

Leading the way: An innovative community engagement approach for mine closure planning in Mongolia

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Abstract

Mongolia's vast mineral resources have made mining a significant contribution to its economy. The country's deeply rooted nomadic lifestyle and cultural heritage connected to the natural environment have led to public opposition against mining due to its negative effects on the environment and local communities. To address these concerns, the Mongolian government has implemented a range of regulations to promote community notification and engagement into mine development applications and planning.

The "Mongolia: Enhancing Resource Management through Institutional Transformation" (MERIT) is a public sector strengthening project funded by the Government of Canada. A Mine Closure Plan pilot was implemented with Erdenes Silver Resource LLC, a state-owned mining company, and the Mongolian Government at the Salkhit silver mine located in the Gobi desert steppe region. This pilot project marked an important milestone in Mongolia's efforts toward responsible resource management. It resulted in the first Mine Closure Plan to be developed in accordance with the country's 2019 mine closure regulation and incorporates international best practices and innovative approaches. By setting a standard for mine closure planning, this pilot provided a benchmark for other mining entities seeking to enhance their closure planning processes.

Through a coordinated multistakeholder engagement approach, the project ensured that all relevant stakeholders, including affected communities, were fully informed and actively involved in the mine closure planning process. The primary goal of the project was to foster a comprehensive understanding and knowledge of innovative mine closure strategies, promoting collaboration and shared insights among stakeholders. By attaining this objective, the project aimed to empower stakeholders with the essential knowledge and insights required to address mine closure challenges effectively and sustainably, thus ensuring a positive impact on both the environment and the communities for future endeavors.

A series of community-targeted, information-sharing, and educational activities were conducted to engage with different community groups, including herders, women, youth, and vulnerable members. The processes employed were gender-inclusive and transparent, allowing for the input of community members on how mine closure may impact their livelihoods, gender relations, and the roles of women in the community. This approach promoted equity and helped to avoid any negative impacts on their traditional lifestyle.

This paper explains how the pilot successfully demonstrated best-practice through a model of community consultations and engagement in the mining sector in Mongolia. By actively involving stakeholders and directly impacted communities in the planning process, the pilot aimed to foster community capacity building and to empower communities to take a more proactive role in the mine closure process. This approach recognizes that mine closure can have significant impacts on communities and that these impacts must be addressed through open and transparent communication with stakeholders. The lessons learned from this pilot might be beneficial for both government and industry that face similar challenges in closure planning.

Keywords: *stakeholder engagement, community education and capacity building, socio-economic transition, and gender equality*

1 Introduction

Mongolia, the world's most sparsely populated country is located in the heart of Central Asia. It is a landlocked country that shares borders with Russia to the north and China to the south.

Mongolia has been recognized by the International Monetary Fund (IMF) as a resource-rich developing country. The mining sector is a key driver of economic growth, contributing approximately 25% to Mongolia's Gross Domestic Product in 2022. It accounted for over 90% of the country's exports and attracted 77% of Foreign Direct Investment by the National Statistics Office of Mongolia (2021). However, the country's deep-rooted nomadic lifestyle and cultural heritage, intricately connected to the natural environment, have sparked significant opposition to mining due to its detrimental effects on both the environment and local communities. Mongolia strives to balance the economic advantages of mining and the preservation of its distinct cultural heritage and natural environment. The Mongolian Government is prioritizing the strengthening of mine closure governance as a means to foster sustainable mining practices and ensure the well-being of directly impacted communities.

Mine closure planning is a new concept in Mongolia. The adoption of comprehensive closure planning in the Mongolian mining sector represents a new approach, particularly for small and mid-sized mines. However, numerous challenges arise due to the current capacity and capability constraints surrounding closure planning in Mongolia. Nonetheless, there are promising opportunities to address these challenges and drive positive change. These include enhancing policy instruments, upgrading the skills of professionals conducting closure planning, developing comprehensive guidance documents, and fostering social responsibility within the mining sector (Poscente 2023, p. 10).

Recognizing the relatively recent emergence of mine closure planning in Mongolia, it is crucial to acknowledge the enduring impacts on the community even after a mine ceases operations. The adverse socio-economic consequences can have long-lasting effects on the traditional way of life, livelihoods, and overall quality of life of directly impacted communities. It is essential to consider the unique vulnerabilities and dependencies of herding communities on the natural resources and ecosystem services provided by the land affected by mining activities. Addressing these challenges and mitigating the negative effects on herders' well-being is a priority in comprehensive closure planning efforts. By incorporating their perspectives, needs, and traditional knowledge into the planning process, solutions can be developed to support and protect the herding communities during and after mine closure.

1.1 Mine closure planning pilot project

The 'Mongolia: Enhancing Resource Management through Institutional Transformation' (MERIT) project is funded by Global Affairs Canada, and implemented by Catalyze+, a Canadian Non-Governmental Organization. MERIT partnered with the Ministry of Mining and Heavy Industry (MMHI), Ministry of Environment and Tourism (MET), and Erdenes Silver Resources LLC (ESR), a state-owned company, to develop a mine closure plan for the Salkhit Silver mine.

