relevant authorities and the proponent and a reporting system to keep regulatory bodies informed.

This checklist is important to NEMA and The Ministry of Mining Kenya as it gives a summary of key issues to focus on during this crucial stage of any mining project. As inspectors who review Environmental Impact Assessment (EIA) submitted little, focus is given on the decommissioning phase of any project and this checklist will help us as inspectors to collect all the information needed to make the right decisions and enforce accordingly where needed. It is a demonstration of our commitment to responsible mining practices and environmental care in Kenya and full ownership of mining sites up-to the final stage. This checklist will help leave a positive impact on the environment and the communities around mining sites as they will see the benefit of mining activities without jeopardizing their health and safety.

Learning and adaptation

After coming up with this project proposal we set out to implement it using the breakdown actions highlighted in it. We had to navigate through some challenges forcing us to be adaptable as we progressed.



One key adaptation we had to adjust to was the way we approached key government stakeholders. Finding them all at once was a challenge so we had to create an online link and submit to them to enable us to collect their feedback from wherever they were. This helped us to save on time and resources. Another adoption was in community consultations. We worked closely with local authorities, especially the local community administrators (chiefs) to allow us to converse with locals during their community meetings (barazas) so as to help us collect their opinion and views. Through this process we realized that ongoing and open communication with local communities was important as it helped the process to flow easily and it contributed valuable insights to the overall project goal.

One major opportunity that came up was when during our discussions with previous groups we identified that Group 1 Kenya worked on developing a guideline titled “NATIONAL GUIDELINE ON MINE SITE DECOMMISSIONING AND REHABILITATION”. They were on the final stage of getting it approved and endorsed by the NEMA board. This means that it will be accepted as a published NEMA document. We saw this as an emerging opportunity to come up with a mine site decommissioning checklist based on the guidelines already developed by Group 1 Kenya

Meeting physically was also a challenge. We work in different parts of Kenya with different work schedules. Financially also we had a challenge as we have no sponsor for this project. We tackled this by using online



platforms and meeting after work hours. Challenges also arose in the collection of data from the locals. Some of them did not understand English as we had written our questionnaires in English. Some spoke their local dialect of Luhya “Kiisukha” and some Luo. We adjusted this by having some questionnaires in Swahili and having a translator to help communicate what we needed and translate back to us their views and opinions. Opportunity came up after having discussions with previous groups. We adjusted our topic to align with Group 1 project We mainly focused on fostering a collaborative and inclusive working environment. Inclusivity was also extended to those who gave us their feedback so they can feel like their voice and opinions matter and that we take them very seriously. We also encouraged open communication among team members and to enable this we created a Whatsapp group for direct and instant communication. Having this approach facilitated a collective effort in swift problem-solving and decision-making when need arises. Our approaches depended on what we were handling at that moment. For example, in engaging community members we had to go through the relevant authorities and we were willing to even include the village elders. Another good example to enable us to get reports done and submitted on time. We had to divide the work amongst ourselves, do most of our work online then finally have an online meeting to discuss and compile our work.

The success of the project was not solely dependent on our team's efforts. Key partners have been instrumental in progressing this project



and they include local communities in Kenya, local authority such as area chiefs and village elders and regulatory bodies such as NEMA and the local government. Their contributions ranged from providing valuable local insights to ensuring regulatory viewpoints were well noted to mobilizing the locals for discussion sessions, use of their vehicles and fuel to access some of this sites, identifying where this mine sites are and taking us to where they are, giving us their reports and record for us to peruse through and add the information in the draft checklists and translating where need arose.

Results and accomplishments

The project successfully garnered support from management and leadership by presenting a compelling rationale and outlining the numerous benefits it offers. By actively engaging stakeholders throughout the process, the developed checklist effectively addresses a wide range of concerns related to mine decommissioning. This inclusive approach has fostered a cordial relationship between the miners and the surrounding community, emphasizing collaboration and mutual understanding. The project's emphasis on transparency, communication, and comprehensive stakeholder involvement has not only strengthened the overall effectiveness of the checklist but also contributed to a more harmonious relationship between industry players and the local community.



