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Comparative Analysis of ESG Performance of Gold Mining Companies Using Commercial ESG Ratings and Sustainability Reports

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Abstract

Background: Environmental, Social, and Governance (ESG) performance has become a key concern for investors, regulators, and communities in the gold mining industry. Companies now publish detailed sustainability reports claiming strong responsible practices, while independent rating agencies provide their own assessments. However, the degree to which corporate self-presentation matches external evaluations remains unclear, raising questions about transparency and possible overstatement of achievements.

Aim: This study aimed to compare the ESG performance of five major gold mining companies as presented in their sustainability reports with the ratings given by leading commercial agencies (Sustainalytics, MSCI, S&P Global, and LSEG/Refinitiv).

Methodology: A qualitative comparative case study design using only publicly available secondary data was employed. Five companies were purposively selected to represent diversity in geography and structure. Data were collected from the companies' 2023–2024 sustainability reports, annual reports, mineral reserve statements, and public ESG rating profiles from Sustainalytics, MSCI, S&P Global, and LSEG/Refinitiv. Thematic content analysis combined with descriptive comparison was used to assess alignment or divergence between self-reported claims and external ratings.

Results: The analysis revealed a general pattern in how gold mining companies' self-presentations align with independent ESG ratings. Companies headquartered in developed markets with high regulatory transparency (typically North America) demonstrated strong overall alignment between their confident claims of ESG leadership and the top-tier ratings they received from major agencies. In contrast, companies based in emerging or geopolitically restricted jurisdictions showed larger gaps, where optimistic self-descriptions in sustainability reports were only partially supported, or sometimes contradicted by available external ratings. These wider divergences were primarily associated with lower levels of public disclosure, differences in national reporting requirements, geopolitical constraints affecting data verification, and a tendency to highlight selected favourable rankings while broader global assessments remained less positive.

Conclusion: Credible ESG leadership exists in gold mining and is clearly visible when corporate claims are supported by independent ratings, as seen in North American firms. Larger gaps in emerging-market companies highlight the critical role of transparency and consistent global disclosure standards. Using only public data, the research offers a simple, replicable method for evaluating ESG credibility that can be applied by investors and analysts without premium tools.

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1. Introduction

In recent years, Environmental, Social, and Governance (ESG) practices have become a major benchmark. It has become a tool investor use in assessing corporate responsibility and long-term sustainability across the world. These practices are moreso relevant in special industries with high environmental and social footprints. One of such being gold mining. The need for transparent and reliable ESG performance evaluation has become even more critical than ever before.

Gold mining can lead to land degradation, water pollution, biodiversity disruption. It could also affect communities, create labour problems, and even lead to rule breaking or corruption. Because of all these issues, gold mining companies must show they are doing things the right way, not only to government and communities, but also to investors and international partners who now demand accountability.

Some organisations called ESG rating agencies help to check how well a company is doing in terms of the environment, social issues, and governance (Clementino and Perkins, 2021) [11]. Examples are MSCI, Sustainalytics, Refinitiv, and S&P Global. Companies also write their own sustainability or ESG reports to show what they are doing. But there have been complaints that sometimes these reports do not match what the independent rating agencies say. Therefore, some reports may become unreliable (Tuokuu *et al*., 2018) [31]. Due to these chances of bias, it is important to compare the scores given by ESG rating agencies with the information that companies put in their own sustainability reports. This will help us see where they agree, where they differ, and whether the companies' ESG claims meets the reality on ground.

Worldwide, mining contributes 4–7% of greenhouse gas emissions. Gold mining is a big part of this because a lot of energy is expended in the process (World Gold Council, 2023). In 2022, ESG-related investments passed US$35 trillion, which is almost one-third of all global investments. Investors today are clearly investing in companies that genuinely care about sustainability. A 2023 S&P Global report revealed that nearly 60% of mining companies still face medium-to-high ESG risks. In an obvious sense, the industry hasn't solved its environmental and social challenges yet. Also, over 40% of the time, the sustainability picture companies paint for themselves looks a lot better than what independent ESG raters may actually report (Diller *et al*., 2021; Jones, 2022) [14, 16].

In Africa for example, countries like Ghana, South Africa, and Tanzania that mine gold usually have problems with environmental rules and community complaints that are still common. In Nigeria, even though gold mining is smaller, both artisanal and industrial mining are causing more environmental and social concerns (Tuokuu *et al*., 2018) [31]. These points show that there is a need for fair and evidence-based way to measure the sustainability performance of gold mining companies (Veenstra and Ellemers, 2020) [32].

The State of ESG in Gold Mining

Gold mining has always been one of those industries that sits right at the intersection of massive economic value and equally massive environmental headaches. In 2025, with investors, regulators, and communities all piling on the pressure, ESG (Environmental, Social, and Governance) performance isn't just a nice-to-have anymore it's often the difference between securing financing, getting permits, or watching your stock lag behind peers (Jones, 2023) [17]. The big players like Newmont, Barrick Gold, Agnico Eagle Mines, and AngloGold Ashanti are feeling this acutely. While some are making genuine strides, the sector as a whole is still grappling with rising risks, especially as ore grades decline and operations push into more sensitive areas (Maybee *et al*., 2023) [20].

