Land, Environment and Development Project
LEGAL ASSISTANCE CENTRE
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Lithium Mining in Namibia – Dâures Constituency, Erongo Region

An Overview of the Legal Position and Effects of Lithium Mining on the Environment and Local Communities

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Introduction

Mining is Namibia's leading economic sector, accounting for about 10% of the country's GDP every year, and for over 50% of its export revenues. Diamond and uranium oxide mining have been the leading subsectors, and lithium mining has been gaining traction in recent years, due to lithium's potential in the sphere of renewable energy technologies. Lithium-ion batteries currently have the highest energy density, the longest life cycle and the widest temperature range tolerance, and their self-discharge rates are the lowest among all varieties of rechargeable batteries. Lithium is also used in glass, lubricants and air purifiers. Lithium (from the Greek word *lithos*, meaning 'stone') is a chemical element, which in elemental form presents as a soft silvery-white alkali metal. It is mostly found in deposits of hard rock (pegmatites), this being the case in Namibia, and in brine deposits. After the rocks containing lithium have been extracted from the mine, the minerals containing the lithium are extracted from the rocks, and then the lithium itself is isolated.[1]

Effects on the environment and local communities

Lithium mining can have various effects on the environment and the communities living in the vicinity of the mine. Noted **positive effects** include the creation of **infrastructure** such as roads and shopping centres, **facilities** such as banks and **services** such as educational programmes. However, there are several **risks** for the environment and population.

Lithium mines use explosives as well as drilling machines to break up the rock into smaller pieces for extraction. The mining results in volumes of **waste** consisting of dust and small pieces of rock. If these pieces are dumped near the drilling site, they cover the soil and alter its natural composition. The waste might also contain toxins from the mining process, which pollute the soil, destroy the habitat of plants and make the land dangerous to use for farming. Moreover, the extraction causes a multitude of **emissions**. The drilling, detonation of explosives and use of production machinery and transportation vehicles cause a lot of noise pollution that disturbs animals and people living close by, especially at night. The machinery and vehicles used in hard rock mining also cause a high amount of carbon emissions.[2] On average, 9 tons of carbon dioxide (CO_2) are emitted for every tonne of refined lithium carbonate produced. Furthermore, the mining endangers the **water supply** in the mining area. Although less water is used in hard rock mining than in brine mining, the overall process ultimately increases water consumption in the area around the mine. This is because the shafts extend to a depth below groundwater level, so the water has to be constantly pumped out of the shaft to keep it from flooding, and the collected water is redirected to local communities, which disturbs the natural circulation of the water, therefore the environment has to be rebalanced to ensure that the fauna and flora still have access to water, hence additional irrigation is needed. Even when the water is redistributed successfully, there is always a degree of **contamination** from oil and other toxic substances used in the mining process. These effects lead to the **destruction of habitats and biodiversity**,[3] which in turn would affect any local community whose **livelihood** depends on the natural resources on the land surrounding the mine.

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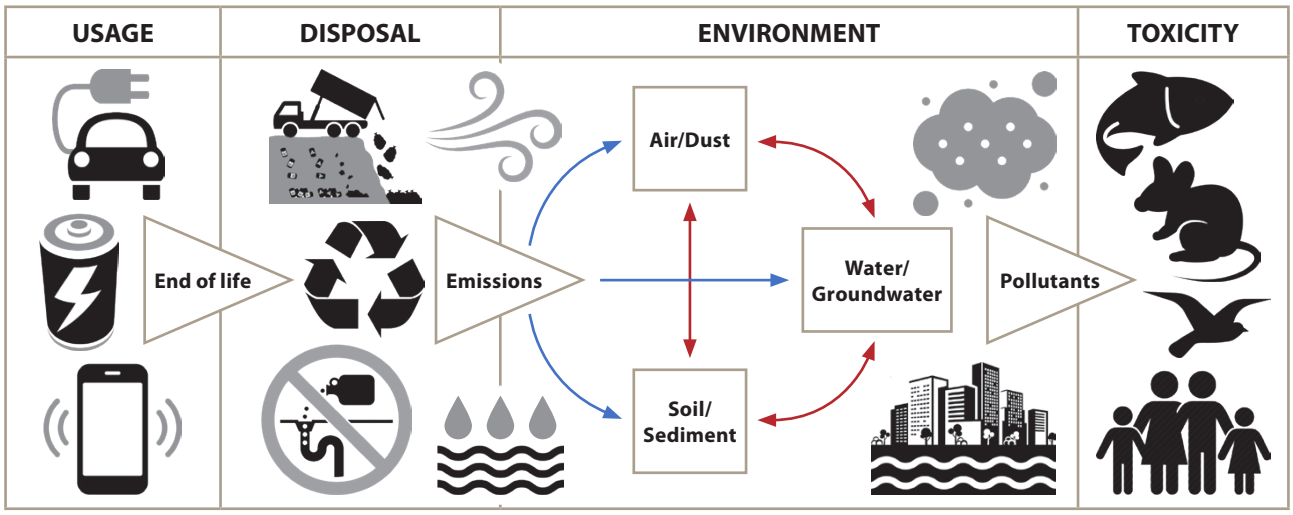
1 Diehl, B. J. M. (1992a): Lithium Caesium Beryllium. Open File Report, Mineral Resource Series, Geological Survey of Namibia, 18 pp., Windhoek.