Mine and Environmental inspectors have profited from early exposure to a draft checklist. Mine operators have also benefited by participating in the consultations, sharing insights into practical challenges and operational realities. As a result, their contribution to developing a user-friendly checklist that addresses potential issues relevant to their operations. Local communities got an opportunity to engage in focus groups and discussions, expressing concerns and priorities related to mine closure impacts.

The project has developed a draft checklist to be used during the decommissioning of ASM mining sites. The checklist encompasses key phases such as pre-closure planning, site stabilization, waste management, re-vegetation, water quality monitoring, and post-closure monitoring. Due to its digital format, the checklist enables customization to various mine types, locations, and regulatory requirements, making it flexible in its application. To enhance accessibility, the checklist will be freely accessible on the State department for mining and NEMA websites. Moreover, active dissemination strategies will include sharing the checklist with relevant stakeholders through workshops, seminars and training sessions, facilitating widespread utilization and adherence to standardized decommissioning practices

The project, once validated and adopted, will contribute to improved compliance and adoption of best mine closure practices by promoting



adherence to environmental regulations. This will result in safer and more environmentally responsible decommissioning of ASM sites. Additionally, the project enables data-driven decision-making by allowing stakeholders to monitor decommissioning progress and performance against established standards. This will facilitate continuous improvement. It will also enhance communication and transparency among stakeholders by providing a clear framework for discussing closure activities, potential impacts and consequently foster trust and collaboration in the process.

The project once finalized and adopted will significantly increase our organizations (State department for mining and NEMA) capacity in mine decommissioning by bolstering expertise through research, collaboration with experts, working with local communities and eventually on the practical implementation of the developed checklist. This effort will position our organizations as leaders by providing a valuable tool for stakeholders, thereby promoting sustainable mine closure practices. Furthermore, the project has successfully created awareness and prioritization of responsible mine closure within the country . This increased focus will result in a more sustainable approach to mine management and emphasize on the importance of responsible mining practices in the industry.



This project promotes transparency by outlining clear expectations and facilitating data collection and reporting. This will create accountability with all stakeholders involved in the decommissioning process. The project also emphasizes the importance of engaging communities and incorporating their concerns in the decommissioning process. This aligns with principles of good governance. The project product (checklist) allows for flexibility in adapting to changing circumstances and unforeseen challenges. This will ensure a dynamic and responsive approach to mine decommissioning.

Future prospects

Internal Communication of Project Progress:

- The project progress and accomplishments was communicated within the State department of Mining and National Environment Management Authority (NEMA), staff meetings, and dedicated sessions to discuss project accomplishments and progress. This has ensured that each staff, from top management to on-site staff, is aware of the positive changes and lessons learned from the project.

External Communication of Project Progress:

- Externally, the team has engaged County Governments, local mining communities, land owners, mining investors, mining brokers, Artisanal Mining Committees (ASM), regulatory bodies,



environmental advocacy groups, opinion leaders among others. The communication has been focused on project milestones and achievements which have been communicated through mass media including radio and local community meetings. This communication helps build trust and showcases the team's commitment to responsible mining practices and management of mine waste and mine water.

Continuation Efforts and Stakeholder Engagement:

For the project sustainability efforts, there is need to engage key stakeholders including mining regulatory bodies, environmental authorities and local mining communities including mining associations. Key to the success of this checklist is the positive impacts of the checklist to ensure successful decommissioning of mining sites. Continued feedback and dialogue with stakeholders needs to be undertaken to address emerging challenges and ensure project objectives and goals are aligned with new evolving priority needs of all stakeholders.