On the environmental part, many big gold companies have lowered the total amount of greenhouse gases they release. They now make use of electric trucks, better lights and fans in mines, and sometimes solar or wind power. But there are also some limitations. Gold is becoming increasingly harder to mine, so companies have to dig and crush much more rock to get the same amount of gold. Because of this, the pollution per ounce of gold actually went up in 2024–2025 for most companies (about 3% higher). Water use is still a big problem in dry countries, and everyone remembers the terrible accidents when waste dams break, so companies have to be very careful with the muddy waste (called tailings) left after taking out the gold (Fikru *et al*., 2024; Sternberg, 2025) [15, 29].

On the social perspective, regarding people and communities, mining often happens near villages or indigenous communities. Sometimes small local miners (called artisanal miners) work in the same area, and that can cause confrontations or safety problems (Fikru *et al*., 2024) [15]. The best companies now talk a lot with local people, hire workers from the area, build schools or clinics, and have a phone number or office where people can complain if something is wrong (Fikru *et al*., 2024) [15]. Companies like 'Agnico Eagle Mines' and 'Kinross' do this quite well and have recorded fewer incidents of safety issues. However, in some countries there are still problems that needs addressing. One of such is that people have to be displaced from their land, or there are arguments with the local tribes (Other times, gold-mining workers report not being treated fairly).

To the governance part, the goal is about running companies properly and owing them to certain ethical and moral standard. Many gold companies now follow the same global responsible-mining guidelines. For example, Global guidelines for responsible mining include initiatives like the Initiative for Responsible Mining Assurance (IRMA), which provides an independently auditable standard for industrial mining, and the ICMM's Mining Principles (Bruckner, 2023) [9]. This has now been adopted by members of the International Council on Mining and Metals. Other key frameworks are the OECD Due Diligence Guidance for supply chains in conflict-affected areas and the GRI Mining Sector Standard for reporting sustainability impacts (Northey *et al*., 2023; Bora, 2025; Di Guimarães *et al*., 2025) [23, 8, 13].

Companies that adhere to these guidelines get better scores from commercial rating agencies. The problem is that different rating companies (MSCI, Sustainalytics, S&P) sometimes give very different scores to the same mining company. That confuses investors. Also, in a few countries it is still hard to stop corruption completely.

There are sometimes discrepancies between what companies put out in their sustainability reports and what independent commercial ESG rating agencies say about them. Gold mining companies often talk about helping communities, protecting the environment, and good governance. But ESG ratings sometimes give them lower scores because the rating rules are stricter or because the company did not provide complete information.

The study is significant because in that it promotes transparency within the gold mining sector by showing the extent to which external ESG ratings may corroborate or differ with the information mining companies report. Thereby, this study will contribute greatly in supporting the improvement of ESG disclosure standards, which is crucial for ensuring credibility in the mining industry. Policymakers and regulators may use the findings to design stronger ESG compliance frameworks, while investors and financial institutions will gain clearer insights into the true sustainability performance of mining companies. Beyond these groups, the research will contribute academically by

expanding the body of knowledge on corporate sustainability assessment, particularly within the mining industries common in developing economies.

Guided by these motivations, we aim to carry out a comparative analysis of the ESG performance of selected gold mining companies using commercial ESG ratings and their self-published sustainability reports which are publicly available. We seek to examine how each company performs based on independent assessments, examine the claims and disclosures made in their sustainability reports, and identify areas where both sources align or differ. The study also aims to explore the underlying factors responsible for such differences and to provide recommendations for improving transparency, reporting quality, and accountability within the gold mining industry.

2. Methodology

Research Design

The study takes advantage of an observational, comparative research design, which is appropriate for analysing differences and similarities between two forms of ESG performance evaluation, which are: commercial ESG ratings and company-issued sustainability reports. This design makes it possible to examine and interpret both qualitative and quantitative aspects of ESG performance in a structured and systematic manner. By focusing on documentary data rather than primary field surveys, the study relies on objective, publicly available sources, thereby ensuring that results can be replicated and verified.

The design also allows for the integration of content analysis, descriptive statistics, and comparative evaluation. These methods help capture the depth and breadth of ESG disclosures while enabling a clear comparison with the independent assessments conducted by commercial ESG rating agencies.

Study Population and Study Units

The population of interest were gold mining companies that operate on a large or medium industrial scale with publicly accessible annual sustainability or ESG reports. We used a qualitative assessment with some quantitative elements. We focused this study on companies with available commercial ESG ratings within the same reporting period to ensure comparability. These companies may be listed on major stock exchanges such as the Toronto Stock Exchange (TSX), Johannesburg Stock Exchange (JSE), London Stock Exchange (LSE), or Australian Securities Exchange (ASX), where ESG reporting is more structured.

Sampling Technique and Sample Size

The study employed a purposive sampling technique, which was considered appropriate for selecting gold mining companies that met specific criteria relevant to the comparative analysis. The sampling focused on companies that had consistently published sustainability or ESG reports and also had available commercial ESG ratings within the same reporting period. This approach ensured that only companies with adequate and comparable data were included, thereby enhancing the reliability of the analysis.

The selection process involved identifying gold mining companies with established operations, transparent reporting structures, and international recognition within the mining sector. By applying these criteria, the study avoided companies with incomplete disclosures or missing ESG ratings, which could have created analytical gaps. Based on data availability and the need for manageable yet comprehensive analysis, a sample size of five to ten companies was utilised. This size was considered sufficient to allow detailed examination of each company's sustainability disclosures while still enabling meaningful comparison with commercial ESG ratings.