2 Geological Survey of Namibia (2002): Mineral Resources of Namibia, Summary of Mineral Deposits and Occurrences, Omaruru Sheet 2114, Volume I – Complete Descriptions, 119 pp., Windhoek.

3 Ibid.

At the same time, even though mining creates short-term **employment**, the jobs created tend to be primarily for skilled people from other regions, so the local communities have to compete for the few other vacancies created. And, it has been found that mining ventures tend to increase rather than reduce **unemployment** rates, due to the limited period for which the jobs are available, given that mining operations on any one site are discontinued once the resource has been extracted. Another effect is that the **population growth** causes an increase in **housing prices** in the affected area. Additionally, mining work is considered to be **dangerous**, because more often than not it has detrimental effects on the **health** of the mine employees and that of the people living around the mine. Apart from the ever-present risk of workplace accidents, mineworkers face a higher risk of being diagnosed with cancer and other diseases. Finally, since the vast majority of mineworkers are male, the male population around a mining site normally increases, and there is a proven link between the larger population of males, in combination with the workers from their families and communities, and a rise in cases of gender-based violence against women and children as well as cases of transmission of HIV.[4]



Source: Adapted from the diagram in W. Mrozik, M.A. Rajaeifar, O. Heidrichab and P. Christensen, "Environmental impacts, pollution sources and pathways of spent lithium-ion batteries", *Energy & Environmental Science*, Issue 12, 2021.

[4] State report: "The Impact of Mining Sector to the Namibia Economy: Assessing socio-economic and environmental effects", 2021.

Licensing and protection of the environment and local communities

Article 100 of the Namibian Constitution establishes the State's "Sovereign Ownership of Natural Resources":

> *"Land, water and natural resources below and above the surface of the land and in the continental shelf and within the territorial waters and the exclusive economic zone of Namibia shall belong to the State if they are not otherwise lawfully owned."*[5]

To operate a mine in Namibia, companies and individuals have to apply to the Ministry of Mines and Energy for a licence under the Minerals (Prospecting and Mining) Act of 1992 ("Minerals Act") as amended by the Minerals (Prospecting and Mining) Amendment Act of 2008. The Minerals Act provides for four types of licence: reconnaissance; exclusive prospecting; mining; and mineral deposit retention. Licence holders have to comply with various conditions and requirements concerning environmental and community protection. For instance, to ensure the integration of Namibian citizens into the mining operations, section 50 of the Minerals Act[6] requires licence holders to: give employment preference to Namibian citizens who have appropriate qualifications; conduct training programmes to promote such employment and to support the development of skills and technology; and make use of products, equipment and services that are available within Namibia.[7]

Applicants also have to submit an Environmental Impact Assessment (EIA) report indicating the extent of any pollution that is likely to be caused, as well as, if pollution is likely to be caused, an Environmental Management Plan setting out how environmental degradation can be prevented or minimised.[8] Additionally, an application has to contain particulars regarding the condition of the environment in the area. During mining, reports on all operations have to be provided to the Ministry of Mines and Energy.[9]

