Corporate social responsibility in the mining industry: evidence from Boliden Tara Mines, Ireland

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Abstract

Purpose – *While corporate social responsibility (CSR) is recognised as a value-creating mechanism in the mining industry, there is limited understanding of how local managers shape CSR activities of multinational mining companies in host regions. The purpose of this study is to examine CSR practices at Boliden Tara Mines in Navan, Ireland, to understand how local management influences CSR implementation and impacts relationships with local communities.*

Design/methodology/approach – *This research uses a case study design focusing on zinc mining operations at Tara Mine, Navan. Data collection includes document analysis of company CSR reports and sustainability materials, semi-structured interviews with local managers and environmental engineers and observations of community engagement practices. The analysis is grounded in stakeholder theory, examining how the company identifies stakeholders, frames community relationships and operationalises CSR commitments.*

Findings – *Local Boliden executives ensure consistent implementation of CSR policies in the Navan host community. This study reveals that local management plays a crucial role in translating corporate CSR strategies into contextually appropriate practices, enhancing stakeholder relationships and community trust. The findings of this study demonstrate that local managers act as critical intermediaries between corporate policy and community needs, contributing to more effective CSR implementation than centralised approaches.*

Originality/value – *This study addresses a significant gap in mining CSR literature. While previous research has examined Boliden's operations in Sweden, no study has analysed the CSR strategy and activities of Boliden Tara Mines in Ireland. This research contributes original insights into the role of local management in multinational mining company operations, demonstrating how decentralised leadership influences CSR effectiveness in mining contexts with minimal community contestation.*

Keywords *Corporate social responsibility, Mining, Multinational companies, Ireland, Local management, Case study*

Paper type *Research paper*

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1. Introduction

Stakeholders generally perceive the economic consequences of mining projects positively while viewing social and environmental consequences negatively. Although corporate social responsibility (CSR) emphasises social and environmental responsibility, it is often viewed simplistically as a marketing campaign. The concept of CSR addresses:

- what CSR should look like;
- to whom it should apply; and
- how it should be demonstrated.

Recently, empirical evidence that many companies do not implement CSR has prompted the proposal of a more analytically useful concept of corporate social irresponsibility (CSI) (Kemp and Owen, 2022). CSI is based on "organised irresponsibility", which implies that people in positions of power benefit from the risks they create (Beck, 2009, pp. 28–30). Namely, companies can claim to be responsible while acting irresponsibly, and hence, there is a need to make a clear distinction "between (i) the critique of company performance within the dominant discursive construct of CSR and (ii) CSI as an evidence-based approach to reading and documenting corporate performance" (Kemp and Owen, 2022, p. 1816). A conceptually distinct CSI discourse removes the need for researchers to disprove CSR rhetoric before engaging with responsibility problems and suggests that researchers of global resource extraction focus their efforts on capturing the form and function of "organised irresponsibility" in locations where mining takes place. Recently, Sinha *et al.* (2024) developed a multilevel perspective on how acts of CSI emerge and evolve over time, using the term "organised and intentional CSI" to explain irresponsible activities undertaken by several colluding actors that harm multiple stakeholders. Their choice was informed by the prevalence of organised and intentional CSI in countries with strong regulatory safeguards and monitoring mechanisms.

The mining industry is dominated by a positive narrative that new technologies can increase economic benefits. However, what is often overlooked is the impact of these technologies on local communities. Keenan *et al.* (2019) note that responsible companies must understand the social consequences of new technologies and ensure that their implementation does not put local communities at risk. In many parts of the world, including developed countries, environmental activists stage local, national and global protests, claiming that certain areas are too sensitive for mining (Urkidi and Walter, 2011). Social conflicts can arise when local communities feel they are not receiving their share of the mine's wealth (Muradian *et al.*, 2003).

Mining companies manage relationships with numerous stakeholders and social and environmental consequences to build good ties with local communities (Jenkins, 2004; Saenz, 2023). The ultimate goal is to achieve mutual trust. Among various stakeholders, Fordham and Robinson (2018) argue that mining companies, local leaders, non-governmental organizations and governments can encourage community participation in CSR activities, thereby bridging the cultural gap between companies and communities. Different actors can act as agents of change, bringing new knowledge, capabilities, ideologies and ethical values. Some developed countries – particularly the UK, European Union, the USA and some developing East Asian countries – promote CSR, while others lag behind (Kurowski and Huk, 2021). This is particularly applicable to countries in the Global South, where, despite abundant natural resources, corrupt behaviour often occurs in the absence of good governance (Wirba, 2024). In Europe, CSR functions as a "developmental mechanism" (Gillo *et al.*, 2023, p. 80).

Despite CSR efforts, many mining companies are not achieving desired results. This can be attributed to an insufficient understanding of CSR's importance in business strategy. Mining companies generally develop CSR programs reactively rather than out of altruistic motives. Devenin and Bianchi (2018) identified three ineffective situations:

1. CSR initiatives failing to meet the real needs of local users;
2. failing to adapt to the socio-cultural characteristics of local beneficiaries; and
3. failing to ensure long-term sustainability.

Some studies confirm CSR effectiveness increases significantly if multinational mining company directors are from local communities (Awuah *et al.*, 2021; Seang, 2023; Tawiah *et al.*, 2024; Tawiah *et al.*, 2025). There is a growing trend toward nominating directors who reside far from corporate headquarters. Firoozi and Keddie, drawing on stakeholder theory and image motivation theory, examined this relationship using a sample of Canadian firms

from 2009 to 2017 and found that geographical diversity among board members had a positive impact on certain dimensions of CSR (2022). According to image motivation theory, local experts will behave pro-socially at management levels to intensify CSR activities (Firoozi and Keddie, 2022). Image motivation theory suggests that individuals' actions are partly motivated by how they believe others perceive them (Akerlof, 1970). In exploring the impact of image motivation theory, it is important to note that local directors may be advocating CSR activities that promote sustainable development, focus on global environmental issues (e.g. clean energy initiatives) and enhance their image as environmentally conscious leaders. Furthermore, as community members express appreciation and recognition for CSR initiatives, local directors may be more motivated to continue and expand these efforts. In line with Image Motivation Theory, local directors may engage in CSR to manage their interactions with other stakeholders, such as employees. Local directors and managers may leverage their influence to encourage employees to participate in CSR initiatives, fostering a culture of social responsibility within the company.

This study analyses stakeholder power and roles at Boliden Tara Mines (BTM) from five perspectives:

1. stakeholder identification and perception;
2. community engagement practices;
3. power dynamics;
4. outcomes and accountability; and
5. communication and trust.

The following research questions are formulated:

RQ1. How does the company define its key stakeholders?

RQ2. How is the local community framed: as a beneficiary, a risk or a partner?

RQ3. In what ways does the company involve the local community in decision-making processes?

RQ4. What kinds of projects or investments has the company made in the community?

RQ5. How are community needs assessed, and how is impact evaluated?

The main goal is to explore how the company communicates cooperation initiatives in light of CSR and assess how these practices contribute to building trust and legitimacy with local communities. The novelty lies in multi-dimensional, insider-informed analysis of how a mining company conceptualises and operationalises stakeholder participation and CSR, focusing on power dynamics, accountability and communication – aspects receiving limited integrated attention in mining governance literature. Unlike Boliden's Swedish operations (Djuvfelt, 2014; Poelzer, 2023; Thorén, 2014), the Irish subsidiary's activities have not been analysed from this perspective, which constitutes the main contribution of this research.