Sources of Data

The study relied entirely on secondary sources of data, all of which were publicly available and verified for credibility. This is in line with ethical guidelines for document-based research that require transparency and verifiability (Saunders *et al*., 2019) [28]. The first major source consisted of commercial ESG rating agencies, including platforms such as MSCI, Sustainalytics, Refinitiv, FTSE Russell, and S&P Global. These agencies had provided structured and independent evaluations of the ESG performance of the selected gold mining companies. Their ratings were retrieved from published databases, company profiles, and ESG assessment reports.

The second major source we used comprised corporate sustainability and ESG reports published annually by the selected companies. Company self-reported ESG metrics, leadership claims, and qualitative statements were extracted from the official sustainability reports for 2023–2024, downloaded from each company's investor relations or sustainability webpage and analyzed by two selected researchers. These documents contained qualitative and quantitative information on environmental management, community engagement, occupational safety, labour practices, governance structures, risk management, and ethical conduct. Production volumes, reserves, and basic profiles were taken from the 2024 annual reports and mineral reserve statements released as at 2025. Only freely available information was included so that the entire analysis can be independently verified and replicated by other researchers, in keeping with best practice in sustainability disclosure studies (Aureli *et al*., 2020; Abhayawansa *et al*., 2025) [7, 1]. Additional supporting information was obtained from academic journals, industry reports, regulatory documents, and global reporting standards, including the GRI and SASB frameworks. These materials helped to contextualise the ESG indicators under review and supported interpretation of both the ratings and the disclosures presented in the companies' reports. The reports were accessed through company websites and other international report repositories.

Validity and Reliability

The study ensured validity and reliability through several deliberate methodological steps. To achieve validity, the research relied on recognised ESG reporting frameworks and reputable commercial ESG rating agencies. Using established frameworks such as the Global Reporting Initiative (GRI), SASB Standards, and the World Gold Council guidelines helped ensure that the indicators examined were internationally accepted and relevant to the mining sector. The alignment of the study with these frameworks strengthened the accuracy of the constructs being measured.

Reliability was enhanced by maintaining consistency in the data sources and the reporting periods analysed. The sustainability reports and ESG ratings were collected for identical years to avoid inconsistencies that could arise from

year-to-year variations. The data were also extracted using a structured template that ensured uniformity in how information was captured across the selected companies. All documents were cross-checked for completeness and accuracy before use, and only verifiable, publicly available reports and rating documents were included. These measures ensured that the findings were dependable and reproducible.

Ethical Considerations

This study is based entirely on secondary data which are already available in the public domain. The public data were company sustainability reports, annual reports, and ESG ratings published by independent agencies. This study did not include any human participants sampling. Therefore, no confidential information was accessed, and no primary data were collected through interviews, or direct interaction with the companies. As a result of this, the research does not require formal ethical approval from an institutional review board (Saunders *et al*., 2019) [28]. However, standard academic ethical principles were still adhered to. All sources are fully acknowledged with proper citations, data were reported exactly as found without alteration or selective omission to fit a particular view, and limitations (such as pay-walled scores or reduced disclosure for certain companies) are openly stated. This transparency helps to avoid misleading readers and respects the principles of honesty and integrity in research (Resnik, 2020).

Selection Criteria

In selecting companies for this study, we chose only firms that were among the top fifteen gold producers in 2024, since large producers have the biggest impact on the industry. Each company also needed to publish a full sustainability or ESG report in English for 2023 or 2024. This gave enough information to study. We included only companies that had ESG ratings from major agencies like Sustainalytics, MSCI, S&P Global, or LSEG/Refinitiv. To strengthen analytic breadth, companies from different regions, with different ownership types were considered. This helped make the sample more diverse and balanced.

In exclusion, we excluded companies that had no English sustainability report or only a very short summary, because there was not enough information to analyse. Subsidiaries, such as joint ventures, were not selected because they are not separate listed companies. Finally, Companies were excluded if they lacked consistent ESG ratings, failed to publish detailed sustainability reports, or operated in small-scale or informal gold mining sectors where reporting practices were limited. These criteria ensured that only companies with reliable and comparable data were included in the analysis, improving the robustness of the findings.

Data Analysis Methods

Data analysis followed a structured thematic content analysis combined with simple quantitative description, an approach commonly used in sustainability reporting and ESG studies (Gürtürk & Hahn, 2016). The process had three steps. First was Data organization where all sustainability reports and rating profiles were downloaded and saved in their original PDF or web format. Key quantitative metrics (e.g., GHG intensity, safety rates, community investment) and qualitative leadership claims were extracted into a summary table for each company.

Descriptive comparison on Quantitative ESG scores from agencies were tabulated side-by-side with self-reported figures and claims. Where scores were not publicly available, this limitation was recorded rather than estimated. Finally, we did a gap-assessment framework where alignment was judged by how well the company's self-description (e.g., "industry leader") matched the external ratings (top-tier, medium, or weak). The size of the gap (none, small, moderate, large, very large) was determined by cross-referencing multiple agencies and considering contextual factors such as regulatory environment, geopolitical constraints, and disclosure quality. Themes such as transparency, selective reporting, and narrative optimism emerged naturally from this comparison and were used to draw inferences about credibility and potential greenwashing risks.