Decisions for Continued Efforts:

- Both NEMA and the state department of Mining have already made decisions to institutionalize the project's guidelines and procedures into the standard operating procedures (SoP's) of the respective agencies. This has ensured that the positive changes initiated by the project are domesticated to become integral to the standard



operating procedures (SoPs). Immediate steps include integrating these guidelines through the checklist into organizations training programs and updating internal procedures.

Motivated and Capable Organizations:

- Key lead agencies such as the Ministry of lands, Interior, civil society and mining groups with interest and commitment to responsible mining and sustainability will be motivated to build on our project's efforts. Environmental NGOs, academic and research institutions, and mining industry associations such as chamber of commerce, mining cooperatives have the motivation and capacity to take the project's principles and guidelines and adapt project outcome for environmental conservation.

Collaboration Initiatives:

- Collaboration between the state department of mining and NEMA including civil society organizations within mining areas has been initiated to conduct joint workshops and awareness programs. This collaboration highlights a shared responsibility towards sustainable mining practices and opens opportunities for shared resources use and expertise.



Continued Involvement of the Team:

- Team members are focused and motivated to ensure achievement of project goals and objectives. The team underscores the critical role mining plays in the country with the associated environmental challenges particularly mine water and mine waste. The mission thus is to ensure active involvement for success of the project. Team members will continue to be engaged in broader initiatives aimed at addressing identified problems. This involvement will be motivated by a sense of personal responsibility and common vision for a sustainable future in the mining industry.



Project Report

(Complete at the end of the change project)





Project name: INSPECTION CHECKLIST FOR ARTISANAL AND SMALL- SCALE GOLD MINING IN TANZANIA

Country: TANZANIA

Team members: PAUL KALOKOLA, SUZAN CHAWA, HEAVENSOPHY MFINANGA AND CLARENCE NKWERA



1. INTRODUCTION

The proposed change project is '*To develop a Joint Inspection Checklist for Artisanal and Small-scale Gold Mining in Tanzania*'. Artisanal and Small-scale Gold Mining (ASGM) plays an important role in poverty eradication, employing about 1.2 million people (EHPMP, 2023). However, the sub-sector is also associated with environmental perturbations/threats such as land degradation through pitting, deforestation and pollution, water sources contamination and atmosphere pollution from dust, smokes, pungent/ toxic gases) due to the use of chemicals like mercury and cyanide at different stages of gold recovery.

To address the issue, the National Environment Management Council (NEMC) is implementing a four-year project called Environmental Health and Pollution Management Project (EHPMP), which commenced on October 26, 2020 and is funded by the World Bank. The project is intended to strengthen the institutional capacity to manage and regulate mercury use in artisanal and Small-scale Gold Mining (ASGM) and introduce alternative methods to mercury in gold recovery processes in the ASGM subsector. Therefore, developing the Joint Inspection checklist for ASGM in Tanzania will be an important working tool which will help regulatory authorities and the EHPMP to attain their goal.

The aforementioned change project falls under **Subcomponent 1.2 of EHPMP: Monitoring and enforcement tools for management of import, use and disposal of Mercury in ASGM while Activity 1.2.1: Preparations of Inspection Protocols (manuals and checklist).**

So far, EHPMP has developed and produced two guidelines which are; Guidelines for Disposal of Mercury Related Wastes in Artisanal and Small-scale Gold Mining (2023_- under NEMC operations and Guideline for Import and Use of Mercury in Artisanal and Small-scale Gold Mining (2023)- Under Government Chemist Laboratory Authority (GCLA) whereby both guidelines are new and require development of joint inspection checklist.

In view of the above, the team has developed a Joint Inspection checklist for ASGM in Tanzania as a working tool which will help regulatory authorities to address environmental and health issues specific to ASGM and help miners comply with national legislations.

The objective of the checklist is to ensure compliance and encourage best practices in ASGM by identifying deficiencies, and preventing or minimizing environmental pollution in the mining sector. It will also enable regulating institutions and the regulated



community (ASGM) to properly handle mercury operations and reduce associated health and environmental risks.