The work consists of five main parts. First, we examine the main conceptual approaches to CSR, emphasising the four-dimensional CSR model. Subsequently, the evolution of CSR research in mining will be described. The third part presents the methodological approach, followed by a detailed description of the selected case's context. The main contribution is the analysis of the Tara mine case study, followed by concluding remarks and recommendations.

2. Corporate social responsibility: a conceptual overview

Howard R. Bowen wrote the first influential work on CSR in modern times. In his book, Bowen asked a question that is still relevant today: "What responsibilities to society may

businessmen reasonably be expected to assume?" (Bowen, 1953: xi). Meanwhile, since 1960, more than 30 definitions of CSR have emerged. In 2006, for instance, Dahlsrud identified and analysed 37 different definitions of CSR (Dahlsrud, 2006).

Corporative social responsibility is usually defined as:

> [...] a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis (EC, 2001, p. 8).

Slightly different definition proposed by the International Financial Corporation; namely, CSR is defined as:

> [...] the commitment of businesses to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are good for business and for development (IFC, 2008).

There has been considerable research on CSR, particularly into the relationship between CSR and profitability. Many of these studies reflected either an ideological bias or limited methodological procedures. Aupperle *et al.* (1985), for example, using an elaborate, forced-choice instrument administered to corporate CEOs, found no relationship between social responsibility and profitability. Specifically, varying levels of social orientation were not associated with performance differences. Cochran and Wood (1984), by contrast, using a new methodology, improved technique and industry-specific control groups, found that the average age of corporate assets is highly correlated with social responsibility rankings. The main point of Cochran and Wood (1984) is that within industry groups, "the financial variable most strongly correlated with CSR is asset age", and, consequently, the omission of this variable led to a spurious relationship between CSR and financial performance (p. 14).

CSR as a concept has a long history (Eells, 1960; Emery and Trist, 1965; Walton, 1967). A major problem in understanding social responsibility is that the environmental contexts in which organisations exist are themselves changing and becoming increasingly complex (Zenisek, 1979). This means that they demand consideration for their own sake. One such consideration is the work of Emery and Trist (1965). They state that to consider environments for their own sake requires a redefinition, at a social level of analysis, of the "causal texture" of the environment. Emery and Trist (1965, pp. 20–26) contend that organisational environments differ in causal texture in regard to the degree of uncertainty and in certain other aspects. They suggest a typology which identifies four "ideal types" of organisational environments, approximations which exist simultaneously in the world of many organisations. In Emery and Trist's terms, interdependencies within an organisation's environment comprise the environment's causal texture.

Following these studies, Tuzzolino and Armandi (1981) proposed a microanalytic foundation for organisational analysis, drawing on a paradigm derived from need theory. They presented a taxonomic construct to assess corporate performance and proposed a metric to monitor CSR. Their conceptualisation of CSR was more readily motivated and operationalised within an organisational-need hierarchy. Following Maslow's well-known hierarchy theory, Tuzzolino and Armandi (1981) proposed an organisational need hierarchy that identifies five basic needs, with corresponding criteria for examining CSR: physiological (profitability), safety, affiliation, esteem and self-actualisation (p. 25). Affiliative needs may emerge as the safety needs of profit and managed competition become reasonably satisfied. Esteem, or status, encompasses criteria such as market share, product leadership, price leadership and image creation. The last need – self-actualisation – can be understood as a function of prepotent needs, buttressed by higher-order need satisfaction, as reflected in social effectiveness criteria. It contains two parts:

1. internal (employee relations); and

2. external (community and government relations).

Despite some weaknesses of this model, such as the subjective categorisation of needs as the most important, it appears redemptive at two levels: intraorganisational and interorganisational. Therefore, the work of Tuzzolino and Armandi (1981) was among the first to argue for a more systemic, multilevel approach to CSR (Rupp *et al.*, 2024, p. 5).

There are different perspectives on conceptualising CSR. The subject of dispute among researchers concerns to whom the company owes responsibilities. Considering the question, Marrewijk (2003) singled out three approaches that try to resolve this dispute:

1. shareholder approach;
2. stakeholder approach; and
3. societal approach.

The first approach maintains that companies are responsible only to shareholders. Accordingly, corporations might be responsible but only if shareholders ask them to be. Their ultimate goal, as business entities, is to gain profit (Friedman, 1962). The second approach is stakeholder theory, which highlights the obligation of corporations to consider their stakeholders – "any groups or individuals who can affect or are affected by the achievement of the firm's objectives" (Freeman, 1984, p. 25). Accordingly, each stakeholder group has a right not to be treated as a means to some end and, therefore, must participate in determining the future direction of the firm in which they have a stake (Freeman, 2014). Finally, the societal approach states that:

> [. . .] corporations operate by public consent (licence to operate) to serve the needs of society constructively, to the satisfaction of society (Marrewijk, 2003, p. 97).

"Carroll's CSR Pyramid" is arguably the most well-known model of CSR. Carroll developed a four-dimensional model of CSR in the form of a pyramid (Figure 1). The pyramid was chosen as a geometric design because it is simple, intuitive and built to withstand the test of time. Hence, "the economic responsibility was placed as the base of the pyramid because it is a foundational requirement in business" (Carroll, 2016, p. 4). In other words, "economic and legal responsibilities are required; ethical and philanthropic responsibilities are expected and desired" (Carroll, 2016, p. 8; italics original). Each component of CSR addresses different stakeholders and their priorities, which may be affected by CSR initiatives. Only ethical responsibility affects all stakeholder groups. From the standpoint of this research, it is important to note that philanthropic responsibility most affects:

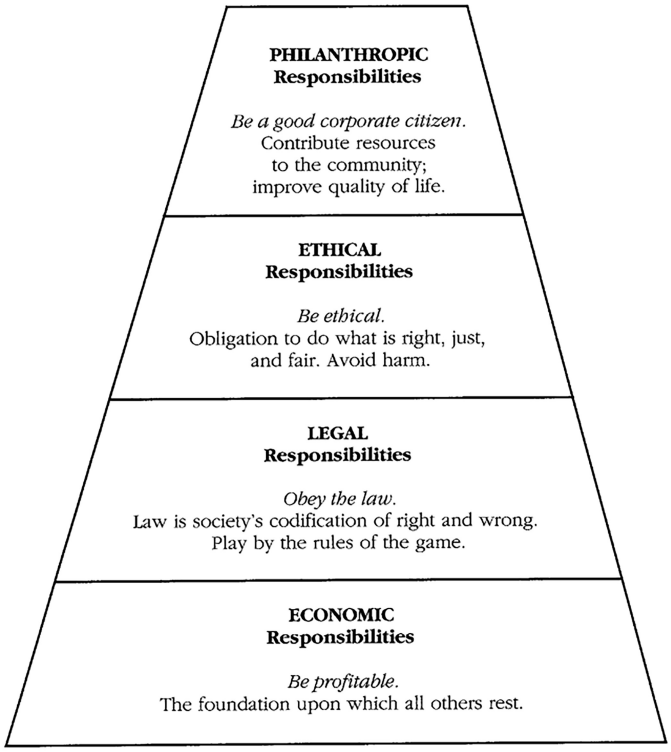
> [. . .] the community and nonprofit organizations, but also employees because some research has concluded that a company's philanthropic involvement is significantly related to its employees' morale and engagement (Carroll, 2016, p. 8).