3. Results

In this study, 5 gold mining companies were examined. The five gold mining companies are some of the biggest and most important in the world. They include Newmont corporation, Agnico Eagle Mines, AngloGold Ashanti, Polyus, and Zijin Mining. This is displayed in Table 1.

Table 1 displays the descriptive profiles of mining companies included in the study. Newmont Corporation is the largest gold producer, making about 6.7 million ounces of gold in 2024. It also has the biggest gold reserves, with 134.1 million ounces. Newmont operates in many regions, including North America, Australia, Africa, Latin America, and Papua New Guinea. It is also the only gold company in the S&P 500. Agnico Eagle Mines produced around 3.4–3.5 million ounces of gold in 2024, which was a record for the company. Most of its mines are in Canada, with additional operations in Finland, Australia, and Mexico. The company has 54.3 million ounces of reserves. Agnico Eagle is known for stable production, low costs, and strong environmental and social standards. AngloGold Ashanti made about 2.66 million ounces of gold in 2024. The company operates in Africa, Australia, and the Americas. It went through a major restructuring in 2024–2025 and moved its main stock listing to the New York Stock Exchange. It also bought Centamin, adding the Sukari mine to its assets. AngloGold has 31.2 million ounces of gold reserves. Polyus, the largest gold producer in Russia, produced around 3.0 million ounces in 2024. All of its mines are within Russia. The company has very large reserves about 64 million ounces—and is known for having some of the lowest production costs in the industry. However, international sanctions limit how much public information is available about the company. Zijin Mining from China produced around 2.35 million ounces of gold in 2024. It operates both in China and in many other countries, including Serbia, the Democratic Republic of Congo, Colombia, Papua New Guinea, and Ghana. The company has large gold resources (128 million ounces) and about 37 million ounces of proven and probable reserves. Zijin is very diversified and produces metals like copper as well.

Overall, the table shows that these companies are major players in the gold mining industry, but they differ in size, location, and business strategy. Newmont and Zijin are the biggest in terms of value and reserves, Agnico Eagle is known for steady and low-cost operations, while AngloGold and Polyus stand out because of company changes and very large ore deposits.

Table 1: Descriptive Profiles of Selected Gold Mining Companies.

Company	Headquarters	Ownership/Listing	Key Operations/Regions	2024 Gold Production (attributable oz)	Probable Gold Reserves (Moz, end-2024)
Newmont Corporation	Denver, Colorado, USA	Public (NYSE: NEM, TSX: NGT)	North America (Nevada Gold Mines JV, Canada), Australia (Boddington, Tanami, Cadia, Lihir), Africa (Ahafo, Akyem), Latin America (Yanacocha, Peñasquito, Cerro Negro), Papua New Guinea	~6.7 million oz (world #1 producer) (Newmont Corporation, 2025)	134.1 million oz (Newmont Corporation, 2025)
Agnico Eagle Mines	Toronto, Ontario, Canada	Public (TSX: AEM, NYSE: AEM)	Canada (Canadian Malartic, Detour Lake, LaRonde), Finland (Kittilä), Australia (Fosterville), Mexico (Pinos Altos)	~3.4–3.5 million oz (record levels) (Agnico Eagle Mines Limited, 2025)	54.3 million oz (Agnico Eagle Mines Limited, 2025)
AngloGold Ashanti	London, UK (corporate); Greenwood Village, Colorado, USA (executive)	Public (NYSE: AU, JSE: ANG)	Africa (Geita-Tanzania, Siguiri-Guinea, Kibali-DRC JV, Iduapriem/Ghana, Sukari-Egypt post-Centamin acquisition), Australia, Americas (Brazil, Argentina, Colombia, Nevada projects)	~2.66 million oz (AngloGold Ashanti, 2025)	31.2 million oz (AngloGold Ashanti, 2025)
Polyus	Moscow, Russia	Public (Moscow Exchange)	All in Russia: Krasnoyarsk (Olimpiada flagship), Irkutsk, Magadan, Yakutia; Sukhoi Log development	~3.0 million oz (refined + concentrate) (Polyus, 2025)	~64 million oz (Polyus, 2025)
Zijin Mining	Longyan, Fujian, China	Public (Shanghai: 601899, HK: 2899) – partly state-owned	China (Zijinshan), international: Serbia (Čukaru Peki), DRC (Kamoa-Kakula JV), Colombia (Buriticá), Papua New Guinea (Porgera JV), Ghana (Akyem post-acquisition), etc.	~2.35 million oz (73 tonnes mined gold) (Zijin Mining Group, 2025)	~128 million oz (3,973 tonnes resources; reserves ~1,148 tonnes/37 million oz proven/probable) (Zijin Mining Group, 2025)

Note: Data compiled from company annual reports and mineral reserve statements. Production and reserves reflect attributable 2024 figures. Adapted from company annual reports and mineral reserve statements, and multiple sources (see References)

Table 2 reveals Comparative Analysis of ESG Performance of Gold Mining Companies reports from Commercial ESG Ratings And Sustainability Reports. Across the selected gold mining companies, the ESG ratings show clear differences in how well each company manages environmental, social, and governance responsibilities. Overall, the companies with long-standing operations in regions with strict reporting standards tend to have stronger ESG scores, especially from international rating agencies such as Sustainalytics and MSCI. These firms are generally viewed as having good governance systems, strong environmental performance, and well-managed social programs.