In view of these conditions and the cost thereof, Namibian companies are granted an alternative to a mining license, to facilitate the participation of the Namibian people in the mining industry. They can also register mining claims for small-scale mining. A person or company is allowed to own a maximum of 10 mining claims, with each claim measuring no more than 600 metres on the longer side and 300 metres on the shorter side. The application for the registration of a mining claim costs N$50.00, and the granting of the registration is subject to an Environmental Clearance Certificate (ECC) issued by the Ministry of Environment, Forestry and Tourism. This Ministry has the discretion to determine whether or not an EIA is necessary for the issuance of an ECC, as well as the discretion to decide whether or not to issue the ECC after considering the EIA report. The conditions for a mining license as set out in section 50 of the Minerals Act do not apply to mining claims.[10]

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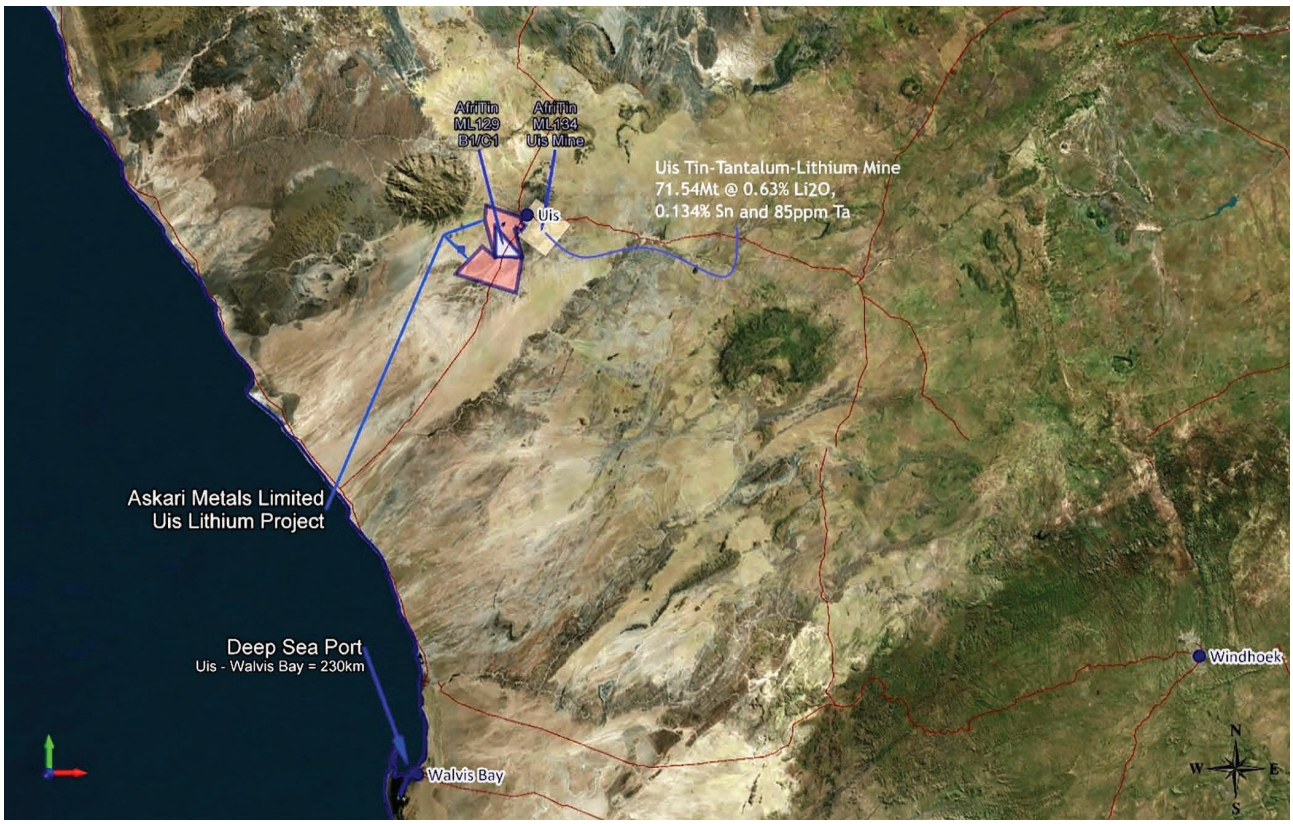
5 *The Constitution of the Republic of Namibia*, 1990.
6 Act 33 of 1992.
7 Ibid.
8 National Planning Commission, *The Impact of Mining Sector to the Namibia Economy: "Assessing socio-economic and environmental effects"*, Office of the President, 2021.
9 Ibid.
10 Ibid.