The project involved experts and specialists from the Mining Commission and NEMC during the development of the Joint Inspection Checklist. The team identified and consulted EHPMP project coordinator, Eng. Dr. Befrina Igulu for technical and financial support for the change project, also the team approached officers from the Resident's Mine Office in Singida to engage in the field visit and project consultation during data collection and processing. Additionally, the team has worked closely with ITP project coordinator, Ms Jonnina Karlsson who is the change project supervisor for inputs during the whole process and alumni ITP (beneficiary), Ms. Edica Masisi.

1.1 Background

The idea for Joint Inspection Checklist for ASGM was first proposed during ITP training in Zambia, whereby the Tanzanian team agreed that, there is a need to close the existing gap of checklist availability to small scale gold miners provided that there is an existing project that targets ASGMs purposely which create a conducive environment in synergy with the existing checklist for large and medium scale miners. Development of the desired checklist will help tailor environmental compliance to ASGM and further the work of EHPMP that already had guidelines for use of mercury. Through the EHPMP project the checklist will be easier institutionalized and used by regulators.

The focus of the project has been ASGM through all project phases because the sector has many environmental challenges, and many miners are at risk. However, changes did occur along the way as detailed below;

- i. Initially the project was broad, and the team planned to use/adopt the existing checklist for medium and large-scale mines developed by another ITP 308 group. However, the team decided to complement the existing EHPMP efforts and opportunities focusing on ASGM sub-sector instead. This includes financing, cooperation and a wide range of ASGM stakeholders engaged in the EHPMP project. This provided a relevance and increased efficiency and effectiveness in the implementation of the change projects as supported from EHPMP project.
- ii. After field inspection and drafting of the Joint Inspection checklist, the team also planned for a stakeholder's meeting to create awareness, improvements and enhance the Joint Inspection checklist validation. However, this was skipped due to time constraints and funding. Instead, the team opted to circulate the checklist to NEMC and the Mining Commission staff particularly to the Resident Mine Office for their inputs.
- iii. Testing the Joint Inspection checklist was also planned but could not be accomplished due to time constraints of the officers. However, the team is still



working on an opportunity to test the checklist and the stakeholders meeting will be arranged afterwards by the EHPMP project as part of institutionalization process.

2. TECHNICAL AND FINANCIAL SUPPORT

One of the biggest challenges was financial support to cover for costs such as field visits, testing the Joint Inspection checklist and calling stakeholder's meetings. This cost could not be covered by ITP and NEMC directly. However, the team managed to secure some funding from EHPMP to cover field visits for all four members of the team. This provided an opportunity for the checklist to be more focused and streamlined with the EHPMP and saved time in terms of negotiating access to fields or mines on our own financial source.

Apart from all team members being familiar with ASGM and environmental issues, the engagement, knowledge and experience on mining activities by Mr. Paul Kalokola was very valuable in progressing the project. Additionally, Mr.Kalokola was part of the EHPMP team and thus was the first to suggest to the team the component of preparing the Joint Inspection checklist for ASGM as part of EHPMP project and acted as our interlocutor.

Moreover, socio-economic inclusions and dynamics-Suzan Chawe; Water and aquatic information-Clarence Pelekamoyo and Ecological dimensions-Heavensophy Mfinanga. Inline to that, Eng.Dr.Befrina Igulu-EHPMP project coordinator provided technical guidance in ensuring the checklist align with the project requirements.

Key players in the development of the Joint inspection checklist are the Swedish International Development Agency (SIDA) which funded the ITP programme, Directorates in the National Environment Management Council (NEMC) and EHPMP project under the World Bank. Also, credible and valuable contributions are from the miners that allowed us to their facility and provided full cooperation during the field visit.