When a company meets its fourth component of CSR, philanthropic responsibility, it gains the status of a corporate citizen. Corporate citizenship assumes that:

> [. . .] there is a parallel line between companies and individual citizens and that companies are endowed with both the right and responsibility to undertake their operations (Adonteng-Kissi and Adonteng-Kissi, 2017, p. 198).

For various reasons, implementing CSR programmes within the philanthropic sector in mining and other controversial industries is challenging. For instance, companies often fail to acknowledge the full extent of their interactions in the countries in which they operate (Kaupke and Knyphausen-Aufsess, 2023). Also, the number of potential beneficiaries of philanthropic programs is more limited (Palazzo and Richter, 2005). Finally, the scope of managers' perceived philanthropic responsibility is quite limited (Tetrevova *et al.*, 2021).

Figure 1 The pyramid of corporate social responsibility



Source: Carroll (1991)

It is evident that in an economy of giant, divisionalised corporations, CSR is difficult to achieve. However, given the immense power of large corporations, the more ethical forms of social responsibility become imperative. Without responsible and ethical people in important places, as Mintzberg (1983) noticed, "the society we know and wish to improve will never survive" (p. 13).

3. Corporate social responsibility in the mining industry

CSR is particularly relevant to the mining industry, which has significant effects on economic, social and environmental dimensions and is among the most damaging and dangerous industrial sectors (Yakovleva, 2005). Accordingly, there are four types of responsibilities acknowledged:

1. economic;
2. legal;
3. moral and ethical; and
4. social, while the concept of public responsibility emerges as a driving principle of CSR (Yakovleva, 2017).

CSR in the mining industry is typically understood as companies' efforts to account for the environmental impacts of their mining activities and to provide nearby communities with benefits in exchange for permitting the mining company to operate in the area (Yousefian *et al.*, 2023).

Recently, Langton *et al.* (2024) extended Carroll's CSR model, drawing on prior research, to make it applicable to the mining sector in Zimbabwe. The authors adopted five components of CSR: political CSR, stakeholder CSR, environmental CSR, ethical CSR and social CSR (Langton *et al.*, 2024).

Despite these notions, CSR can have different meanings depending on the type of company and its relationships with local communities and the environment. Mining companies can be responsible for a number of polluting activities such as "noise, light, water pollution, air emissions, contamination of soil and the environmental problems associated with transport and waste disposal" (Brew *et al.*, 2015). Thus, understanding CSR in the context of mining remains a challenge (Viveros, 2016). It is essential to note that mining companies, unlike other industries, cannot relocate their activities; therefore, they continuously work to build a favourable relationship with the local community. The relationships between mining companies and local communities, in general, have a long history of distrust. Furthermore, communities have just recently begun to more forcefully demand their rights worldwide. It appears that neither governments nor mining companies have been fully prepared to respond effectively, despite the demands' relevance.

Mining companies adopt CSR policies for a number of reasons, including moral obligations to advance human rights, protect local economies and enhance societal welfare. CSR efforts may be seen as the realisation of the company's strategic plans (Mulhern *et al.*, 2022). Untung *et al.* (2021) note that mining companies transition from prioritising profit maximisation to adopting CSR practices, which entail allocating a portion of their profits to community development. From a community perspective, one can say that social sustainability and mining are most commonly connected through their impacts on employment. The evolution of philanthropic activities appears to pose a challenge for many mining companies.

The vast majority of mining companies, to improve the chances of their long-term viability, seek to enhance their social responsibility through transparent disclosures about activities that primarily concern the environmental cleanliness of operations. Many studies consider corporate disclosure of CSR information as a company's response to "social expectations", confirming legitimacy in front of "society" (Tilling and Tilt, 2010). The role of stakeholder pressures on CSR reporting may vary among the mining companies because of specific circumstances. Each country has its own social and political order, regulatory framework and economic and cultural institutions, which may lead to significant differences in stakeholder power with respect to CSR. Dong *et al.* (2014), for example, analysing 176 corporate annual and CSR reports produced by all mining and minerals companies, showed that in addition to the central government:

> [...] salient stakeholders with a significant impact now include international consumers, while unexpectedly mining industry associations, local communities and employees are not considered as salient as they do not have a significant impact on CSR reporting practice (p. 59).

In developing countries, many capital-intensive mines operate as "enclaves" that fail to enhance the local economy (Hilson *et al.*, 2024, p. 95). From the standpoint of developed countries, there are four main components of stakeholder theory which are relevant to the analysis of CSR:

1. flows of benefits and potential threats between companies and stakeholders;
2. varied and discrepant issues or interests;
3. stakeholder networks and roles; and
4. stakeholder engagement (Post *et al.*, 2002).

Stakeholders can be defined as:

> [. . .] the individuals and constituencies that contribute, either voluntarily or involuntarily, to firms' wealth-creating capacity and activities and that are therefore their potential beneficiaries and/or risk bearers (Post *et al.*, 2002, p. 19).

The Theory of Stakeholder Identification and Salience (TSIS), developed by Mitchell, Agle and Wood (1997), is a widely used framework in stakeholder theory that helps identify which stakeholders should be prioritised by decision-makers in the mining context. It is based on the idea that stakeholders vary in importance, depending on three key attributes:

1. *power* (the ability of a stakeholder to influence the firm or organisation);
2. *legitimacy* (the perceived validity or appropriateness of a stakeholder's claim or relationship with the firm); and,
3. *urgency* (the degree to which a stakeholder's claim requires immediate attention).

Power can be coercive (force), utilitarian (resources or money) or normative (symbolic influence or persuasion). Legitimacy can stem from legal, moral or cultural grounds. Finally, urgency includes time sensitivity and criticality.

The key idea of TSIS is that stakeholder salience is the extent to which managers prioritise competing stakeholder claims. Stakeholders with more attributes are more salient, and their concerns are more likely to influence organisational decisions (Table 1). This model is particularly useful for CSR studies, as it explains why certain stakeholders are heard, while others are ignored and maps how power dynamics and perceptions shape participation and impact.

While stakeholder theory has been foundationally shaped by Freeman's (1984) work on stakeholder identification and Donaldson and Preston's (1995) distinction between normative and instrumental approaches, this research adopts the TSIS. This approach offers a nuanced and practical tool for analysing which stakeholders are prioritised in decision-making, and its dynamic and manager-centred perspective makes it especially relevant for examining CSR practices in contexts where stakeholder influence and recognition vary significantly, such as in mining operations.