The Mine Closure Plan (MCP) Pilot, developed through this partnership, was designed to set an achievable benchmark within the Mongolian mining industry. The pilot's objectives focused on three key areas: i) Formulating a comprehensive closure plan for the Salkhit mine, ii) Building the capacity of the multi-disciplinary planning team and stakeholders, and iii) Strengthening community engagement and collaboration. A greater emphasis was placed on community engagement, actively involving and collaborating with the local community to ensure an inclusive closure planning process. The primary approach used in the MCP plan was capacity-building, intending to equip directly impacted communities with the necessary information and skills to participate in decision-making. While industry expectations may differ, the knowledge gained through the pilot remains valuable and applicable to similar contexts.

The project’s multi-disciplinary planning team comprised a diverse group of professionals, including technical consultants, ESR technical representatives, MERIT staff, and Canadian consultants. Their collective expertise and experience played a crucial role in formulating a comprehensive closure plan for the Salkhit mine, building the capacity of stakeholders, and engaging the local community throughout the project's duration.

Salkhit Mine is a medium-sized silver and gold mine with an expected lifespan of 5-10 years (Data Resource LLC 2021, p. 17-18). The mine is situated in the arid region of Gobi-desert, specifically in Gurvansaikhan soum of Dundgobi province. This location is approximately 380 km to the south of Ulaanbaatar, the capital city of Mongolia. The mine lease covers an area of 2,888 hectares. The Salkhit mine has proven reserves of 3.2 million tons as of December 2021, grading 300 grams of silver and 0.31 grams of gold per ton (Data Resource LLC 2021, p. 11). The mining operation comprises an open-pit mine and a floatation concentration plant. The milling capacity of the mining complex is 600,000 tons per annum (tpa). The mine employs approximately 250 employees in a single shift.

The mine closure plan holds significant importance as it was the first plan created and to be submitted for approval under the regulation “Rehabilitation and Closure of Mines and Concentration Plants (2019)” issued jointly by MMHI and MET (2019). By incorporating best practices and robust guidelines, this plan will serve as a guiding reference for ensuring responsible and sustainable mine closures across the mining sector in Mongolia. The two primary goals and objectives of the Salkhit Mine Closure Plan (MCP) pilot are shown in Table 1 (MERIT 2023).

Table 1 Goals and objectives of the mine closure plan pilot

Goal 1	Goal 2
Write a mine closure plan for Salkhit Silver Mine, operated by Erdenes Silver Resources LLC, a state-owned mine	Enhance knowledge and competencies of planning team members, stakeholders, and local citizens
OBJECTIVES	
1.1 Sets innovative standards, incorporating international best practices 1.2 Includes gender equality principles 1.3 Be realistic and economically achievable 1.4 Supports socio-economic transition after mine closure 1.5 Incorporates climate change adaptation strategies 1.6 Supports improvement of laws and regulations guiding mine closure	2.1 Implement learning opportunities, fulfilling team member and stakeholder needs 2.2 Improve knowledge of international best practices, new techniques, and technologies 2.3 Inform local citizens, herders, and community representatives, improving their capability to meaningfully engage

The pilot project was initiated in September 2021 and successfully concluded in June 2023, reaching specific milestones along the way, as shown in Table 2.

Table 2 Mine closure plan milestones

No	Task name	2021		2022			2023	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2
1.	Data gathering and analysis	█						
2.	Risk assessment		█	█				
3.	Closure goals and objectives development		█	█	█			
4.	Writing the closure plan			█	█	█	█	
5.	Capacity building		█	█	█			
6.	Closure cost estimates					█	█	
7.	Community engagement		█	█	█	█	█	█

This paper aims to introduce community engagement approaches and present the results as a solid foundation for future closure planning projects. It advocates for a culture of inclusive community engagement that respects local traditions, values diverse perspective, and fosters meaningful collaboration.

2 Methodology

Stakeholder engagement in the Salkhit mine closure plan pilot project was a crucial component that aligned with international best practices and is mandated by Mongolian jurisdictions. The stakeholder engagement plan and stakeholder map, which were developed for the pilot project, served as essential documents to identify and facilitate the meaningful involvement of both key stakeholders who are directly impacted by decisions and stakeholders who have an interest but are not directly impacted. Local government representatives, community leaders, and citizens in directly impacted communities were members of the key stakeholder groups. Other stakeholders included representatives from national and local government bodies, local communities, non-government organizations, as well as the company's decision-makers and other interested parties. This coordinated approach aimed to address the interests and concerns of all stakeholders, promoting a shared understanding and reaching a consensus on the key concepts and strategies for mine closure.

The objectives of stakeholder engagement for the MCP were as follows (MERIT 2023, p. 89):

1. To inform stakeholders of international best practices in mine closure.
2. To engage key stakeholders in the closure goals and objectives development process, critical to developing the overall closure vision for the Salkhit mine.
3. To inform key stakeholders of the mine closure plan development progress
4. To inform and engage affected communities on the mine closure plan, soliciting their feedback on the planning process, and addressing that feedback wherever feasible in the final mine closure plan.
5. To inform regulatory bodies on priorities and provide recommendations and guidance on closure-related policy issues and regulatory requirements.