3. RESULTS AND ACCOMPLISHMENTS

Having successfully conducted field visit and drafted the checklist,the team is planning on testing the checklist following input from various stakeholders to determine issues such as acceptability, ease of use, applicability and clarity. This is important because it will benefit regulatory authorities and miners themselves in the following way;

- i. Opportunity for miners to learn about environmental issues and comply to legal requirements. Miners have already become aware of risks associated with their work and thus they are keen to be inspected as it will help them learn more about



- deficiencies and compliance measures, which in turn will improve their health and safety.
- ii. The checklist will enable NEMC to have a closer look at health and environmental challenges in ASGM and have tool for monitoring compliance. Additionally, members of the team gained knowledge and skills due to the Joint Inspection checklist. Team members were able to learn more about ASGM through literature and direct observation during site visits, enhance their writing analytical skills.
 - iii. Once validated and disseminated, EHMP will have met requirement in paragraph 5.1.1 and 6.1.1 of the Guidelines for Disposal of Mercury Related and Small-scale Gold Mining and Guideline for Import and Use of Mercury in Artisanal and Small-scale Gold Mining respectively.
 - iv. Sector Ministries such as the Mining Commission and GCLA will also benefit because the checklist provides an integrated approach to monitoring environmental compliance.

4. DELIVERABLES

The team developed a Joint Inspection checklist that would be used to evaluate environmental compliance among ASGM. The checklist is divided into several parts that cover themes such as chemicals management, health, social impacts and processing. It has been circulated to the Mining Commission and internally in NEMC for input before further steps.

The team anticipates that once in use, the checklist will play an important role in sustainable mine water and mine waste management in Tanzania as follows:

- i. Governance

The Joint Inspection checklist provides a tool for collaboration between institutions and local populations. This will help in monitoring compliance on various legal requirements. For instance, GCLA is responsible for monitoring the importation and use of mercury and other chemicals in mining while the Mining Commission is responsible for managing mine operations and NEMC oversees environmental issues. Integrating such issues in the checklist helps ensure sustainability and coordination.

- ii. Stakeholder engagement

The checklist is inclusive because it involved people who will be affected by the programme, that is artisanal and small-scale miners. The groups participated in some stages of its development, and it is expected that they will be involved during testing too. Apart from miners, sector ministries were also involved as they will be implementing it on the ground and using the results for evaluation.

- iii. Biodiversity



The team ensured that impacts on biodiversity and ecosystem were taken on board by including criteria such as presence of water bodies and disposal of chemicals which is important in conserving the environment.

4.1 Relevance to NEMC

While it is widely acknowledged that ASGM plays a significant role in poverty alleviation, the sector is also associated with environmental impacts like deforestation, land degradation, health hazards, mercury pollution, and noise and dust pollution (NEMC, 2022). NEMC, as the custodian of environmental management in mainland Tanzania is required to address such issues in order to avoid irreversible damage to the environment.

Additionally, this project helps the Tanzanian government, through NEMC, to follow its commitments on the international stage such as implementing the Minamata Convention on mercury as well as national commitments such the National Environmental Policy (NEP) 2021 and the Environmental Management Act, 2004.

The Joint Inspection checklist helps NEMC identify and monitor whether key environmental controls put in place to govern ASGM are in place or adhered to.

To attain the goal of developing Joint Inspection Checklist, the following key approaches to mine water and mine waste management were adhered to;

i. Professionalism

It is important for the team to work with people who have knowledge and skills of mining. This helps in understanding the project and providing necessary inputs. Although all team members had some knowledge regarding ASGM, we worked closely with the staff from the Mining Commission, specifically, Resident's Mine office such as a geologist in Singida for his expertise and input during development of the checklist. Additionally, team members worked as a team and divided work among each other to complete a task easily.

ii. Transparency

Awareness of the project was communicated to NEMC management during the early phases of checklist development so as to ensure transparency within NEMC. Additionally, participation by the miners was voluntary and they were clearly informed about what the project is about. Any plans and output were submitted to NEMC such as the field trip to Singida, and local participants were involved throughout the field visit and they were clearly informed. Upon completion of the draft Joint Inspection checklist, the team sent it to the staff at the Mining Commission for additional input and for information. Where payment could not be made for services, the team clearly informed all those involved and no services were provided without consent.

iii. Human Rights approach



The exercise was participatory as it included miners themselves so that they can be part of process and provide input. Miners participated voluntarily and no minors were involved in the exercise. Additionally, no names or biographical data was collected on participants.