The TSIS is a widely used management framework that guides organisations in addressing competing stakeholder claims. This is of vital importance because the typical stakeholder network includes, among others, governments, special interest groups, the environment

Table 1 Stakeholder types based on combinations of the Three attributes, according to the stakeholder salience model

Stakeholder type	*Attributes possessed*	*Description*
Latent stakeholders (possess One attribute)		
Dormant	Power only	Have power but no legitimacy or urgency; inactive
Discretionary	Legitimacy only	Have moral standing but no power or urgency
Demanding	Urgency only	Make noise but lack power or legitimacy
Expectant stakeholders (possess Two attributes)		
Dominant	Power + legitimacy	Likely to have influence and be involved in decisions
Dangerous	Power + urgency	Can pose threats if not managed; for example, activists, protestors
Dependent	Legitimacy + urgency	Rely on others to exercise power on their behalf
Definitive stakeholders(possess all Three attributes)		
Definitive	Power + legitimacy + urgency	Priority stakeholders whose claims must be addressed

Source(s): Mitchell *et al.* (1997)

and the community at large. Therefore, TSIS might be a valuable management tool, and according to Beckman *et al.* (2016), it "facilitates the organisation's ability to focus its efforts and resources and introduces some structure to the process of managing stakeholder relationships and issues" (p. 807). Sometimes, some specific social groups (e.g. grassroots movements and the church) may strongly oppose new mining projects on the grounds of environmental, ethical and economic concerns, as was the case in Argentina (Mutti *et al.*, 2012) and Serbia (Djukanović, 2025).

4. Methodological approach

This research uses a case study approach, focusing on lead and zinc mining at the Tara Mine in Northern Ireland. Yin (1989) defines a case study as:

> [...] an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used.

The research questions seek to determine the extent to which social, environmental and economic conditions in the Tara mine and the local community have improved through CSR activities. As Stake (2005, p. 445) argued, "the more the object of study is a specific, unique, bounded system", the greater the possibility for in-depth findings. This case study is significant because, although researchers such as Thorén (2014), Poelzer (2023) and Hellqvist (2014) analysed Boliden AB's activities in Sweden, no one has examined CSR strategy and activities at Tara Mines.

Current activities and strategy of Boliden AB in Sweden's welfare state significantly impact BTM's strategy. Additionally, research by Fdez-Galiano *et al.* (2022) found that the 1998 environmental disaster in Spain, which resulted in 55 environmental lawsuits against Boliden-Apirsa over 17 years, led to negative market responses and reputational damage, likely influencing the company to prioritise responsible business practices over the past two decades.

Following qualitative research methodology, we used document analysis and semi-structured interviews as primary data collection techniques (Bryman, 2004). Semi-structured interviews provided flexibility while adhering to defined questions, with recording and transcription enabling detailed analysis.

A key limitation is the single-perspective approach focusing on the mining company's viewpoint. The voices of residents, civil society actors and municipal authorities are not directly represented, potentially missing divergent perceptions or mismatches between company intentions and stakeholder experiences. Future research should include multiple stakeholder perspectives.

Ireland hosts the world's greatest zinc concentration per square kilometre (Singer, 1995). Zinc has been exploited in Navan since 1977, with Tara Mines ranking as the eighth-largest zinc mine globally. Navan, with 33,886 inhabitants (CSO, 2022), is Ireland's ninth-largest settlement. In 2024, 370 people were employed at Tara Mine, a significant decline from 595 in 2023 (Boliden, 2024a). Boliden claims Tara Mine is socially responsible, supporting local community development (Boliden, 2024c, p. 13). This analysis examines whether that corresponds to reality.

5. Case study: Boliden Tara Mines, Ireland

Boliden is a leading European metals company with core competencies in exploration, mining, smelting and metal recycling. Boliden's main metals are zinc and copper. Boliden's operations are organised into two business areas: mining and metallurgy (smelters). The company has several mines (in Sweden, Finland, Ireland and Spain), five smelters (in

Sweden, Finland, Norway and Ireland), and marketing offices in Sweden (headquarters), Denmark, England and Germany. Unlike Boliden Smelters' business units, which are autonomous with some synergies, Boliden Mines have "more resources for common support functions", such as, for example, exploration, technology or business development (Hellqvist, 2014, p. 22).

Boliden's sustainability efforts are grounded in its own norms, the UN Global Compact and the UN Sustainable Development Goals. Since 2021, Boliden has been a member of the International Council on Mining and Metals (ICMM), an international organisation dedicated to a safe, fair and sustainable mining and metal industry. The company undertakes to implement ICMM's Mining Principles across dam safety, sustainable development, corporate governance and related areas. The latest report on ICMM Mining Principles compliance for 2024 (Boliden, 2024b) indicates that, at the Tara Mine, all 33 principles were met. Performance expectations PE 3.1 – Respect Human Rights and PE 6.3 – Effectively Manage Tailings have been only partially met; however, the plan is to fully comply with both Pes in 2025.

Boliden has published sustainability information since 2005. Of the 17 global Sustainable Development Goals, Boliden has identified eight to which the company pays particular attention: gender equality (Goal 5), clean water and sanitation (Goal 6), affordable and clean energy (Goal 7), decent work and economic growth (Goal 8), responsible consumption and production (Goal 12), climate action (Goal 13), life below water (Goal 14) and life on land (Goal 15). The most recent Annual and Sustainability Report 2024 (Boliden, 2024b) highlights how Boliden creates value and covers topics such as strategy, operations, sustainability and financial performance.

Boliden Tara Mines was acquired by Boliden in 2004. The facility comprises an above-ground ore-processing facility on a footprint of approximately 70 hectares, an above-ground tailings management facility (approximately 280 hectares) and the underground mine (Figure 2). The tailings storage facility (TSF) is located in the townland of Randalstown, approximately 2.5 km north of the town of Navan (Figure 3). The site lies in a topographically flat area, approximately 50 m above mean sea level. The Tara mines' products – zinc and lead concentrates – are shipped to Dublin Port and then to the smelters of Boliden Mineral AB in Odda (Norway) and Kokkola (Finland), as well as to other smelters in Europe. Orebody development at this mine commenced in 1973, with production beginning in 1977. The annual production target for 2025 is set at 1.8 million tonnes (Boliden, 2024c).