The methods used for stakeholder engagement and community participation included a variety of approaches. These methods included: one-on-one engagement, an “Open House” information-sharing event, a Salkhit mine-site tour, focus group discussion (FGD), an opinion survey, group presentations, facilitated discussion, mentorship, and capacity-building training (Noble-Pattinson & Poscente 2022, p. 8). Moreover, the project generated various communication products aimed at enhancing public awareness and educating the community about the crucial aspects of mine closure. By employing these methods, the project sought to create a comprehensive framework for community participation, ensuring that community

members had multiple avenues to contribute, share their perspectives, and be actively involved in the closure planning processes.

MERIT maintained regular engagement with key stakeholders, including national and local government decision-makers, Erdenes Mongol LLC (ESR's parent company), and ESR LLC's executives, throughout the project's progress. A total of 13 key stakeholders meetings, seven-goal and objectives development work sessions, three community information-sharing sessions, two community training sessions, and three rounds of opinion/feedback surveys were organized. Overall, these engagement activities aimed to create a participatory and inclusive environment where stakeholders could contribute their perspectives, provide feedback, and actively participate in shaping the project (MERIT 2017, p.7). The insights gained from these activities helped in developing closure plan strategies. Stakeholders highly valued the stakeholder and community engagement process as it allowed interested parties to share their suggestions and inputs.

3 Background data

The Salkhit silver and gold mine is located in the Province of Dundgobi, specifically in the Gobi Desert region. The Gobi Desert is a vast desert and grassland region located in southern Mongolia. It is characterized as a large, cold desert and is considered the sixth-largest desert in the world. The region's unique landscape and ecosystem contribute to its significance and attract attention from various sectors, including tourism and scientific research.

Dundgobi is the second least populated province in Mongolia with a population density of 0.64 inhabitants per square kilometer (National Statistics Office of Mongolia 2021). Despite its relatively low population, it is home to various economic activities, including animal husbandry, mining, and tourism, which contribute to the local economy. Mining activities play a significant role in the economic sector of the province.

Dundgobi had a population of 47,199 people in late 2022. The population consisted of 23,482 women and girls (49.8%) and 23,717 men and boys (50.2%). The population of Dundgobi Province has a relatively young age structure. Children aged 0-14 make up 30.3% of the population, indicating a significant youth population. The majority, 64.4%, falls within the age range of 15-64, representing the working-age population. The elderly population aged 65 and older comprises 5.3% of the total population (National Statistics Office of Mongolia 2021, p. 39-76).

Recognizing the limited interaction between the company and the local community, the pilot project demonstrated effective practices in maintaining consistent engagement with the local government and communities, placing a particular emphasis on community engagement, consultation, and regular communication. Specific capacity challenges were:

- Local stakeholders and community members lacked knowledge about the mine life cycle, the purpose of closure planning, and the importance of conducting MC planning early in the mine life cycle.
- Citizens did not know whom to speak to within the company, their contact information, or the process for engagement.
- Community members were more interested in discussing current operational concerns they had about the mine rather than mine closure topics.
- Regular engagement sessions were not organized by the mining company, prior to the MCP process (MERIT 2023).

3.1 Community engagement activities

Throughout the project, three community sessions were organized to communicate the significance of mine closure to the affected stakeholders and communities. These sessions served to inform local government representatives, community leaders, and citizens about the MCP and gather their valuable feedback, which

would then be incorporated into the plan while considering financial and operational constraints (Figure 1). Furthermore, the community sessions aimed to provide the citizens with comprehensive information on the MCP, ensuring transparency and awareness regarding the proposed actions and strategies. Each engagement session was held in different locations. A core group of key stakeholders participated in all three sessions while new participants from the specific locations joined the session.

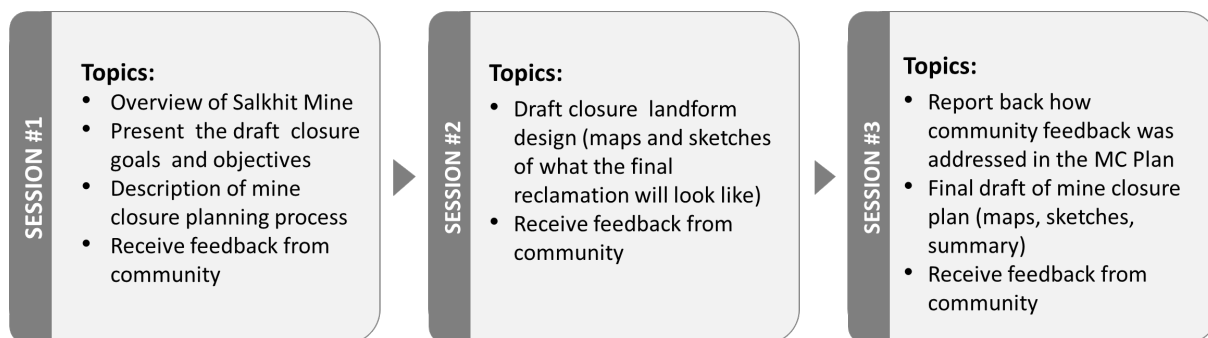


Figure 1 Three sessions for community engagement and consultation.