5. FUTURE PROSPECTS

As the project continues to be developed, it is important for the team to continue engaging pertinent stakeholders to ensure sustainability. Since the checklist will be a government document, procedures for its approval need to be thorough for its sustainability. Thus, continual engagement of NEMC, GCLA and the Ministry of Mines is very important. At the institutional level, the team has managed to communicate the project with the Director General through the organisational focal person for ITP and to the Directors of Environmental and Social Impact Assessment (DESIA) and Director of Environmental Research and Management (DERM). Frequent communication on the progress is made with the Coordinator of EHMP (Eng. Dr. Befrina Igulu) as the checklist will be part of the output of that project.

The team is also working closely with the Mine Resident's office in Singida for any updates and progress. Additionally, miners will be engaged during the field test of the checklist as they are also keen to be educated regarding environmental compliance.

The checklist serves many organizations because of its contents. Key institutions outside NEMC are the Ministry of Mines, the Mining Commission, GCLA's and STAMICO. All are involved in ASGM; Ministry of Mining deals with policy, Mine Commission issues mining licenses, GCLA regulates chemical use and the State Mining Cooperation (STAMICO) to facilitate transformation of ASGM. Thus, this checklist can be a helpful tool in inspections for all stakeholders.

The aim of the project is to allow the checklist to be alive and usable by all stakeholders within and outside NEMC. Thus, so long as the project is under EHMP, the team anticipates that it will be finalized and disseminated eventually after all procedures have been followed. Additionally, the team also hopes that all members will continue to be involved in the project until it is finalized and ready for use.



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ITP 308 Mine water and Mine waste management material



Project Report (Final)



Project name:**Development of Guidelines for monitoring and management of Tailings and Tailing Storage Facility*****Country: Liberia******Team members:***

- *Targen P. Daye*
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Project summary

Mining supplies the raw materials we need for construction, energy, household products, and many more. The mining industry can also be an important employer, investor, and taxpayer contributing to local, regional, and national economies. However, mining and the waste left by mining can seriously affect the environment and the people depending on their livelihood.

Mining also has social impacts on local communities; displacement, loss of land and livelihoods, health hazards, and reduced water availability. Mineral processing activities resulting from mining can release environmental elements and negatively impact resources, soils, vegetables, and crops in some areas.

This project aims to develop Regulations / Guidelines for monitoring and managing tailings and Tailing Storage Facilities (TSFs) in Liberia. These guidelines / regulations serve as the primary source of information for determining the standards and procedures for the construction, management, and operation of different tailing storage facilities in our country. These regulations/guidelines shall apply to all tailing storage facilities within Liberia, covering their



design, construction, operation, monitoring, closure, and post-closure phases. These guidelines/regulations are to be used by” CLASS A” mining companies, actors/proponents, and government entities involved in approving TSFs constructions, operation, monitoring, and inspections to contain or minimize tailings and its associated effluents pollution.

As part of our change project implementation, Group 9 collaborated with members of Group 8 and filled in the gaps by conducting a field assessment, engaging with stakeholders to review the draft regulations, and developing guidelines for managing Tailings storage facilities.