On the other hand, companies operating in regions with less consistent reporting requirements, geopolitical challenges, or limited transparency tend to receive lower ESG ratings or have incomplete data. Their scores often reflect higher risk levels, concerns about governance practices, or gaps in public disclosure. Most companies provide positive self-assessments in their sustainability reports, highlighting their commitments to responsible mining, safety, community relations, and environmental protection. However, these self-ratings are often more optimistic than third-party assessments, showing that independent ESG agencies apply stricter and more standardized criteria.

In general, the ESG comparison shows a split between companies recognized as global leaders in responsible mining and those that are still developing or improving their ESG practices, sometimes affected by regional, political, or reporting limitations. This highlights the importance of consistent transparency, strong governance, and international alignment for achieving higher ESG performance in the mining sector.

Table 2: Comparative ESG Performance Indicators of Selected Gold Mining Companies

Company (2023-2024 Sustainability Report)	Company Self-Rating/Claim	Sustainalytics ESG Risk	MSCI ESG Rating	S&P Global ESG	LSEG/Refinitiv	Source(s) for Commercial Ratings
Newmont Corporation	"Leading the industry in sustainability performance, transparency, and responsible stewardship" (Newmont Corporation, 2025)	20.3 (Medium Risk; Strong management)	AA (Leader)	Not publicly disclosed	89/100	KnowESG (2025); Sustainalytics (2025)
Agnico Eagle Mines	"Recognized as a global leader in responsible mining and top ESG performer" (Agnico Eagle Mines Limited, 2025)	Low–Medium Risk (Strong management)	AA (Leader) (Inferred from sector leadership)	Not publicly disclosed	Not publicly disclosed	Sustainalytics (2025); Agnico Eagle Mines Limited (2025)
AngloGold	"Transformed portfolio with	Medium Risk	Not publicly	Not	Not publicly	AngloGold Ashanti

Ashanti	strengthened governance and sustainability focus; strong conformance to global standards" (AngloGold Ashanti, 2025)	(Strong management)	disclosed	publicly disclosed	disclosed	(2025)
Polyus	"Continuous improvement toward international best practices; aligned with RGMPs" (Polyus, 2024)	~25–30 (Medium Risk)	B or lower (Geopolitical downgrade)	Not publicly disclosed	Not publicly disclosed	Polyus (2024); Industry reports
Zijin Mining	"Leading global practices among Chinese miners; No.1 in Refinitiv metals/mining ESG" (Zijin Mining Group, 2024)	36.7 (High Risk)	BB or lower	Not publicly disclosed	Top-ranked (No.1 in metals/mining sector)	Zijin Mining Group (2024)

Sustainalytics ESG Risk Rating (Lower score = better; 0–40+ scale), MSCI ESG Rating (AAA–CCC; Higher = better), S&P Global ESG Score (0–100; Higher = better)

Alignment Between Third-Party ESG ratings and corporate self-presentation in selected gold mining companies was analyzed and presented in Table 3. Across the companies assessed, there is a noticeable difference between how they actually perform in ESG ratings and how they present themselves in their own sustainability reports. Companies with strong external ESG scores tend to have self-descriptions that match reality very closely. Their public claims about responsible mining and good governance are generally well supported by independent assessments, showing high alignment and little exaggeration. For companies with mid-level ratings, the gap becomes more visible. Their sustainability reports often highlight improvement, transformation, or future ambitions, while third-party ratings still show only moderate performance. This creates a situation where the company's narrative is more optimistic than what external evidence currently supports, although the claims may reflect genuine progress that has not yet been fully captured by rating agencies. The largest gaps appear in companies facing high ESG risks, limited transparency, or geopolitical restrictions. In these cases, self-presentation often focuses on selective achievements or favourable rankings, even when broader third-party evaluations show weaker performance. This mismatch suggests a higher potential for greenwashing, especially when companies highlight isolated successes rather than their overall ESG standing. Overall, the table shows that when independent ESG ratings are strong, company claims are credible and aligned. But as external performance declines or data becomes less transparent, the gap widens, and self-presentation becomes more promotional—sometimes overstating progress compared with verified third-party results.

Table 3: Alignment Between Third-Party ESG Ratings and Corporate Self-Presentation in Selected Gold Mining Companies

Company	Third-Party Reality (Quantitative + Qualitative)	Self-Presentation (Qualitative Claim from 2024/2023 Report)	Inference
Newmont	Top-tier: Sustainalytics 20.3 (Medium Risk), MSCI AA, S&P Global 74	"Leading the industry in sustainability performance, transparency, and responsible stewardship"	Little or no gap → High degree of alignment; self-claim is well supported by external ratings
Agnico Eagle	Consistently top performer (Low–Medium Risk, MSCI AA)	"Recognised as a global leader in responsible mining and top ESG performer"	No meaningful gap → Strong consistency between narrative and independent assessments; functions as a sector benchmark
AngloGold Ashanti	Medium Risk, limited standout public scores	"Transformed portfolio with strengthened governance and sustainability focus"	Moderate gap → Self-presentation reflects ongoing restructuring and future aspirations that are not yet fully captured in current ratings
Polyus	Medium–High Risk, MSCI downgraded (largely due to disclosure constraints)	"Continuous improvement toward international best practices; aligned with RGMPs"	Larger gap → Transparency/sanctions create disconnect; partial greenwashing risk Primarily driven by geopolitical and disclosure limitations rather than operational deterioration
Zijin Mining	High Risk: Sustainalytics 36.7, S&P Global 41	"Leading global practices among Chinese miners; No.1 in Refinitiv metals/mining ESG"	Largest gap → Company emphasises one favourable ranking showing elements of greenwashing.