3.1.1 Open house event—community session #1

The first of three community consultations was held in Gurvansaikhan, the district closest to the mine site, in September 2022 to inform and collect feedback from local government officials, community members, and nomadic herders on the Salkhit Mine Closure Plan Pilot Project. The open house session allowed more than 560 local citizens, herders, public officials, and business owners to participate and receive information on mine closure and provide their feedback. Seventy percent of the participants were women. They received information on mine closure, built their understanding of the issues, and provided feedback on the mine closure priorities.

The mine closure planning team met community members and explained their roles, answered their questions, and had an open discussion during the event. Community members and herders were provided with the opportunity to have a better understanding of the closure plan and its importance by visiting the booths of national consultants and having conversations with them. Information was provided on the following topics: environment and reclamation, water resources management, socio-economics and gender, closure cost estimation, laws and regulations, and climate change.

During the event, four group discussions were organized among different groups including women, business owners, affected community representatives, public servants, and the community members who shared their thoughts on the Salkhit Mine Closure Plan. The group discussions were facilitated by the ESR team, the MERIT team, national consultants, and provincial-level government representatives.

Moreover, citizens shared their feedback by participating in group discussions, meeting the planning team members, and by filling out feedback forms. This feedback was summarized, analyzed, and provided to the multidisciplinary closure planning team of Mongolian consultants, to consider in the preparation of the landform designs and closure plan (MERIT 2017, p. 11). Sixty-two percent of a total of people (141) who filled out the feedback form, responded that they have received sufficient information on closure planning. The summary of feedback, demonstrating the themes of most concern and interest from the local community on the mine closure plan is shown in Figure 2.

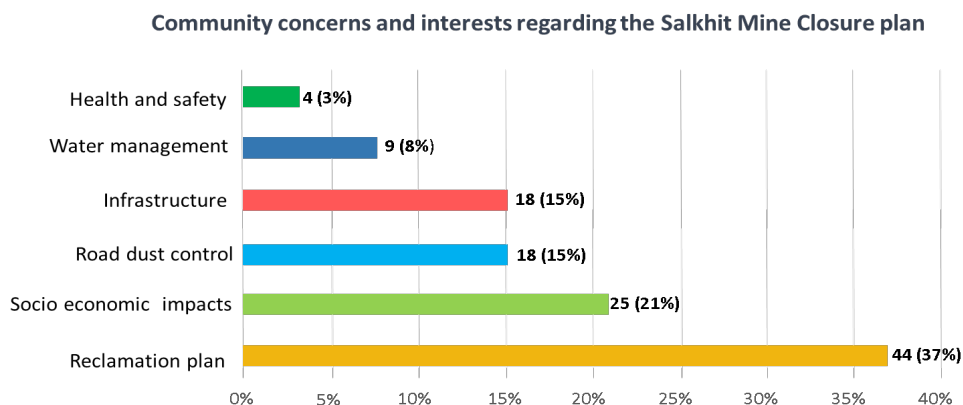


Figure 2 The summary of feedback from the local community

The table illustrates the areas of most concern indicated by community members. One challenge was that during the initial session, community members exhibited a tendency to blend closure-related concerns with ongoing operational impacts.

Additional Engagement Approaches: The primary mine-affected community members are herders who pursue a nomadic lifestyle; gathering them in the center of the district for an open house event was challenging because they travel with their herds. Respecting their unique way of life, alternative approaches such as incentives and flexible drop-in sessions were organized to encourage and leverage their participation in open house events. By implementing these practices, the participation of nomadic herders was enhanced and their feedback was heard, documented, and considered.

1. **Public services:** Provincial-level public organizations such as the Hospital and Department of State Registration played a valuable role by offering in-kind contributions during the event. They provided health diagnosis and state registration services to the citizens of Gurvansaikhan district for two days. This approach was particularly beneficial as it addressed the limited access to services for herders living in remote areas.
2. **Trade fair:** A well-known Mongolian brand, "Darkhan Nekhii LLC," showcased its products in the secondary hall of the event. Additionally, local herders were given the opportunity to exhibit and sell their dairy and hand-made products. This approach not only promoted the local small and medium-sized enterprises (SMEs) but also added value to the event.
3. **Kids' Corner:** In line with the stakeholder engagement strategy of the project, which emphasized equal participation of women and men, a dedicated kids' corner was arranged. This facilitated the attendance of female herders at the event, as they were assured that their young children would be taken care of. The sub-provincial administrative unit's nursery team provided support by assigning a teacher as a caregiver for two days, and a children's corner was set up with toys and art supplies.

These additional engagement approaches helped to foster inclusivity, increased participation and provided valuable services and opportunities for citizens during the event (Noble-Pattinson & Poscente 2022).

