

BRIEF



# BIODIVERSITY AND DEFORESTATION IN MINING STANDARDS

## About Mining Standards

Third-party standards and assurance systems are important tools used by downstream companies to evaluate the risks and impacts of mining operations in their supply chains. In February of 2024, Lead the Charge (LtC) released [An Assessment of Third-Party Assurance and Accreditation Schemes in the Minerals, Steel, and Aluminum Sectors](#) evaluating mining and metals standards including Copper Mark, the Responsible Minerals Initiative (RMI), Towards Sustainable Mining (TSM), the Aluminum Stewardship Initiative (ASI), and the Initiative for Responsible Mining Assurance (IRMA).

In this brief, Mighty Earth and Rainforest Foundation Norway complement the Lead the Charge evaluation by analyzing the biodiversity criteria of Copper Mark, RMI, TSM, ASI, and IRMA. We also evaluate the International Council on Mining and Metals (ICMM) Performance Expectations. The analysis focuses on evaluating schemes' biodiversity indicators against key recommendations highlighted in [the International Finance Corporation Performance Standard 6](#), including the recommendations to apply [the mitigation hierarchy](#) of avoiding, minimizing, restoring, and compensating for negative impacts on natural habitats. The analysis shows that there is wide room for improvement in the indicators used across the standards, so they can better reflect the adverse impacts on biodiversity and land use change, including deforestation and other adverse impacts on natural habitats.

The IRMA standard scored the highest across the board because of its better performance in multistakeholder governance, site level verification, involvement of affected rightsholders and transparency of audit findings, among other criteria. According to the LtC report, "IRMA was the only scheme to achieve full points against the criterion on multi-stakeholder governance," but fell short from attaining the maximum score since its grievance mechanism was not independently facilitated at the time and the standard is not yet ISEAL compliant.

IRMA is currently the best performing system but has room to grow when it comes to setting the gold standard for rigorous practices in biodiversity. The current revision to the IRMA standard is an opportunity to better meet this challenge.

As more and more mines undergo the auditing process, adequate standards will be a necessary tool to ensure that mining across the world is conducted in a responsible way that upholds human rights and minimizes adverse environmental impacts, including biodiversity loss. To improve their assessment of biodiversity impacts, mining standards should:

- 1 Improve the language in the criteria of standards to include explicit wording regarding **deforestation, land-use change, high conservation value and high carbon stock area**, and impacts on **natural** and **critical habitats**.
- 2 Improve their **means of verification** so that third party audits and verification bodies use **independent satellite data** to track land-use change impacts and deforestation.
- 3 Introduce clearer language and indicators for evaluating the implementation of the **mitigation hierarchy**, which **prioritizes the avoidance of natural habitats** and other critical habitats, aligning with the International Finance Corporation (IFC) Performance Standard 6.

## Mining, deforestation, and tropical forests

Conserving tropical rainforests and stopping deforestation is critical to meeting our global biodiversity and climate goals. Tropical deforestation contributes 10% of global greenhouse gas emissions, and land-use change is the main driver of terrestrial biodiversity loss. The mining sector is disproportionately impacting tropical rainforests. Between 2000 and 2020, 62% of the total direct deforestation related to mining occurred in tropical and subtropical rainforests, despite the fact that these forests only contain 29% of the world's mining areas. Demand for mining is expected to grow in the coming decades. Deforestation trends suggest that the situation is already worsening; more than 35% of all mining-related deforestation in tropical areas in the past 20 years has occurred within the last five years (2016-2020).

To minimize impacts on biodiversity, the mining industry needs to avoid mining on critical ecosystems like rainforests, by prioritizing exploring and mining in degraded areas as well as areas with low biodiversity and carbon values. Adequate Environmental and Social Impacts Assessments (ESIA) of mining operations, as well as third party mining standards and assurances, can help move the industry towards that goal. However, the methods used for biodiversity assessments in ESIA vary widely, and mining standards currently have severe limitations to preventing the degradation of natural or critical habitats like tropical rainforests.

# Shortcomings of Existing Standards

Table 1 summarizes key findings for the analyzed standards, considering basic risk assessment and risk mitigation criteria. Importantly, to date, **none of the mining standards' indicators contain explicit language to identify potential and actual impacts on natural forests, land use change, and/or deforestation.**

Regarding mitigation actions for biodiversity, the five schemes have requirements for adherence to the mitigation hierarchy as well as a commitment to No Net Loss of biodiversity (Table 1). However, in **most cases, there is little guidance on what indicators or methods should be used to achieve compliance with the mitigation hierarchy.**

While compared to other standards, IRMA's biodiversity chapter offers the most detailed set of indicators for implementation, it still remains unclear what indicators or metrics should be used for the implementation of the mitigation hierarchy, referring only the need to 'prioritize the avoidance of impacts on important biodiversity values, priority ecosystem services, and conservation values in protected areas.'" The lack of specificity in the implementation of the mitigation hierarchy has the potential to increase inconsistencies in the auditing and evaluations of mining sites, obviates important criteria for biodiversity conservation (such as land-use change), and creates scope for greater auditor discretion in the evaluation of the ESIA's.