The team engaged with stakeholders and local experts on TSF management who are currently working or consulting with mining companies in Liberia. The engagement provided our team (Group 9) with a broad knowledge of how large-scale mines in Liberia design, construct, and monitor their TSFs and the environmental challenges they encounter throughout the mine, especially in managing tailing storage facilities. The team, in addition, reviewed the draft regulations developed by Group 8, and other guidelines documents from the International Council on Mining and Metals (ICMM), prepared checklists, and developed the draft Guidelines for TSFs management.

This project was crucial to the Ministry of Mines and Energy, and the EPA because poorly managed tailings can pose significant environmental and health risks to communities, potentially impacting water sources, land quality, and public safety, making it essential for the ministry to ensure responsible mining practices and mitigate potential damage through strict regulations and oversight of tailings storage and disposal. Improperly managed tailings facilities can collapse, causing significant damage to infrastructure and potentially endangering nearby communities, negatively impacting public safety. Therefore, there are requirements for regular monitoring of tailings facilities to detect potential issues and report findings to authorities to minimize and mitigate these risks.

Learning and adaption

Our change project focuses on the development of a legal document that will serve as a national regulation /guideline for the management of TSFs in Liberia. Over the past ten months, several actions were taken to achieve this goal. These include conducting field assessments (visiting



storage facilities of some large-scale mining companies), and reviewing TSF regulations/guidelines from other countries; meeting with some experts and consultants in the country to harness their expertise on TSFs regulations and management. The team collaborated with past ITP 308 groups (i.e.7 & 8) to gather their views and experience in the change project. Due to these consultations and actions, the team assigned roles and responsibilities to its members to collect data and collaborate to develop the draft regulation/guidelines document.

Each member of the group was assigned a task based on his/her skills and respective role in his/her institution. A regular meeting was held twice monthly to review inputs and activities of the project. This was done to ensure that all assigned tasks were completed or reviewed and supported sufficiently.

The lack of funding and logistical support was a key challenge to the implementation of this project. Most of the time, we had to optimize existing resources and seek kind contributions from members to get this project moving.

The team Consulted relevant stakeholders including mining companies, local communities, regulatory agencies, environmental groups, and technical experts

Facilitating open communication and transparent decision-making processes

Incorporating community concerns and feedback into the development of regulations

Among the technical experts that contributed were environmental specialists, mining, civil engineers, and geologists from government and private institutions who gathered data and expert views on tailings storage management.

A thorough environmental impact assessment was conducted to understand the potential environmental impacts of a tailing's facility. There were interviews with community members from mining-affected areas.

Results and accomplishments

The Ministry of Mines and Energy, and the Environmental Protection Agency are the main institutions benefiting from the implementation of this project. Other beneficiaries are the mining companies, professional bodies related to TSFs, and mining and local authorities



The key deliverables from this project consist of a series of notes compiled from an extensive document review process carried out by the team, the development of an operational and risk assessment plan, data collection strategies, and the development of draft guidelines for the management of TSF in Liberia. These are presented in the form of technical policy documents

The project seeks to address challenges surrounding sustainable mine water and mine waste management in our country. It will create change within our organizations; by regularly monitoring tailing facilities and reporting to regulators, Environmental Impact Assessments (EIA) will keep checking the environmental effects of mining activities, including tailings management and Emergency Plans will be ready for potential tailings dam failures or other emergencies in Liberia.

It will also contribute by enhancing the technical capacities of staff at the Ministry of Mines & Energy (MME) and the Environmental Protection Agency of Liberia (EPA) working in departments directly involved with mine water and mine waste management through training and skill development

This project will strengthen capacity, enhance monitoring capabilities, and promote inter-agency collaboration and engagement to regulate TSFs, protect the environment, safeguard communities, and promote sustainable mining practices.

The ITP training course and topics on Introduction to Mining and Sustainability and Tailing Storage Facilities influenced the design and implementation of this project. These topics highlight how miners should conduct best practices in mining and alleviate environmental risks and impacts. Some key principles that were incorporated from the course relate to the participation of mining-affected communities in the mining process, including from conceptualization, design, operation, and decommissioning of TSFs. Another approach is the use of scientific principles in mine waste characterization. The project took into consideration the Geotechnical aspects of the design and construction of TSFs, ensuring safety guidelines and best practices in managing tailings and tailings storage facilities.