3.1.2 Community visit to the Salkhit Mine site—community session #2

The second round of the community engagement session for the Salkhit MCP was successfully held on January 23, 2023, at the Salkhit mine site operated by ESR LLC.

A total of 75 (55% female, 45% male) people, including local herders, community members, Citizen Representative Council (District Parliament) members, and government officials of the Gurvansaikhan district participated in the site visit. Participants were provided with updates on Salkhit mine closure landform

designs, and reclamation strategies on soil management and revegetation. Stakeholders also learned about the results of the compiled community feedback from the previous Open-House event (#1) and how it was incorporated into the designs or considered for future closure plans.

This information sharing and discussion helped community members to understand the importance of designing mining landforms as an essential component of successful reclamation. The landform designs presented during the meeting presented a shared vision for the mining company and community members, including that the reclaimed landforms and landscapes remain sustainable long after the mine has closed.

The herders and community members greatly appreciated the mine visit. Informed communities are shown to have more active engagement and participation in closure planning. Building a good relationship between the directly impacted communities with ESR LLC supports the company in effectively meeting its reclamation commitments. The Table 3 provided below offers a summary of the diverse themes of interest and activities that were visually represented, reflecting the outcomes of engaging discussions with community members:

Table 3 The summary of feedback from the local community during the site visit

Water management	Infrastructure	Reclamation	Health and Safety	Social and economic support and land use
<ul style="list-style-type: none"> • Repurpose some of supply wells to serve the needs of herders • Construct a water reservoir and implement measures for groundwater restoration 	<ul style="list-style-type: none"> • Establish a tannery factory • Keep the power supply system • Establish an administrative center 	<ul style="list-style-type: none"> • Use native plants as reclamation species in site restoration • Incorporate medicinal plants into reclamation species selection for their valuable properties • Ensure effective topsoil management practices are implemented. • Introduce fodder plants for livestock (provender) through strategic planting initiatives 	<ul style="list-style-type: none"> • Establish a green belt around the open pit lake • Ensure safety and minimize the risk of contamination when creating an open pit lake. • Ensure the safety for human and animals (forage and water quality) 	<ul style="list-style-type: none"> • Provide livelihood promotion program for sub-district herders and residents. • Establish an aid program for low-income families. • Provide livelihood income generation support

Moreover, as part of the community engagement, ESR LLC and the MERIT project announced an essay and drawing competition for Gurvansaikhan District secondary school students under the theme of “Salkhit mine closure in my imagination.” The school kids were asked to put their imagination into painting and essay papers describing their vision for the reclaimed mine, including what socio-economic benefits they would like after closure.

3.1.3 Open house event—community engagement session #3

The third community engagement session took place in Mandalgobi City, the capital of Dundgovi Province, on June 13 and 14, 2023. The main purpose of this session was to inform the residents of the province about the Salkhit MCP.

During the two-day event, a total of 150 (68% female, 22% male) registered citizens received individualized information from each consultant team. Overall, the event attracted approximately 1,200 citizens (with some overlap) over the course of the two days. Attendees had the opportunity to access publicly presented information, including MCP presentations and videos.

The primary objective of the event was to present the draft closure plan and provide a detailed account of how the community feedback was incorporated into the plan's development. This approach aimed to empower citizens to oversee the implementation of closure management for the Salkhit mine, thereby playing a vital role in enforcing relevant laws and regulations.

During the event, information booths were set up, where the planning team consultants provided comprehensive information about the mine closure plan to the citizens. These booths served as a platform for sharing insights on various topics, including the ecological rehabilitation plan for the Salkhit mine, the socio-economic transition plan, the climate change adaptation plan, and cost estimates for closure and rehabilitation. The average duration of each meeting ranged from 15 to 30 minutes, allowing for a meaningful and informative exchange of information.

Additionally, the team actively engaged in open discussions with the communities, addressing their queries and concerns. After an in-depth conversation with the community, who have shared their feedback on the improvement of community engagement and cooperation with Salkhit Mine as below (Figure 3).

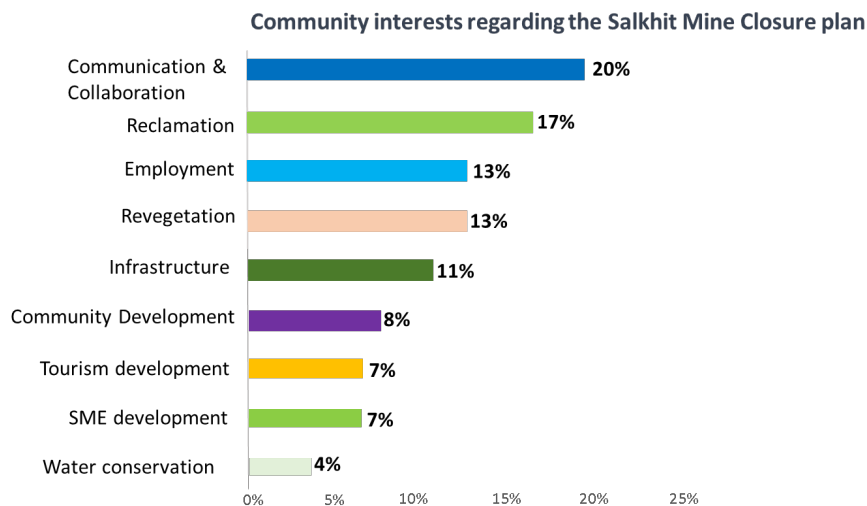


Figure 3 Summary of feedback from the third community session

Additional Engagement Approaches: The event incorporated various organizations setting up additional booths, enhancing the overall experience and providing diverse offerings to the attendees. These include:

1. **Women's Focus Group Discussion:** The discussion centered around promoting gender equality in socio-economic transition at closure and aimed to address the specific challenges and opportunities faced by women during periods of significant social and economic change. The FGD provided a platform for women to come together, share their experiences, gain insights, and engage in meaningful discussions that nurture personal growth and contribute to social progress within their community.
2. **Public Service:** State Registration Service and E-Mongolia and Digital Transformation actively participated in the event, allowing citizens to access essential public services. Their presence underscored a commitment to serving the community's needs and fostering public welfare.
3. **Tree Planting Campaign:** The Department of Environment provided valuable expertise on cultivating and maintaining trees in the Gobi desert area. Their guidance aimed to promote sustainable environmental practices and address the challenges associated with desertification, thereby contributing to long-term ecological sustainability.
4. **The Natural Reserve Protected Area Exhibition:** This exhibition held relevance due to the reserve's proximity (20 km) to the Salkhit mine, which impacts its ecosystem. It allowed the Protected Area

Administration to educate the public about their conservation work, highlighting efforts to safeguard local flora, fauna, and endangered species.

5. Local Handicrafts: A dedicated booth displayed and sold locally crafted artisanal products, serving as a platform to present the region's rich cultural heritage. This initiative supported local artisans, preserving traditional craftsmanship and enhancing the community's economic and cultural vitality.
6. Health Diagnosis: ESR LLC offered basic health check-ups at their booth, showcasing their commitment to community well-being. This provision of healthcare services provided attendees with accessible opportunities to promote overall health awareness.

To further promote the event and engage with the community, several activities were organized:

1. Open Mic Competition: An evening singing competition attracted over 40 participants, providing a platform for aspiring singers to showcase their talent. This engaging activity added vibrancy to the event and created a sense of community participation.
2. Open Air Cinema: An open air cinema was set up, featuring screenings of Mine Closure Plan videos created by MERIT before and after the main movie presentation. This cinematic experience not only entertained attendees but also disseminated important information, raising awareness on relevant subjects and encouraging dialogue.
3. Kids' Play Corner: ESR LLC thoughtfully arranged complimentary children's play activities in an open-air area, providing an enjoyable space for young attendees. This provision not only catered to the children's amusement but also facilitated parents' interaction with consultants without concerns for their children's well-being. This family-friendly approach fostered engagement and strengthened community bonds.

These comprehensive additions and activities significantly enriched the community engagement session, offering a diverse range of services, interactive experiences, and informative discussions.

3.2 Importance of the community information sharing

The community engagement sessions were very successful – attracting many directly impacted community members and herders, who were very appreciative of the effort MERIT, ESR and the government authorities had put into developing the content and the public service offerings.

The capacity building integrated into the community engagement sessions provided an example of the level of effort mining companies must undertake to improve the capacity of communities to meaningfully engage in mine closure planning. In-person meetings with affected communities and stakeholders are critical in building productive relationships between mining companies and the communities in which they operate. MERIT's facilitation of these ESR events helped to develop goodwill towards ESR LLC.

Based on the feedback from the community members, the quality and clarity of the materials presented increased between the first and second sessions. It is important to develop and present basic, understandable materials and to show communities how their feedback has been incorporated into the MCP so community members feel empowered and respected.

The third and final session included more one-on-one opportunities for the attendees to speak with MERIT staff, ESR staff, and the consulting team members. This allowed for more detailed discussions to be held with concerned citizens, and for more citizens to feel heard during these meetings.

4 Results

Community participation in mine closure planning plays a crucial role in ensuring an inclusive, transparent process that addresses the concerns and interests of the affected communities. The Pilot project employed four levels of community participation (Figure 4):