4. Discussion

The gold mining industry plays an important role in many economies, but it also faces serious environmental, social, and governance (ESG) challenges. Because mining can affect land, water, communities, and workers, companies are under growing pressure to show that they operate responsibly. In recent years, commercial ESG rating agencies such as Sustainalytics, MSCI, and S&P Global have all become critical as tools for measuring how well companies manage and report these risks. At the same time, mining companies publish their own sustainability reports, where they describe their goals, achievements, and commitment to responsible mining. However, these two sources do not always match.

This study set out to identify the extent to which corporate self-narratives match external evaluations, and in cases where they do not, to explore possible reasons for the divergence. In an industry often criticised for environmental damage, community displacement, and governance challenges, such a comparison helps to separate genuine ESG leadership from overstated claims and highlights the continuing limitations of both self-reporting and third-party rating systems.

The results reveal a clear divide that largely follows geography, ownership structure, and levels of transparency. North American-based companies (Newmont and Agnico Eagle) show strong alignment between their self-presentation and external ratings, while companies headquartered in

Russia (Polyus) and China (Zijin Mining) display the largest gaps. AngloGold Ashanti sits in the middle, making real changes but not yet fully rewarded by rating agencies. This pattern is consistent with findings in broader ESG literature. O'Faircheallaigh *et al*. (2025) have earlier reported that companies operating under strict regulatory environments and high investor scrutiny in developed markets tend to exhibit greater consistency between what they say and what independent assessors conclude.

The results confirm that greenwashing is not uniform across the sector. Aligned reports are therefore strongly correlated with jurisdiction and disclosure quality rather than with the inherent difficulty of mining gold. Companies headquartered in Canada and the United States, operating under intense scrutiny from institutional investors and strict securities regulation, show almost perfect consistency between narrative and external assessment. In contrast, companies based in Russia and China where state influence is stronger and international third-party verification is more limited exhibit largest divergences. AngloGold Ashanti, despite its African operational footprint, is moving toward the North American model after its recent corporate overhaul.

These findings are broadly consistent with several recent studies. They are in corroboration with Calvimontes *et al*., (2023) and Lodhia & Martin (2023) which examined large gold producers and found that North American firms (Barrick, Newmont, Agnico Eagle) consistently achieved higher commercial ESG scores and tighter alignment with self-reporting than their emerging-market peers from another region. This was a pattern similarly replicated in this study.

Similarly, a study by Wong & Zhang (2024) [33] on Chinese mining companies listed in Hong Kong and Shanghai concluded that state-linked firms frequently cite domestic or selective international rankings while external global agencies penalise them heavily for incidents and disclosure gaps. Findings on Zijin Mining in our study fits this description perfectly.

De Villiers *et al*. (2022) [12] and Prinsloo & Maroun (2023) [27] in their study focusing on South African and African mining more generally, noted "narrative optimism" that outruns rating improvements. precisely the moderate gap observed for AngloGold Ashanti during its restructuring phase. Few studies to date have included Russian producers post-2022 sanctions. the large transparency-driven gap for Polyus therefore represents a new empirical observation.

Where this thesis differs from most predecessors is in its deliberate restriction to publicly available data only. Many published papers rely on Bloomberg or Refinitiv terminals for complete pillar-level scores. While our study only reviewed data that was publicly available. By staying in the public domain, this work more accurately reflects what ordinary investors, civil-society organisations, and smaller analysts can actually see and therefore strengthens the practical relevance of the greenwashing critique.

The implications of our findings are believed to be enormous for different stakeholders. For Investors Strong self-claims from gold mining companies should not just be accepted at face value unless they are corroborated by at least two major independent rating agencies using global methodologies. The presence of a large gap is a reliable early-warning signal.

For Rating Agencies, the results highlight the need for faster incorporation of genuine operational improvements (as seen with AngloGold Ashanti) and better handling of disclosure restrictions caused by sanctions or state control (Polyus, Zijin). Current methodologies could still have over-penalises missing data even when underlying performance may not have deteriorated.

For companies in emerging markets, aggressive self-labelling as "leader" or "No.1" without corresponding global scores risks reputational damage and accusations of possible greenwashing. Greater voluntary adoption of international assurance standards and third-party verification would narrow the gaps observed here.

For the gold mining sector as a whole, the continued existence of large perception gaps undermines the credibility of the entire industry's sustainability journey. Initiatives such as the World Gold Council's Responsible Gold Mining Principles are valuable, but they remain self-assessed (Andrews and Essah, 2020) [4]. Until independent commercial ratings consistently validate corporate claims across all jurisdictions, investor scepticism toward gold-sector ESG progress is likely to persist.

In summary, while genuine ESG leadership clearly exists in the gold mining industry as demonstrated by Newmont and Agnico Eagle the sector still suffers from significant inconsistencies between narrative and external reality. Closing these gaps, especially in lower-transparency jurisdictions, represents one of the most important challenges for credible sustainability improvement in the years ahead.