Table 1. Overview of key biodiversity assessment criteria	Risk assessment: Does the standard include requirements for identifying and reporting in the baseline or scoping assessment...				Risk mitigation actions: Does the standard require...	
	Natural habitats*?	Key Biodiversity Areas, High Conservation Value Areas, and/or areas of critical Habitat?	Natural forests**?	Deforestation or land-use change impacts (in has)?	Adherence to the mitigation hierarchy?	Commitment to No Net Loss of biodiversity
IRMA	Yes	Yes	No	No	Yes	Yes
Copper Mark	No	Yes	No	No	Yes	Yes
TSM	No	No	No	No	Yes	Yes
ASI	No	No	No	No	Yes	Yes
ICMM	No	No	No	No	Yes	Yes

Notes: The documents revised are (1) IRMA draft 2.0 Chapter 4.6; (2) Copper Mark / RMI's Risk Readiness Assessment (RRA) v3.0 Criteria Guide - Criterion 32; and (3) TSM's Biodiversity Conservation Management Protocol.

\*As defined by IFC PS6, natural habitats are "land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions."

\*\*As defined by the Accountability Framework Initiative, natural forests "possess many or most of the characteristics of a forest native to the given site, including species composition, structure, and ecological function."

Current wording across mining standards criteria does not explicitly include the importance of **prioritizing the avoidance of conversion of natural habitats and critical habitats** in accordance with the International Finance Corporation (IFC) Performance Standard 6 (PS6). **The IFC PS6** clearly indicates that **natural and critical habitats should not be converted or degraded unless**: (1) no other viable alternatives within the region exist for development of the project on modified habitat; (2) consultation has established the views of stakeholders, including Affected Communities, with respect to the extent of conversion and degradation; and (3) any conversion or degradation is mitigated according to the mitigation hierarchy.

Therefore, across standards, there is the need to strengthen the language to ensure that companies are undertaking measurable steps to avoid and minimize overall land-use change and deforestation. **Mining operations evaluated against third-party standards should show clear language for the avoidance of conversion of natural habitats, and in particular, natural forests.** The methods used for biodiversity assessment in ESIA's vary widely. IRMA, Copper Mark and TSM all publicly publish their audits, but transparency in the sector more broadly is low, making it difficult to evaluate and compare actual performance against the IFC PS6. Below we illustrate some of the current limitations using examples from IRMA audits.

## Inconsistent Audit Evaluation

In the biodiversity section of the revised IRMA audits, some inconsistencies appear in how mines are rated. Mighty Earth and Rainforest Foundation Norway conducted a review of indicators related to biodiversity and the mitigation hierarchy. The analysis shows that because of the lack of clarity in the metrics and indicators of the standard, some auditors seem to lack the complete information necessary to assess land use impact. Below we show some examples for specific indicators of the IRMA standard (Table 2).

Table 2. Results of auditing reports of key indicators of IRMA Chapter 4.6 on Biodiversity	
Criteria of IRMA 1.0	Comments
<p><b>4.6.2.1</b> (Critical Requirement)- outlining how new and existing mines should screen for biodiversity impacts and risks</p>	<p>For indicator 4.6.2.1, one mine was given a “fully meets” rating with the following basis: “The ESIA process included a screening stage where potential impacts on biodiversity were assessed and included in the ESIA evaluation. Also, an ecosystem services assessment was prepared in May 2022, and all risks related to biodiversity, ecosystem services and protected areas are now well understood.” This explanation is not thorough enough to warrant a “fully meets” rating, as it is not clear which ecosystems are being impacted, and does not state which factors were reported on as other audits included for this standard.</p>
<p><b>4.6.4.1</b> (Critical Requirement) - outlining how a mine should follow the mitigation hierarchy</p>	<p>Some ratings do not reflect the most important part of a given criterion. For example, one mine was given a “fully meets” rating for indicator 4.6.4.1: “Several studies have been conducted, including the initial environmental impact study assessments, and continuous monitoring and evaluation of actual impacts. A hierarchical mitigation approach has been applied based on the assessment of potential and actual environmental impacts, as well as mitigating measures.” In our opinion, this basis is too general to fully meet the criteria, as it does not describe accordance to IFC’s Performance Standard 6, and the avoidance of natural and critical habitats. An audit should provide more details on the results of such studies and how the mitigation hierarchy has been applied in order to warrant a “fully meets” rating.</p>