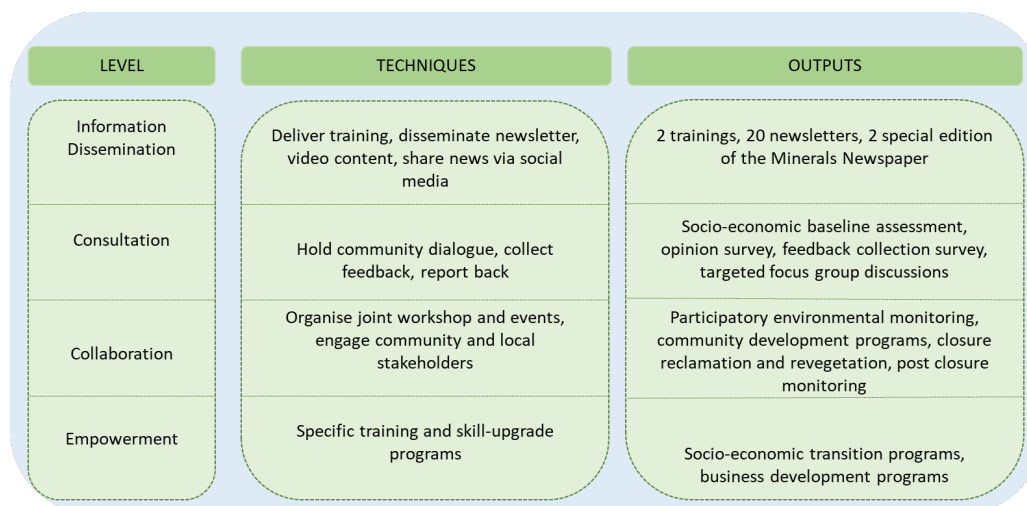


Figure 4 Four levels of community participation

1. Information Dissemination. The goal was to ensure that the community was well-informed and had a clear understanding of the mine closure planning process and strategies. Community access to the provided educational and communication products is effectively facilitated.
 - a. Monthly newsletters. A series of 20 monthly newsletters were published from October 2021 to June 2023. These newsletters were available in Mongolian and English, reaching a wider audience. The newsletters were distributed through both hard copy and electronic means. The newsletters served as a valuable communication tool, offering project progress updates, technical information, and detailed explanations of project activities. Furthermore, these materials provided participants with informative technical and policy briefs on broader topics pertinent to the project.
 - b. Targeted Training Sessions. Two rounds of targeted training sessions were conducted as part of the pilot project. These sessions were designed to educate the community members about various aspects of mine closure planning, such as environmental considerations, reclamation processes, and potential socio-economic impacts. The training sessions aimed to enhance the community's understanding of the closure plans and equip them with relevant knowledge.
 - c. Special Edition of Mongolian Minerals Overview Newspaper. Two rounds of publication contained comprehensive information about the closure objectives, key strategies, and anticipated outcomes, as well as the closure process, environmental considerations, community benefits, and post-closure opportunities. By distributing physical copies of the newspaper, the project ensured that herders who lacked internet access could still receive important information about the mine closure plan.
 - d. Five different educational videos, including International Council on Mining and Metals video material (ICMM 2021) and MERIT-produced promotional videos. These videos have covered various topics related to responsible mining practices, community engagement, and post-

closure activities. By leveraging educational videos, the project aimed to provide visual and interactive content to support the community's understanding of the closure planning.

- e. Visual aid printed materials such as stands, display boards, one-pager, and brochures. Stands or display boards set up at project information booths and various meetings, covering key closure topics such as environment and reclamation, water resources, socio-economics and gender, mine closure cost estimation, laws and regulations, and climate change. In addition, brochures were distributed that provide a summary of the closure strategies on certain topics such as landform designing, topsoil management, and revegetation.
 - f. Open source and social media. The MERIT Knowledge Portal (<http://portal.merit.mn/>) and corresponding blog (<https://www.facebook.com/MERIT.mn>; [LinkedIn/MERIT](#)) played a vital role in disseminating information about stakeholder sessions, their topics, and reporting outcomes to the public. These blogs serve as a comprehensive platform for the mine closure stakeholders.
2. Consultation. The pilot project sought input from the community and stakeholders on the closure vision, goals, landform design, revegetation, post-closure monitoring framework, and socio-economic transition. Community members were given the opportunity to express their concerns, opinions, and suggestions through various platforms, namely: open house meetings, mine site visit, feedback surveys (opinion box), FGD meetings, and other interactive platforms. The Planning team took into account the feedback received during the consultation process while finalizing the closure plans.
 3. Collaboration. ESR stated their commitment to involving the community and local stakeholders in decision-making processes concerning socio-economic transition, reclamation performance, and participatory closure monitoring. For the closure reclamation, the company has made a commitment to engage local nurseries and community groups in reclamation efforts, including tasks such as seed collection, nursery establishment, and trial reclamation and revegetation monitoring. This collaborative approach involves also joint problem-solving, with company representatives and community members now work together to choose reclamation species that will yield the best outcomes. The selected species will be both wind-resistant and drought-tolerant, taking into account climate change and desertification challenges.

Furthermore, the company expressed its commitment to collaborate with the community in developing a comprehensive socio-economic transition program. This will involve the establishment of a working group and committee, including various community groups such as herders, business owners, and service providers.

4. Empowerment. Throughout the development of the Salkhit mine closure plan, the community actively participated in decision-making at all stages, including planning, implementation, and monitoring. The mining company collaborated closely with local communities to identify and create viable alternative economic opportunities. The company intends to provide specific training and skill-upgrade programs to support post-closure income generation and business ventures. This approach empowers the community to take ownership of the closure process, respecting their rights, interests, and aspirations while integrating them into the closure plans.

Overall, effective community participation in mine closure planning promotes social acceptance, fosters long-term relationships, and contributes to sustainable development in the affected areas.