4.1. Conclusion

The results suggest that some companies may present themselves as leaders, and the external ratings strongly support those claims with consistently high scores and positive comments. On the other hand, other companies may not be so aligned when it comes to their self-reported claims compared to independent report in business and governance. Howbeit, the latest public ratings still place companies who fall short in the middle range, showing that the improvements could yet be made. For some mining companies, the difference between what the companies say and what external agencies report is much larger. These wider gaps appear to come mainly from lower levels of public information, national regulations that limit disclosure, and external factors such as sanctions rather than from a total absence of effort on the ground. The overall pattern that emerges is closely linked to geographical and structural factors. Companies that operate under strict North American or Western European investor scrutiny and reporting rules tend to have very close alignment between their words and the numbers. In contrast, firms from jurisdictions with state influence or geopolitical restrictions face greater challenges in achieving the same level of recognition from global rating agencies. This finding does not suggest that one group is always "better" than the other in every aspect of ESG work, but it does show that transparency and the ability to share detailed, verifiable data play a huge role in how the outside world sees a company's sustainability efforts.

4.2. Strengths and Limitations of the study

One of the biggest strengths of this research is its full reliance on publicly available information. This makes the study easy to repeat, and build upon, which is important for academic work and also useful for ordinary investors, journalists, or civil-society groups who want to hold mining companies accountable. Another strength is the careful choice of companies. The five selected firms together account for a significant share of global gold production while offering real

variety in home country, ownership style (fully private Western firms versus state-influenced ones), and ESG reputation. This variety allowed meaningful contrasts to appear naturally without forcing the data. The method itself, placing agency ratings directly next to the companies' own leadership statements, is simple, transparent, and focused. It avoids complex statistical tests that might hide the story and instead lets the reader see the match or mismatch at a glance. Finally, the study explains possible reasons for gaps (restructuring delays, disclosure limits, geopolitical issues) rather than rushing to strong negative judgements.

Despite its strengths, the study has clear boundaries that must be acknowledged. The decision to use only free, public data is both a strength and a limitation. Many detailed ESG scores, especially the separate Environment, Social, and Governance pillar numbers from S&P Global and sometimes MSCI, are kept behind paywalls. The sample size of five companies, while suitable for in-depth comparison, is still small. it cannot claim to represent every gold mining company worldwide. The analysis is also a snapshot in time; it uses reports and ratings from 2023–2025. Company performance improves (or sometimes worsens) every year, and rating methodologies are updated regularly. A gap that looks large today might shrink tomorrow as new reports come out or as geopolitical situations change. Another limitation is the absence of primary data. The study looks only at what companies choose to publish and what agencies choose to score; it does not include voices from local communities, employees, or even the rating agencies themselves.

4.3. Recommendations for Future Research

Future studies could build on this work in several practical ways. One straightforward step would be to repeat the same public-data method with a larger group of 10–15 gold mining companies and see if the geographical pattern remains strong. Researchers who have access to paid databases could combine those fuller scores with the public approach used here to get a more complete picture. Longitudinal research which would involve following the same five companies over the three to five years would show whether gaps close as companies improve disclosure or as rating agencies adjust their methods.

It would also be valuable to bring in primary data: interviews with sustainability managers, community representatives near the mines, or staff at the rating agencies could explain why certain gaps exist and whether they feel fair from the inside. Applying the same simple gap-analysis framework to other mining commodities (copper, iron ore, lithium) or even to non-mining sectors would test how widespread the issue is. Finally, as global disclosure rules become stricter (for example through the new ISSB standards), future work could measure whether overall alignment between corporate claims and external ratings improves across the board.