To exercise the rights granted by a mining license or mining claim, the holder has to provide written permission from the owner of the applicable land, and must either pay the owner compensation in an amount stipulated in a different document, or provide proof of the owner's waiver of such compensation. If the land in question is communal land, the practice has been that the relevant Traditional Authority issues a letter of consent for the mining activities on that land.[11] However, if any part of the land in question falls within a conservancy or community forest area, only the conservancy or forest management committee can give consent, and only insofar as the mining activities are not contrary to the committee's management plans.[12] In lieu of consent from any of these bodies, ancillary rights allowing the holder to proceed can be granted by the Minerals Ancillary Rights Commission established by section 108 of the Minerals Act.[13]

In line with good mining practice, holders of mining licenses and claims are responsible for taking all steps necessary to remedy any pollution, damage or loss caused, at their own cost (section 130 of the Minerals Act).

[11] Communal Land Reform Act, 2002 (Act No. 5 of 2002).
[12] Nature Conservation Ordinance, 1975.
[13] Act 33 of 1992.

Overview of the application process for mineral rights

In Namibia, any right in relation to the reconnaissance, prospecting, mining sale/disposal and exercise of control over any mineral or group of minerals is vested in the State, and is provided for by the Minerals Act[14] and administered by the Mining Commissioner. Any person interested in undertaking mining activities should apply to the Ministry of Mines and Energy by way of the prescribed forms.[15]

There are two types of mineral right: a mineral licence and a mining claim (MC). A mineral licence under the Minerals Act means a reconnaissance licence, an exclusive prospecting licence, a mining licence or a mineral deposit retention licence. Mining claims are granted to Namibian companies. However, the holder of a mining claim may choose to contract a foreigner or a company owned by foreigners to prospect and mine. An individual or a company can hold a maximum of 10 mining claims at a time. The registration of a mining claim is subject to an Environmental Clearance Certificate (ECC) issued by the Ministry of Environment, Forestry and Tourism.[16]

An application for the registration of a mining claim is made to the Mining Commissioner in the prescribed form. A mining claim must be made within 21 days from the date on which such claim is pegged, as provided in section 28, and shall be accompanied by the application fee. Once the application is lodged, it is registered and managed using the Flexi Cadastre Namibia – a software solution that the Ministry uses to facilitate all aspects of the application, evaluation, granting and compliance monitoring of mineral rights and related permits. The completed "Environmental Questionnaire for Mining Claims in Namibia" and the "Pro-Forma Environmental Contract" forms must be handed to the competent authority (MME official) on the day of application. The mining claim can only be registered upon receipt of an ECC from the Ministry of Environment, Forestry and Tourism. An application for the renewal of registration of a mining claim must be made not later than 90 days before the expiry date of such mining claim. Once in possession of the certificate of registration of the mining claim, the mining claim holder shall carry on mining operations.[17]

An application for: a mineral licence or a renewal thereof; the amendment of a mineral licence; the approval of the Minister for the transfer of a mineral licence, or the grant cession or assignment of any interest in any mineral licence, or to be a joint holder of a mineral licence or such interest, shall be made to the Minister in the prescribed forms and shall be accompanied by the application fees, as the case may be of such licence. The Mining Commissioner receives all applications.

Once the application is received by the Mining Commissioner, technical staff of the Department of Mines conduct a preliminary evaluation of the application and forward their recommendations to the Mineral Prospecting and Mining Rights Advisory Committee (MPMRAC), an inter-ministerial committee that meets about once every two months to look at applications. The assessment follows the order in which the applications were received in terms of section 125 of the Minerals Act.[18] After assessing each application, the MPMRAC forwards its recommendations to the Minister. The Minister makes the final decision on each application.

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[14] Ibid.
[15] Ministry of Mines and Energy, "Mines Application Forms": https://www.mme.gov.na/forms/?designation=dm.
[16] Namibia's Environmental Assessment Policy, 1995.
[17] Ibid.
[18] Act 33 of 1992.