5.1 Boliden Tara Mines and corporate social responsibility

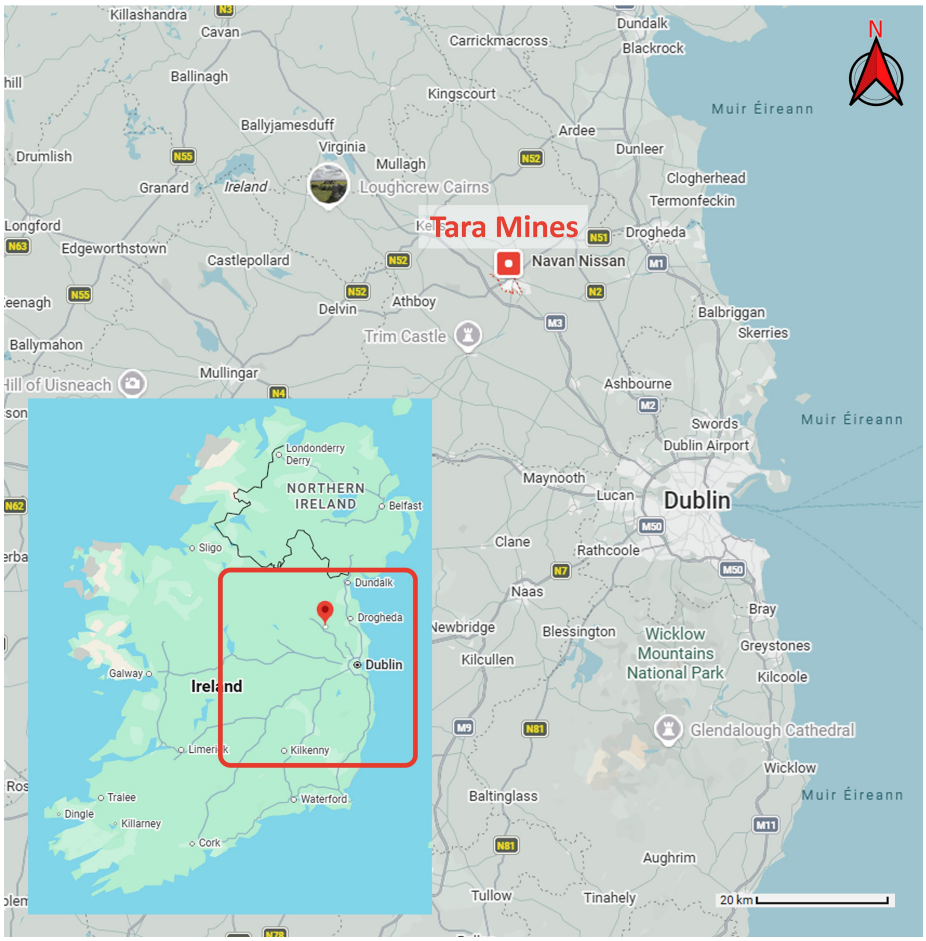
In the BTM, the Environmental Department comprises the following organisational units:

- research projects;
- environmental management system (ISO 14001);
- industrial emissions licence compliance;
- stakeholder engagement; and
- planning/development.

The stakeholder engagement unit comprises the following activities:

- public information and access;
- local residents and their representatives;
- submissions and complaints;
- reports to EP/MCC and other government bodies;

Figure 2 Map of eastern Ireland showing Navan, the location of Boliden Tara Mines and Dublin, in relation to the island of Ireland (lower left corner)



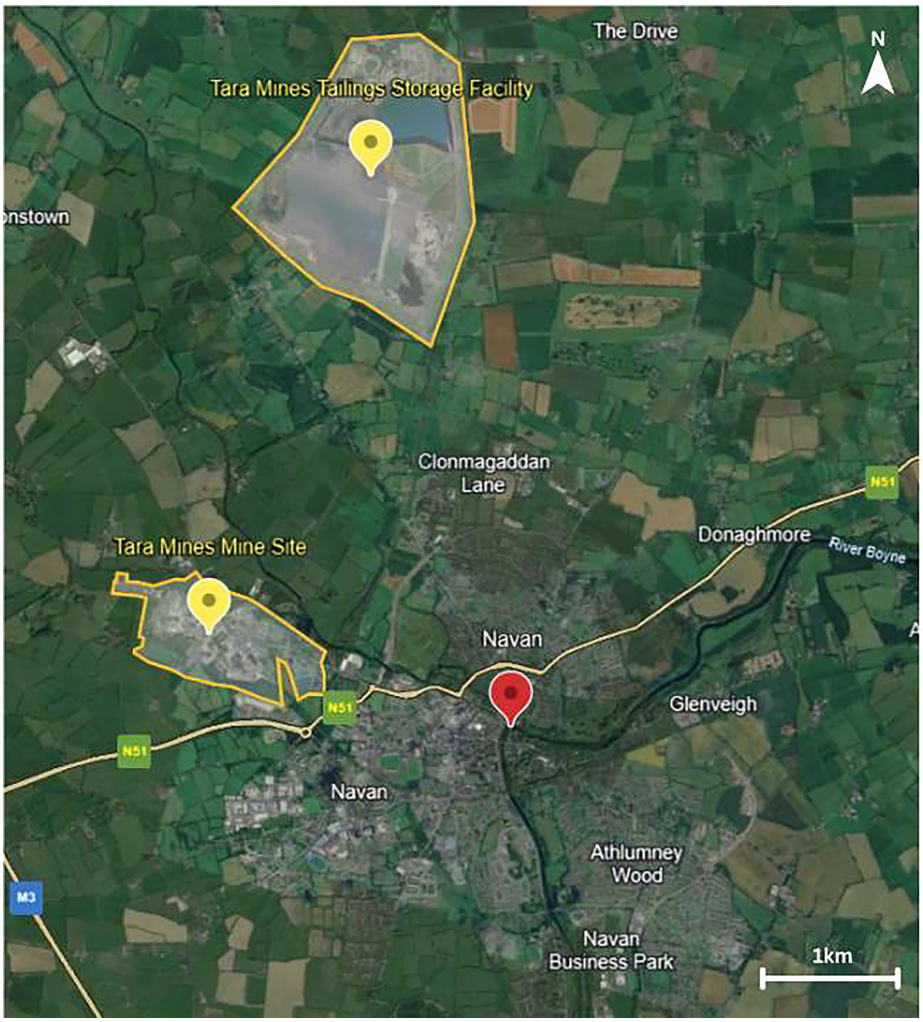
Source: Authors' own work

- support and advisory role for all sections within the Mine; and
- landowners.

Compliance and reporting primarily involve communication with the Environmental Protection Agency (EPA) via the EDEN online portal. This portal also displays compliance history and scoring (National Priority Sites List). All monitoring reports are submitted to the EPA annually or on request. There are also additional reports, such as Annual Environmental Reports (AER), works/change proposals, Closure Remediation and Aftercare Management Plan (CRAMP) and notification of environmental accidents.

5.1.1 Social and economic responsibility. Boliden Tara Mines (BTM), located 50 km from the capital, Dublin, has coexisted with the community of Navan, Meath County, for almost a century. BTM has been a significant employer in the region since the mining operations started in 1977. During normal operations, this mine provides direct employment to nearly 500 employees and contractors, the majority of whom live in the locality, and indirectly supports over 1,000 jobs through the supply chain (Boliden, 2024c, p. 13).

Figure 3 Map showing the footprints of the Tara Mines mine site and tailings storage facility in relation to the town of Navan



Source: Boliden (2024c, 9)

The community surrounding BTM has grown in tandem with the mine, with the local economy in the Northeast and beyond benefiting from its ongoing success. The provision of secure employment for thousands of people has helped the local community progress over the past 45 years. For instance, Tara Mines has established strong relationships with the local community through partnerships with schools, colleges (e.g. Beaufort College in Navan for students aged 16–18 years), charities and sporting clubs. A highly skilled blue-collar workforce is essential to the success of Boliden's production facilities. Therefore, BTM recruits young people annually through its apprenticeship scheme, in cooperation with the National Training Agency, as well as through internships. In 2023, for example, BTM offered employment opportunities in several areas, including construction plan fitter, electrical/instrumentation and geodrilling.

5.1.2 Environmental responsibility. Since its inception, Boliden Tara Mines has planned and executed an extensive baseline study of existing environmental conditions, including aquatic, atmospheric and terrestrial environments; noise and vibration; agriculture; and

social, cultural and socio-economic factors. Recognising its responsibilities to the environment, its employees and the local community, BTM established a separate department dedicated to CSR. The primary role of the Environmental Department is to ensure that Company activities are carried out in accordance with the conditions of the environmental operating licence and that the Company's core values toward the environment are sustained. Consequently, BTM operations are regulated by EPA-IE Licence P0516-04; hence, compliance with this licence must be achieved and maintained.