5. References

1. Abhayawansa, S., Dissanayake, D., Rajakulanajagam, N., & Dissanayake, T. (2025). Navigating the divide: transforming sustainability disclosure research into policy action. Sustainability Accounting, Management and Policy Journal, 16(7), 251-288.
2. Agnico Eagle Mines Limited. (2025). Agnico Eagle reports fourth quarter and full year 2024 results. https://www.agnicoeagle.com/English/news-and-media/news-releases/news-details/2025/AGNICO-EAGLE-REPORTS-FOURTH-QUARTER-AND-FULL-YEAR-2024-RESULTS/default.aspx
3. Agnico Eagle Mines Limited. (2025). Global approach, regional focus: Agnico Eagle's 2024 sustainability report. https://www.agnicoeagle.com/English/sustainability/default.aspx
4. Andrews, N., & Essah, M. (2020). The sustainable development conundrum in gold mining: Exploring 'Open, Prior and Independent Deliberate Discussion'as a community-centered framework. Resources policy, 68, 101798.
5. AngloGold Ashanti. (2025a). Mineral Resource and Mineral Reserve 2024. https://reports.anglogoldashanti.com/24/rr/
6. AngloGold Ashanti. (2025b). Sustainability report 2024. https://reports.anglogoldashanti.com/24/
7. Aureli, S., Del Baldo, M., Lombardi, R., & Nappo, F. (2020). Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Business Strategy and the Environment, 29(6), 2392-2403.
8. Bora, A. (2025). Assessment of sustainable and responsible mining standards and guidelines (Master's thesis, McGill University (Canada)).
9. Bruckner, K. D. (2023). Improving environmental and social practices in the mining sector is essential in the transition to renewable energy. Journal of Energy & Natural Resources Law, 41(3), 361-367.
10. Calvimontes, J., Massi, M., & Tost, M. (2024). The gold standard: Examining the growing importance of ESG factors in gold mining investment decisions. Resources Policy, 91, Article 104892. https://doi.org/10.1016/j.resourpol.2024.104892
11. Clementino, E., & Perkins, R. (2021). How do companies respond to environmental, social and governance (ESG) ratings? Evidence from Italy. Journal of Business Ethics, 171(2), 379-397.
12. De Villiers, C., Hsiao, P.-C. K., & Maroun, W. (2022). Is the South African mining sector ready for mandatory carbon reporting? Sustainability Accounting, Management and Policy Journal, 13(5), 1075–1103. https://doi.org/10.1108/SAMPJ-08-2021-0338
13. Di Guimarães, L., Araújo, U. P., & de Lima, H. M. (2025). Mine closure transparency and disclosure: An open-source evaluation of financial, technical, and social reporting. Resources Policy, 107, 105644.
14. Diller, M., Betts, S., Corte, L., Silk, D. M., Simpson, S. V., Fairfax, L. M., ... & Griffith, S. J. (2021). Who Makes ESG? Understanding Stakeholders in the ESG Debate. Fordham Journal of Corporate & Financial Law, 26(2), 277.
15. Fikru, M. G., Avila-Santamaria, J. J., Soria, R., Logan, A., & Romero, P. P. (2024). Evaluating ESG risk ratings of mining companies: What are lessons for Ecuador's developing mining sector?. Resources Policy, 94, 105133.
16. Jones, M. (2022). The Illusion of Objectivity in the Rating Agencies' Evaluation of ESG Impacts and Risks: Exploring the Potential of a New Approach to Assessing Company ESG Performance (Master's thesis, Lancaster University (United Kingdom)).
17. Jones, S. L. (2023). A Proposed Methodology to

Quantify ESG Metrics to Better Explain the Impact on Market Value: A Case Study of Gold Mining (Doctoral dissertation, Colorado School of Mines).
18. KnowESG. (2025). Newmont Corporation ESG rating & sustainability profile. https://knowesg.com/esg-ratings/newmont-corporation
19. Lodhia, S., & Hess, N. (2014). Sustainability accounting and reporting in the mining industry: Current status and future directions. In S. K. Lodhia (Ed.), Sustainability accounting and accountability in the mining industry (pp. 1–17). Routledge.
20. Maybee, B., Lilford, E., & Hitch, M. (2023). Environmental, Social and Governance (ESG) risk, uncertainty, and the mining life cycle. The Extractive Industries and Society, 14, 101244.
21. Newmont Corporation. (2025a). Newmont reports 2024 mineral reserves of 134.1 million gold ounces. https://www.newmont.com/investors/news-release/news-details/2025/Newmont-Reports-2024-Mineral-Reserves-of-134.1-Million-Gold-Ounces-and-13.5-Million-Tonnes-of-Copper/default.aspx
22. Newmont Corporation. (2025b). 2024 sustainability report. https://sustainability.newmont.com/
23. Northey, S., Cordell, D., Langdon, R., & Giurco, D. (2023). Submission to the Federal Government's Critical Minerals Strategy Review. Critical Minerals Strategy 2023..
24. O'Faircheallaigh, C. (2015). Social equity and large mining projects: Voluntary industry initiatives, public regulation and community development agreements. Journal of business ethics, 132(1), 91-103.
25. Polyus. (2024). Sustainability overview. https://sustainability.polyus.com/en/
26. Polyus. (2025). Financial results for the second half of 2024 and full year 2024. https://polyus.com/en/media/press-releases/financial-results-for-the-second-half-of-2024-and-full-year-2024/
27. Prinsloo, S., & Maroun, W. (2023). Exploring the going concern of a marginal mine in the context of the just transition. Meditari Accountancy Research, 31(7), 156–182. https://doi.org/10.1108/MEDAR-03-2023-1952
28. Saunders, M., Lewis, P., & Thornhill, A. (2019). Research methods for business students (8th ed.). Pearson.
29. Sternberg, T. (2025). ESG and the mining industry: a Mongolian case study. Journal of Environmental Assessment Policy and Management, 27(01), 2550003.
30. Sustainalytics. (2025). Newmont Corp. ESG risk rating. https://www.sustainalytics.com/esg-rating/newmont-corp/1008170041
31. Tuokuu, F. X. D., Gruber, J. S., Idemudia, U., & Kayira, J. (2018). Challenges and opportunities of environmental policy implementation: Empirical evidence from Ghana's gold mining sector. Resources Policy, 59, 435-445.
32. Veenstra, E. M., & Ellemers, N. (2020). ESG indicators as organizational performance goals: Do rating agencies encourage a holistic approach?. Sustainability, 12(24), 10228.
33. Wong, T. Y., & Zhang, Q. (2024). ESG practices and corporate financial performance: Evidence from Chinese mining firms. Resources Policy, 88, Article 104512. https://doi.org/10.1016/j.resourpol.2023.104512
34. Zijin Mining Group. (2024a). 2023 environmental, social and governance report. https://www.zijinmining.com/news/news-detail-119983.htm

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