Fraudulent activities and the bribing of authorities are rife in Namibia. The most recent case of bribery in the lithium mining industry is that between Xinfeng Investments (Pty) Ltd and the Minister of Mines and Energy (First Respondent).[19] Xinfeng is the holder of a lithium mining license (no. ML243), issued by the Minister on 6 September 2022. The Minister then revoked this licence on the grounds that it was obtained fraudulently by the company deliberately including misleading, untrue and incorrect information in the licence application documents. The Minister took an administrative decision to revoke the licence and to direct Xinfeng to stop all the mining operations by 31 May 2023. Despite proving on a *prima facie* basis that the licence was obtained by fraud, the absence of authority for the Minister to revoke the mining licence meant that Xinfeng had established a *prima facie* right.[20] The Minister has since filed a Review Application in the High Court.

Xinfeng is currently in full operation by virtue of the temporary relief granted by the High Court. The matter remains *sub judice* as the Review Application has yet to be litigated in the High Court.

Impact of mining on communities and their rights

Together with the powerful "curative" and "palliative" qualities of lithium on the effects of climate change, it is necessary to consider the potential "side effects" of this chemical, and to communicate them in a transparent manner.[21]

The side effects of lithium include:

- use of large quantities of water and related pollution;
- potential increase in carbon dioxide emissions;
- production of large quantities of mineral waste;
- increased respiratory problems; and
- alteration of the hydrological cycle.

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19 *Xinfeng Investments (Pty) Ltd v Minister of Mines and Energy* (HC-MD-CIV-MOT-REV-2023/00188) [2023] NAHCMD 356 (27 June 2022).

20 Ibid.

21 K. Rall, "South Africa: How Mining Damages Communities and the Environment", allAfrica.com, 2018.

Mining companies have been criticised for their complicity in abusing the human rights of people and indigenous populations at risk. Human rights include civil, political, economic, social and cultural rights, and all these rights apply in relation to property, development, health and safety, and environmental issues. Indigenous people living in the areas of mining operations raise issues around ownership of land, the power to make decisions about their future, entitlement to benefits from development, the appropriate form of community development, and the relationships with government and with non-indigenous small-scale and artisanal miners.

Mining can also have numerous – primarily negative – impacts on the surrounding environment, ranging from the exacerbation of climate change to the reduction of global and regional levels of biodiversity. Examples are climate change, deforestation or habitat destruction, pollution, soil erosion, human-wildlife conflict, and loss of biodiversity. The earliest impact on the mineral cycle in a country occurs at the exploration stage. During initial prospecting, geologists, geophysicists, geochemists and others require access to the land to make preliminary technical assessments. Exploration personnel may make outrageous promises to local communities that they have no ability to deliver on.

Land and access rights can come into conflict at the exploration stage. The construction of a mine often requires a large area of land, and these areas are often the location of previously undisturbed natural habitats. This results in the removal of large areas of habitat (usually forest) to build the mine, followed by other negative impacts from the presence of many people moving to and living and working around the mine. These other negative impacts include poaching of wildlife, overfishing of rivers/wetlands, and increases in the numbers of human-wildlife conflicts, particularly in areas where large predatory species are found.

Various provisions of the Mineral and Petroleum Resources Development Act,[22] (MPRDA) require the holder of a right or an applicant for such a right to notify or consult with the affected landowners or communities. The rationale for the consultative process is to see whether some accommodation is possible between the applicant for a [mining] right and the [lawful occupier] insofar as the interference with the [lawful occupier's] rights to use the property is concerned.[23]

The importance of consultation was similarly recognised in the *Meepo v Kotze and Others* judgment,[24] where the Court held that the consultative process in the MPRDA is intended to afford a landowner the opportunity of 'softening the blow' inevitably suffered as a consequence of the granting of a prospecting or other right under the MPRDA.

The aforementioned judgments have shown how the exploitation of natural resources has the potential to exploit host communities. As such, consent, specifically free, prior and informed consent ("FPIC") of informal land rights holders, has been elevated in relation to the rights and obligations of mining rights holders. The focus on consent from broader communities in relation to land requires a nuanced and measured approach to avoid tumultuous relationships between the stakeholders involved.[25]

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[22] Act 28 of 2002.

[23] *Bengwenyama Minerals (Pty) Ltd and Others v Genorah Resources (Pty) Ltd and Others* 2011 (4) SA 113 (CC) at paragraph 65.