The Boliden Tara Mines, as a significant producer of zinc and lead, can cause numerous environmental problems in the vicinity of their facilities, including the formation of acid mine drainage, air emissions, fugitive dust emissions, habitat modification, surface water pollution, groundwater pollution, reductions in groundwater levels and noise and ground vibration. As the BTM facilities are situated on the outskirts of an expanding town, there may be negative impacts on the local environment (e.g. the River Boyne, the River Blackwater, air quality, groundwater quality and level and noise/vibration). For example, the discharge water from Tara Mines into the River Boyne contains antimony levels exceeding the permitted discharge limit of 1 mg/l and stricter regulations in the future are a possibility (Djuvfelt, 2014, p. 2). Metalloid elements, As and Sb, are present in tailings at ~800 and ~80 mg kg^{-1}, respectively, and in neutral pH leachates at 5–50 $\mu g\ L^{-1}$ (Burke *et al.*, 2023). Despite these relatively low leachate concentrations, these metaloids can cause regulatory concern because of their high toxicity and propensity for bioaccumulation. Additionally, in recent years, wells in the Robinstown and Shambo area have dried up as the groundwater level has declined by 2 m (DECC, 2022). The interviewed Environment and Health Safety (EHS) manager in Tara Mines says in this regard:

> So in the event that an issue is raised with us directly, we will investigate the issue and take ownership of it, in terms of being honest with people and saying, look if we monitor and if the data stacks up, we'll implement corrective actions. We've been very open with our neighbours that if we cause any harm in the community, we will address the issue, and we have done that.

For example, "We have in the past placed instruments, vibrating monitors, in people's houses so they can see by themselves that we're not breaking the limits in the licence". All environmental reports are available online, and for older community members, they are also printed.

The TSF contains approximately 40 million cubic metres of material, which has been stored in this area for more than 40 years. This waste is produced primarily by carbonate and silicate minerals and is disposed of as backfill within mine tunnels and in tailings impoundments capped with vegetation. Recently, BTM built an extension onto it. There was a large traffic impact: "an increase in trucks transporting materials along the route to the Dam. So, that required extensive discussions with the community" as the EHS manager explains:

> People were concerned about road safety as part of the development so the company made a contribution to our local authority to put in place safety measures, bus shelters and traffic calming measure to improve the safety along the route.

In terms of TSF safety, new standards (GISTM – Global Industry Standard for Tailings Management) require a higher factor of safety for dams (1.5 instead of the existing 1.3) and that a comprehensive environmental impact assessment (EIA) be prepared for the project, including stakeholder consultations.

Looking to the future, Tara Mines strives to uphold its exemplary environmental performance by continuing to implement best environmental practices. The key objective of environmental management at BTM is to balance the use of methods and techniques that increase efficiency and precision with minimising environmental impact. There are three full-time personnel whose core responsibilities are environmental monitoring and control. The

developed system of monitoring, carried out in the environments of the mining site and tailings storage facility, includes: air, noise, blast vibration, dust, process emissions to surface waters (River Boyne and River Blackwater), surface waters (River Boyne, River Blackwater and tributaries), groundwater, soil and vegetation and waste analysis (tailings).

6. Case study analysis: stakeholder dynamics and corporate-community relations

This section presents the results from the case study analysis, which included the perspectives of:

- stakeholder identification and perception;
- community engagement practices;
- power dynamics;
- outcomes and accountability; and
- communication and trust.

The stakeholder–manager relationships should be evaluated with descriptions of how the theory was used and how the managers reacted. Various stakeholders have different priorities; for example, for government institutions, the most important criterion is "legal criteria", whereas for mining companies it is "economic criteria". On the other hand, from the perspective of other social stakeholders, such as the local community or non-governmental organisations, numerous studies indicate that the "environmental criteria" are of greatest importance. This implies the differences among stakeholders' perceptions and interests (Okan *et al.*, 2015).

Boliden AB (public limited company) has adopted several policies and commitments supporting CSR, that include: *Environmental policy* (with "the aim of becoming the world's most climate-friendly and respected metal provider", POLY-021012-v. 8.0 from 26.12.2024), *Human rights commitment* (with vision "to be the most climate friendly and respected metal provider in the world", POLY-060227-v. 3.0 from 5.12.2024), *Biodiversity and nature commitment* (POLY-044721-v. 4.0 from 7.07.2025), *Climate commitment*, *Responsible sourcing commitment* ("with a vision to be the most climate-friendly and respected metals provider in the world", POLY-104218-v. 1.0 from 29.01.2025), *Tailing governance commitment* ("Boliden has zero tolerance for human fatalities and strive for zero harm to people and the environment", POLY-044730-v. 7.0 from 23.04.2025) and others (Boliden, n.d.). Recently (July 29, 2024), Boliden Tara Mines adopted the document *Boliden Tara Mines Stakeholder Engagement*, INST-071716-v-1.0 (Boliden, 2024d). It addresses various issues from the CSR agenda:

- human rights, including rights of indigenous people;
- grievance mechanism;
- social, environmental, and local economic context and expansion projects; and
- engagement with project-affected people.

The activities of BTM are governed by the following authorities: Meath County Council (planning and development); the EPA (environmental operating licence); the Health and Safety Authority (health and safety legislation); and the Geoscience Authority Office (mining-related activities). For a project expansion, a planning application is required from the local planning authority (Boliden, 2024d). On the other hand, for larger projects – such as new mining sites, expansions or upgrades of existing facilities or new TSFs – an impact assessment of the proposed project is required and must include project scoping,

screening, public consultations with state authorities, project-affected citizens and other relevant stakeholders.

The company must consider multiple stakeholder groups. Three internal stakeholders are of particular interest to BTM (Table 2). An equally important task is to maintain relationships with numerous external stakeholders, whose impacts and communication frequencies differ (Table 3). The first step in identifying stakeholders is to identify them. A stakeholder analysis is conducted to help BTM engage and strengthen dialogue with key stakeholders. The BTM is a heavily unionised operation, probably one of the most heavily unionised in Ireland, so they cannot be avoided. In terms of this, the interviewed EHS manager in Tara notices:

> When I joined, there were six different unions representing employees and trying to bring people with you has not always been easy. The internal stakeholders would be our employees, contractors, and union representatives. We have tried to keep our employees updated on development and plans, as they are living in the communities and are our best advocates.