5 Lessons learned

The experience of collaborating with nomadic herders, as an affected community, underscores the significance of culturally sensitive and adaptive approaches to community engagement with diverse and

distinct communities. Specific engagement strategies were tailored to accommodate their unique lifestyle and to build trust and understanding. Involving herders in decision-making processes, acknowledging their traditional knowledge, and incorporating it into the closure planning has ensured sustainable outcomes that will benefit both the community and the environment. Through the community engagement approach employed for the pilot project, several valuable lessons have been learned, and the key takeaways include:

- **Cultivate Respectful Communication:** Culturally sensitive engagement approaches demonstrated respectful and inclusive communication towards the affected community. Acknowledging and valuing the herders' traditional knowledge and practices was essential in building strong partnerships between the company and community.
- **Empowerment through Inclusivity:** The active involvement of herders in decision-making processes could empower the community members, making them the key stakeholder in the closure planning. This inclusivity encourages shared responsibility and ownership, supporting the future update and implementation of the closure plan, which is the responsibility of ESR company.
- **Proven Success of Alternate Activities:** The integration of 'alternate activities' into community engagement has been highly successful in attracting and engaging local herders. These activities played a crucial role in ensuring the community participation, in turn, contributed significantly to the pilot project's success.
- **Learning Opportunity:** By diversifying the locations, the project team observed variations in community dynamics and preferences, allowing them to better understand the diversity within the affected community. This piloted experience underscored the distinct priorities between affected communities and wider residents of the province. While affected communities placed high importance on ecological reclamation, provincial residents showed greater interest in the economic opportunities associated with mine closure.
- **Value of Open Communication and Active Involvement:** Reflecting on the state-owned company's past poor engagement with the community, the multi-disciplinary planning team recognized the significance of open communication and active involvement. This newfound approach encouraged constructive dialogue, promoting mutual understanding between the company and community and ultimately leading to more effective collaboration.
- **Additional Measures by the Mining Company:** In response to the socio-economic risks associated with closure, the mining company shall take proactive steps (Poscente M. N.-P., 2023, p. 10). These include implementing improved consultation mechanism and a community business development plan. These initiatives will lead to the mining company's commitment to responsible practices, ensuring a smooth and socially responsible closure process that benefits the community in the long term.
- **Organizing community engagement events in three locations yielded mixed results.** Positively, it enabled key stakeholders, including affected communities, to witness the Salkhit Mine Site and understand the planning team's perspective. It also informed indirectly impacted stakeholders and provided a chance to comprehend closure planning strategies. However, the drawback was the absence of many of the directly affected herders at the final event in the provincial capital, where the draft closure plan was presented, and stakeholder feedback incorporation was explained.

These invaluable lessons serve as a solid foundation for future projects, promoting a culture of inclusive community engagement that respects local traditions, values diverse perspectives, and fosters meaningful collaboration for the greater benefit of affected communities.

6 Conclusion

The closure planning and community engagement efforts for the Salkhit silver and gold mine prioritized capacity building, setting it apart from the approach typically adopted by mining companies. This primary focus led to a distinct stakeholder engagement approach, actively empowering directly impacted

communities through extensive engagement and educational initiatives. The pilot project also emphasized a comprehensive closure plan and collaborated extensively with government stakeholders. This dedication showcased its commitment to setting a benchmark for sustainable and socially responsible mine closure planning within the mining industry in Mongolia.

The design and implementation of the community engagement component in the MCP pilot project emphasized the importance to be adaptive and to accommodate the needs of local citizens, reflecting their culture and traditions. This fostered high levels of participation, and social acceptance, developed rapport, and strengthened relationships with local stakeholders and affected community members and herders. The pilot project showcased the effectiveness of community-targeted information-sharing and educational activities, engaging diverse community groups and employing gender-inclusive and transparent processes. Through various communication channels and mediums, community members were provided with accessible information, enabling them to participate effectively in closure planning. The integration of a gender-based lens in closure strategies and the inclusion of vulnerable members facilitated the further promotion of equity and mitigated negative impacts on traditional lifestyles.

The capacity building integrated into the community engagement sessions has led to meaningful discussions and fostered a sense of ownership and shared commitment to shaping future updates and implementation of the closure plan. The pilot project has fostered the four levels of community participation, ensuring that different community groups were well-informed, engaged, and empowered to collaborate in decision-making. Local government representatives and community members have been better equipped to collaborate with ESR LLC. An agreement has been established with the company to involve and hire community members for activities such as reclamation, land rehabilitation, and environmental monitoring. This initiative is anticipated to lead to greater community participation and a more robust collaborative strategy for managing the closure process.

The state-owned mining company, ESR, acknowledged its role in advancing regional development objectives and places a high priority on implementing a socio-economic transition program. This strategy will mitigate the effects of mine closure on the community, employees, and the environment. Moreover, ESR now emphasizes the importance of engaging in negotiations and consultations with local government and the community. This collaborative effort is focused on developing and implementing a comprehensive socio-economic transition plan. The ongoing discussions and negotiations highlight the level of dedication required from ESR LLC, local government, and affected community to effectively address the multifaceted challenges associated with mine closures.

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