Future prospects

The project's accomplishments and progress are presented to key stakeholders in the mining sector through formal communication. For example, a draft copy of the guidelines was sent to large-scale mining companies that operate TSFs, non-governmental organizations, climate and conservation advocacy groups, and experts. The progress has always been communicated with group members, supervisors, and third parties who have demonstrated interest in the project, like citizens of mining-affected communities and mining companies. A series of Zoom meetings are held to communicate results and discuss future progress not only with team members, but also with our mentor, our supervisors, and some of the stakeholders we worked with on the project.

The Deputy Minister for Planning and Manpower Development who oversees programs within the Ministry of Mines & Energy, was briefed regularly through email, WhatsApp messages, and personal meetings. The same was done with the Manager for Compliance and Enforcement at the Environmental Protection Agency of Liberia, who supervises the program at the agency

There will be a continuous process that will involve extensive stakeholder engagement, technical expertise from various disciplines, and thorough consideration of factors like site-specific conditions, environmental impacts, safety standards, and mine closure plans; those that will be engaged will include: the mining industry representatives, environmental regulators, engineers, hydrogeologists, geotechnical experts, local communities, and legal advisors; ensuring the final regulations address design, construction, operation, monitoring, closure, and emergency response aspects of tailings facilities throughout their lifecycle. In this regard, funding is key in engaging stakeholders and acquiring logistics to take the project to the people, rather than invite them to the capital city. Engaging certain stakeholders in their area allows the project implementors to gain a first-hand understanding of the situation on the ground. As the government – through the two implementing institutions – may not have all the resources to continue the project, other stakeholders like mining companies, foreign embassies, and bilateral and multilateral partners could be engaged to solicit financial support for the project.

The administration of the MME and the EPA have made initial commitments to secure some funding for the continuation of the project, the team has developed a strategy to ensure the



continuation of the project by working with groups 7 and 8. The immediate action for continuation is to brief groups 7 and 8 about our final project deliverables after the regional conference and organize the first roundtable dialogue.

This roundtable will be the first in a series of stakeholder engagements to begin the validation of the document, while it is still being continually developed.

Supervisors nominated to oversee the project from both agencies and batches of past groups will continue to build on the efforts, including Group 9. The MME and the EPA will continue to implement the project and ensure that staff with the right skills and training in mine water and mine waste management continue to move the project forward. These institutions have people with the right expertise, capacities, and motivations to build on the effort of this project.

Team members from the Ministry of Mines and Energy and the Environmental Protection Agency of Liberia have demonstrated their willingness and commitment to this project. These institutions are the leading regulators in the mining sector in Liberia, and as such collaboration between them is almost natural, especially given the opportunities presented by this project. No one agency, independent of the other can develop this project or regulate TSFs in Liberia successfully without the other. Legal and regulatory instruments governing the establishment and functions of these institutions give each of them specific mandates in managing TSFs in Liberia. So collaboration will continue to be at the forefront between the agencies on this project. Staff members from the two institutions working on this project are part of a technical working group endorsed by the heads of both agencies. The group holds regular technical working sessions and engages stakeholders.

Members of Liberia's ITP Group 9 are committed to continue working with their colleagues on the project after their regional conference. The project is an ongoing initiative of the government – and as employees of institutions with mandates to regulate mines and protect the environment – where tailings, waste rock, and TSFs continue to pose serious and real danger to people and the environment due to poor management, continuing the project is paramount for our group. We will continue to give our support to the project by contributing our knowledge, experience, and expertise and to participate in-person, when necessary. We commit working with past Liberia ITP groups until the regulation and guideline of the management of tailing facility is fully developed.