Table 2 Boliden Tara Mines' internal stakeholders

Internal stakeholders	*Impact*	*Governing body*	*Communication frequency*
Employees	High	Direct/indirect	Weekly
Conctractors	High	Direct/indirect	Weekly
Union shop stewards	High	Direct/indirect	Weekly

Source(s): Authors

Table 3 Boliden Tara Mines' external stakeholders

External stakeholders	*Impact*	*Governing body*	*Communication frequency*
Environmental protection agency	High	Operational licence	Weekly
GeoScience regulatory office	High	Mining lease/licence	Weekly
Meath county council	High	Planning permissions	Weekly
Health and Safety Authority	High	Legal compliance	Monthly
Inland fisheries	Medium	Statutory consultees	Quarterly
Irish water	Medium	Statutory consultees	Infrequently
Department of agriculture	Medium	Statutory consultees	Infrequently
National parks and wildlife	Medium	Statutory consultees	Infrequently
Irish farmers associations	Low	Statutory consultees	Infrequently
Health service executive	Medium	Statutory consultees	Quarterly
Teagasc	Medium	Statutory consultees	Infrequently
An Taisce	Medium	Indirect	Infrequently
Department (dep.) of justice	High	Indirect	Infrequently
Dep. of enterprise, trade and employment	Medium	Indirect	Infrequently
Minister for busin., employment and retail	Medium	Indirect	Infrequently
Minister for European affairs	Medium	Indirect	Infrequently
Local councillors – Merath	Medium	Indirect	Infrequently
Unions – SIPTU, mandate, unite	Medium	Indirect	Quarterly
Kilberry heritage trust	Low	Indirect	Annually
Tailteann Donaghpatrick heritage group	Low	Indirect	Infrequently
Kilberry local residents action group	Low	Indirect	Quarterly
Navan and district angling ass.	Low	Indirect	Infrequently
Navan chamber of commerce	Medium	Indirect	Infrequently
Navan town public	Medium	Indirect	Infrequently
Local community groups: Kells, trim	Medium	Indirect	Infrequently

Source(s): Authors

Two groups of stakeholders (employees and unions) have recently become particularly relevant since Tara Mines downsized its production two years ago. In July 2023, the Tara mine was put in care and maintenance because of a combination of factors:

- negative zinc price development;
- overall cost level; and
- operational challenges.

The restructuring costs also include a reduction in headcount to approximately 400 full-time equivalent employees, compared with more than 600 employees before the care and maintenance period. On April 17, 2024, an agreement was signed between workers' unions and local management, significantly improving work practices and productivity (Becton, 2024). Employees began returning to work in the third quarter of 2024 as part of an onboarding and retraining program (Becton, 2024).

As the external stakeholder (Table 3), the national government provided support to the Tara miners. The Minister of Enterprise, Trade and Employment, P. Burke, stated:

> Government will ensure that all available supports are put in place for workers who choose to take voluntary redundancy, including supports for retraining and job search assistance. Tara Mines is a major employer operating in an important sector, and the Government is committed to exploring the possibility of strategic support to incentivise longer-term investment by Boliden in Tara Mines (DETE, 2024).

Various unions (e.g. The Tara Mines Group of Unions) have also expressed their concern about the future of this mine. They even call for the nationalisation of Tara Mines if the owners fail to develop a new ore body, "Tara Deep", which has the potential to maintain the facility's operation for an additional 40 years. SIPTU Organiser, Andrew McGuinness, believes that the Government needs to step in and ask some serious questions of New Boliden and its plans for "Tara Deep":

> A failure by the Government to aid this development will leave the northeast region without one of its biggest employers in the near future. This will remove a key economic lifeline for the surrounding communities (SIPTU, 2025).

The development of "Tara Deep" requires the engagement of numerous stakeholders, given the anticipated environmental impacts. In November 2021, in the exploration tunnel of "Tara Deep", a pilot hole broke. At one moment, the inflow peaked at more than two million litres an hour. During the next two weeks, a massive flood (an "inrush") resulted in the accumulation of an estimated 412,000 m^3 of groundwater in underground relief storage ponds in the Navan mine (DECC, 2022). The "transmissivity" of the site, that is, the ability of water to move through rock, was greater than Boliden experts assessed. A special review by DECC (2022) was conducted to examine the relationship between Boliden's sub-surface activities and the decline in residents' groundwater levels. W. Armostong, mining consultant, cautions that any further drilling in the "Tara Deep" area should "undergo new hydrogeological risk assessment in advance using an updated conceptualisation", while Boliden claimed:

> We have worked closely with the Department of the Environment, Climate and Communications at all times and have undertaken new hydrogeological risk assessment, as has been recommended (O'Doherty, 2023).

In an underground mine, resettlement was minimal; relocated residents experienced higher market values for their property.

Stakeholder engagement is integral, enabling critical effects to be appropriately considered and communicated. BTM conducts consultations with the public, project-affected citizens

and regulatory bodies to identify the optimal project options through multiple accounting analyses. BTM organises pre-planning consultations with Meath County Council. Open hours at BTM's Environmental Department office enhanced participation and were advertised in the Meath Chronicle and communicated to Saving the Environment of Navan Townlands. Community attention was minimal: only six people attended on December 11–12, 2023. According to the EHS manager, residents can access staff during office hours with questions about noise or dust issues. During open hours, issues raised included the duration of TSF construction, traffic concerns associated with material imports, visual impacts, dam stability, groundwater concerns and community inconvenience during construction. BTM presented project documents, photomontages, maps and traffic impact assessments. All stakeholders were offered TSF tours.

Local residents experience significant inconvenience because of the daily passage of hundreds of vehicles transporting construction materials. The local authorities do not see a benefit, as this project will not generate any additional employment. BTM therefore decided to set up a committee with the residents to support local community projects (as football teams, community initiative *Tidy Towns*, community hall, school buses, local anglers' club, Gaelic Athletic Association, Greenway route and local church). However, Ranängen and Zobel (2014) point out that social investments demonstrate involvement but do not necessarily entail community development. Such an initiative may create a risk of community dependence.

The town of Navan is located in the vicinity of Tara Mine. Thus, this mine places strong emphasis on building positive relationships with the local community. The interviewed EHS manager in Tara Mines describes the reason for such an approach:

> Our other mines [...] are located in remote areas, and the people live there as a result of the mine developing there, whereas in our case, we are located in proximity to the town of Navan. The town of Navan predated the development of the mine, which introduces additional complexity. We have established effective communication with the local communities. We frequently meet with different community representative groups, as people living in proximity to the mine have different experiences from those living in proximity to the tailings Dam. We engage with community representative groups every quarter. The engagement has improved over time with the sharing of information from both sides and an appreciation of both perspectives.

Even when there is no serious issue, the Tara Mines environmental department continues to communicate with local residents, providing updates and inviting them to meetings. According to their experiences, this type of engagement helps – "it's local, and it's personal." They argue that some employees from the BTM environmental department should be in the community every day, "monitoring and meeting the local community." For instance, the interviewed environmental engineer 1 (EE1) describes his recent experience gained in this mine:

> Recently we would have undertaken a seismic survey project over an extensive area of land, this would have involved engaging with between 100-200 landowners in the area of the survey, the project involved placing sensors and cables over and through their lands, we would have been in and on their property quite a lot. We would have been engaging with them before, during, and after the project. Any issues/concerns raised were addressed in an open office, where people could come to speak with us or contact us by phone at any time. So, any issues that arose we dealt with straight away [...] we've done the right thing wherever possible. [...] Our environmental team are out monitoring in the community all the time and liaising with locals and trying to help in whatever way we can (EE1).

Similar experience has the second interviewed environmental engineer (EE2), whose primary duty in Tara Mines is environmental monitoring:

> I've been here about nearly six years now. So, I deal with our enforcement body, the Environmental Protection Agency, so I do a lot of work liaising with them directly, any questions

> they have or if they come and do site visits or ask us for any information in particular which they do a lot of, I would look after that and I would do some monitoring as well out and about as well so you would have people asking questions and, yeah, you have to know how to respond to that and answer their questions honestly and clearly so that's kind of what I do really. It's a mix of everything, really.