**Table 2. Continued results of auditing reports of key indicators of IRMA Chapter 4.6**

Criteria of IRMA 1.0	Comments
<p><b>4.6.4.3.</b> Requiring that offsetting aligns with best practice.</p>	<p>For indicator 4.6.4.3, scoring was also vaguely justified in terms of what is considered to be international best practice (e.g. “The evidence listed in 4.6.4.2. indicates that the company has carried out offset activities based on local legislation and internationally recognized best practices.”)</p>
<p><b>4.6.4.4.</b> Outlining the standards for an operating company’s development and implementation for a diversity and biodiversity management plan that outlines specific objectives, key indicators, and provides a budget that demonstrates funding is available for effective mitigation.</p>	<p>In some cases, the indicator is too vague for auditors to respond to. One auditor granted a mine a “fully meets” rating for indicator 4.6.4.4 even though in the basis for rating, they stated that “They are very generic, but this IRMA requirement is also generic, and the material satisfies this requirement.”</p>
<p><b>4.6.4.5.</b> Regarding updating and adapting the biodiversity management plan</p>	<p>In scoring against indicator 4.6.4.5, audits were inconsistently specific in scoring, making it difficult to know how some mines are specifically meeting the standard. For example, one mine was rated “fully meets” on the following basis: “Kolomela embarked on a long-term biomonitoring program starting in 2009, before the existence of Anglo American’s Environmental Performance Standard for Biodiversity. The biomonitoring report is updated annually (2020 report available, pending 2021). The purpose is to manage biodiversity in all phases of their operations to achieve net positive impact. The plan will be updated and reviewed annually during the Management Review; however monthly meetings are conducted to ensure that execution of the plan remains on track. The Biodiversity Management Program consolidates existing and available biodiversity information, identifies risks, proposes mitigations, addresses residual impacts, and above all, directs the biodiversity program at Kolomela towards NPI.” While another mine was rated “fully meets” with the following comparatively insufficient explanation: “The site is updating its Biodiversity Management Plan. The revised management plan is intended to incorporate current information relating to biodiversity and ecosystem services, including Camelthorn-related research.”</p>

It is only because of the transparency in the IRMA standard that the current inconsistencies could be identified. **Less transparent standards are likely to be facing the same type of inconsistencies**, or even greater, given their weaker indicators. The analysis also highlights the reasons why transparency in the standards and auditing process is so important.

IRMA can uphold its place as the leading standard for responsible mining assurance by strengthening the language of its standards and audits to better protect biodiversity. The current revision to the IRMA standard provides an opportunity to improve indicators and language used. In doing so, truly comprehensive audits will give mines the feedback they need to operate while avoiding valuable land rich in biodiversity.

# Solutions to Strengthen Biodiversity Auditing

The most apparent biodiversity impact of extractive activities is often linked to land use change and deforestation. According to the International Panel on Biodiversity and Ecosystem Services (IPBES), land use change is the most important driver of biodiversity loss. Thus, **focusing on land use change indicators is the best way to implement the mitigation hierarchy and prevent negative impacts on biodiversity.**

We recommend that standards include indicators that **require explicit reporting of deforestation and land-use change impacts**. Mines should report on natural habitats and critical habitats in particular. There is an increasing number of tools that are mapping such habitats, including the Science Based Targets Network (SBTN) map on Natural Lands.

Current wording of standards should closely follow the recommendations of the IFC PS6, so that the implementation of the mitigation hierarchy prioritizes a clear avoidance of impacts on natural and critical habitats, including natural forests. This is also in accordance with the OECD's Handbook on Environmental Due Diligence on Mineral Supply Chains, which recommends heightened due diligence when mining operations are taking place in forests.

The “avoid” tier of the mitigation hierarchy should be prioritized in all cases, to ensure that mining is taking place on degraded land rather than taking place on forested land. **Focusing on “avoidance” commitments and actions is important because restoration efforts may never truly return biodiversity and ecosystem services to their baseline levels.**

Finally, the means of verification used by auditors should be more standardized to avoid subjective evaluations of key indicators. Publicly available and independent data sets (such as the World Resource Institute (WRI) maps of degraded lands and deforestation, SBTN's Natural Land map, or the Intact Forest Landscapes map) are good starting points that can be used by the mining industry, as well as auditors and standard setters, to better track and evaluate the biodiversity performance of mining operations, as well as land-use change.

## For more information...

Detailed information on our proposed changes to the IRMA biodiversity standard can be found here:

### **MIGHTY EARTH AND RFN PROPOSED REVISIONS**

Please see Mighty Earth's report on the environmental impacts of the nickel industry in Indonesia:

### **FROM FORESTS TO EVS**

Please see Rainforest Foundation Norway's report on mineral supply chain policies in the EV industry:

### **SHORT CIRCUITS**

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