[24] 2008(1) SA 104 (NC).

[25] W. Odendaal, "Balancing the Economic and Environmental Impacts", in *Insight: Mining in Namibia*, 2012.

Internationally, FPIC is recognised through the United Nations Declaration on the Rights of Indigenous Peoples, and has been incorporated into many foreign jurisdictions' mining legislation and practices. Over the years, the right to FPIC has become a well-established principle under international law, and it is increasingly recognised in domestic laws and jurisprudence across the world. This principle is especially important to indigenous peoples because it provides some legal protection against harmful mining activities on their traditional lands. The law relating to FPIC has developed in such a way that indigenous peoples have the right to give or withhold their consent over what mining companies and the government can do on their land. In short, FPIC means that the consensus and consent of indigenous peoples must be determined in accordance with their customary laws and practices.

Free: A general principle under Namibian law is that no consent is valid if it is obtained through coercion or manipulation. It is therefore important to verify that consent to development projects has been freely obtained. One way of doing this is to ensure that the project developer is not the sole entity responsible for obtaining consent from the State. The indigenous community must share this responsibility, and they must have sufficient access to judicial remedies to protect them against possible harms.

Prior: Informed consent should be done in advance of any final authorisation by the State that could potentially affect the rights of indigenous peoples and their lands, territories and resources. The consent process should allow affected communities enough time to understand the information received. For example, Australia has legislated a minimum 12-month period. The time required may vary depending on the number of affected persons, communities or peoples, the complexity of the proposed activity, and the amount of information provided or requested.

Informed: Any FPIC procedure must involve consultation and participation by the affected communities. This requires the full and accurate disclosure of information about the proposed developments in a form that is accessible and understandable to them. According to the Convention on Biological Diversity's Working Group, the disclosures in

a FPIC process should include the nature, size and scope of the proposed development or activity, its purpose, its duration (including any construction phase) and the location of all affected areas. Communities should also be provided with a preliminary assessment of the likely impact of the development, and information about personnel likely to be involved in both the construction and operational phases (including local people, research institutes, sponsors, commercial interests, and partners). There should also be full disclosure of all potential risks, such as entry into sacred areas, environmental pollution, partial destruction of a significant site or disturbance of a breeding ground, as well as realistic information on all the foreseeable implications of the project.

Consent: This requires consultation and meaningful participation in all aspects of a project, from initial assessment and planning to monitoring and closure. The consent process may also involve negotiation in an attempt to reach agreement on the proposal as a whole or on certain components of it, or on conditions that may be attached to the granting of consent. Throughout this process, indigenous peoples must have the right to participate through their own freely chosen representatives and to identify any special measures required for effective participation by all relevant persons. They also have the right to secure and use the services of any advisors they may require, including legal representation of their choice.

Conclusion

Although social impact studies are required as part of an application for a mining right, the current standard often results in the questioning of the legitimate leader of the community at a later stage. In other words, there is in fact no legislative requirement to determine who has the decision-making authority within a community, and to identify the customary process to follow for such a decision. This is where FPIC can be used most effectively when coupled with a more advanced study of the local community and its leadership informed by its customary law. There may also be an opportunity for a specialist anthropologist to add depth to the social study usually conducted. Customary law is recognised by the Constitution, but is often pushed aside for codified law which is assumed to hold more certainty.

However, the longer we avoid trying to delve deeper and to truly understand customary law and leadership structures in communities, the longer it will take to forge true symbiotic relationships between such communities and the holders of mining rights. In the interim, there is no negative to implementing greater measures during the statutory consultation process to attain FPIC from an individual within the community, and naturally the community as a whole, despite any questions or challenges that may arise in relation to leadership structure. Open dialogue and ventilation of communities' aspirations as well as detailed explanations of mining companies' financial and other constraints will allow for mutual understanding of expectations. There is also a need to formalise benefits, rights and obligations of the stakeholders through more than a social and labour plan to give meaning and to enforce the consultation process.

Oil, gas and mining companies are becoming more and more cognisant of the necessity of earning the confidence of the community in order to obtain a "social licence" to operate. Without it, a project may be implemented with operational delays, monetary costs, legal issues, or even project closure, violence and fatalities. Thus, the principles of FPIC should be enforced in the whole process of mining and not only as per the EMA requirements.

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