BTM's employees (mostly miners) are the most important stakeholders and require a specialised engagement strategy. There were 595 employees in 2023, but only 370 when Tara Mine resumed operations in 2024 (Boliden, 2024a). They all reside in the local community, including five of the six senior managers employed on-site. Regarding this, EE1 manager notices:

> Our philosophy is: give employees as much information as possible because they're out and they're talking to people as a community. [...] We're slowly turning the perception into being a modern type of mine, less harmful, and we're very transparent with results, and people see it, so I think we're turning the story a little bit.

Tara Mine is expected to close in 2031 or 2032. Exploring the new area, "Tara Deep", could significantly improve the life of the mine. Tara Mines adopted the long-term view, and it engages with the local community:

> A lot of the areas surrounding the mine are small villages, rural communities, and we have supported community groups and initiatives where possible. Residents were concerned about road safety, and the company has contributed to local road safety initiatives. For a recent Planning application, we held a public meeting with about 80 people from the local communities in attendance. At the meeting, the company took people through the plans and particulars of the proposed development and explained what we were planning to do and answered questions from the community relating to the project (EHS).

The analysis presented shows that BTM operations depend on employees, unions, local communities, authorities, suppliers, customers and capital markets. These stakeholders are identified throughout the BTM business lifecycle, from exploration to the closure of the business site and, according to the analysis, play a central role in identifying material impacts, risks and opportunities. Stakeholder inclusiveness is one of the seven principles of the sustainability statement of the Boliden Group. The other principles are: materiality, accuracy, clarity, comparability, timelessness and reliability. The Boliden Group's stakeholder engagement is primarily directed toward three key stakeholders: its workforce, workers in the value chain and affected communities.

Tara Mines, as part of the Boliden Group, is responsible for identifying its stakeholders, the type of dialogue to be carried out and the parties responsible for it. Stakeholder engagement may be conducted in different ways with specific groups; for instance, through annual employee surveys, consultation meetings with the neighbouring community and its representatives and formal and informal meetings with authorities.

The results obtained regarding CSR practices at Tara Mines are consistent with stakeholder theory, which posits that corporate performance depends on carefully considering various stakeholders. Maintaining good relations with local communities, which are directly and adversely affected by mining activities, is of particular importance within companies' CSR programs. The Tara Mines treated the local community primarily within the beneficiary framework, thereby building partnership relations. Under these conditions, "good relations" becomes more of an issue.

As presented in the interviews, Tara Mines was involved in plenty of activities with the local community. For instance, because people in the vicinity of the mine were concerned about road safety during the development, the company contributed to the local authority to implement safety measures, bus shelters and traffic-calming measures to improve safety

along the route. Approximately 80 people from local communities participated in a public meeting on road safety issues.

It should be noted that Tara Mines was primarily engaged in CSR initiatives that benefitted most citizens, not just some. This mine has made strong relationships with the local community through partnerships with schools, charities and sporting clubs. More importantly, the community in the vicinity of BTM has grown in tandem with the mine, with the local economy in the Northeast and beyond benefiting from its continued success. This mine provides direct employment to nearly 500 employees and contractors, the majority of whom live in the locality.

Similar practices were observed elsewhere in developed countries. From a stakeholder theory perspective, Cragg and Greenbaum (2002) examined how managers evaluate companies' responsibilities to stakeholders in their case study research on British Columbia. The interviewees in their study demonstrated respect for stakeholders' interests such as physical health, wealth, comfort and convenience. development and welfare (Cragg and Greenbaum, 2002). Drawing similar conclusions from our and similar studies, one can say that mining companies tend to claim that local communities benefit from their mining activities or that the negative impacts on these communities are curbed.

7. Conclusions

The Tara Boliden Mines, a subsidiary of the Swedish public limited company Boliden Group, has adopted several documents (policies and commitments) that support CSR behaviour. Analysed materials referring to certain CSR aspects, and conducted interviews with environmental managers within Tara Mines, indicate that this mine is devoted to the principles of sustainability. For a long time, this mine has adopted various policies regarding sustainability and the environment. More significantly, many of them have been applied to mine operations and their relationships with the nearby community. One can conclude that managerial engagement with CSR is systematically integrated into Boliden's CSR practices. Boliden Mines, unlike Boliden Smelters, has a more holistic view of its operations and a more structured process for integrating numerous stakeholders' requirements.

The environmental performance of Tara Mines is vital, as:

- the location of mine is in the vicinity of an expanding town (with residential and commercial activities);
- there are possible negative impacts on population and local environment (River Boyne, River Blackwater, air quality, groundwater level and quality, noise/vibration impacts);
- it must comply with requirements of obligatory national regulation (IE Licence, EIA) and voluntary international guidelines (ICMM); and
- poor environmental performance can affect business.

These explain why Tara Mines identifies authorities as the primary stakeholders (the Environmental Protection Agency, the GeoScience Regulatory Office, Meath County Council and the Health and Safety Authority). Tara Mines, although it operates in Ireland, follows the Swedish context where the legislation is a crucial driver. In Europe, unlike in the USA, various factors are of greater importance: for example, the power of the state, environmental protection, governments' engagement in economic life, education, labour law and companies' engagement in building relationships with local communities.

Engagement with affected communities occurs through close dialogues, consultations during project development and regular follow-ups. Consultations are conducted by the general managers at business units and relevant experts and involve relevant stakeholders,

including special consultations with affected people. The purpose of these engagements is to maintain and develop strong relationships with surrounding communities, manage risks and opportunities and ensure compliance with national and international standards. The objective is to develop an understanding of community concerns and, accordingly, adapt operations to avoid, minimise, restore or offset impacts.

Based on stakeholder engagement activities and materiality assessments, Tara Mines can adopt a strategy and business model that integrates key stakeholder interests. Enhancing stakeholder engagement in areas such as expanding training programs can prepare mining companies for future increases in requirements. A conclusion is that Tara Mines, as a business unit within the Boliden Mines Area, treated all stakeholders as legitimate. This study indicates that the mine evaluated, for instance, future employees or landowners as legitimate, even though they do not possess power. A shift in relative power may result from increased media attention or heightened demand on the company. This is why Tara Mines' management maintained the stakeholder–manager relations regularly (weekly, monthly or quarterly) with the most relevant stakeholders. It is essential to note that stakeholders are not static actors, and therefore, their identification and communication are continuous tasks for the mine's management to recognise the needs and expectations of various stakeholder groups.

The analysed case shows that Tara Mines' operations are integrated into the sustainability management system throughout the entire company (Boliden), specifically within the Boliden Mines Area. This is not an easy task because of the specific characteristics of various mines.

This paper demonstrates how stakeholder management theory can be applied to CSR; however, it does not provide a deeper understanding of the factors that truly influence corporate decision-making. Presumably, this could be an interesting subject for future research. It should also avoid limitations related to confidentiality concerns that are prevalent in mining companies; there are challenges in reaching the right person and obtaining the appropriate data. Finally, the subjective perspective used in this study could be transformed into a scoring scale for measuring CSR performance in mining companies.

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