Nature-based Solutions for a Sustainable Critical Minerals Value Chain

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MARCH 2026

COLUMBIA CLIMATE SCHOOL
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Introduction

The global demand for minerals is accelerating, placing the mining sector at the center of today's most pressing sustainability challenges. Critical minerals production is essential for a net-zero future yet mining's land footprint overlaps with sensitive ecosystems: of the sector's 101,583 square kilometers of mining concessions, 7% are in biodiversity hotspots, 8% are in protected areas, and 16% are in "wilderness" areas of high ecological integrity (Maus et al., 2022; Sonder et al., 2020).

The value chains of mining operations "both depend on and impact nature," creating a responsibility for mining actors to manage and mitigate the impacts of operations on the landscape (ICMM, 2024). **This responsibility includes addressing nature loss, supporting the well-being of communities, and contributing to the resilience of ecosystems.**

Nature-based solutions (NbS), which are based on the idea that healthy ecosystems deliver valuable services to society, offer one method of working towards these goals.

To explore how NbS might be applied to a mining context, the Columbia Center on Sustainable Investment (CCSI) and Vale Base Metals conducted a joint research collaboration combining case study analysis and expert engagement. The project reviewed NbS case studies globally to identify effective examples and recurring challenges, with a focus on the design, implementation, and governance conditions that enable, or undermine, the success of NbS initiatives.

In parallel, CCSI and Vale Base Metals convened three events at Climate Week NYC and COP30 in Belém to share the research with experts and practitioners and gather feedback. These events were intended to facilitate cross-sector dialogue about the role and opportunities for NbS in mining, particularly with regard to their successful implementation, the implications of their adoption, and the practical barriers to scaling them as sector-wide practice. The events brought together experts from industry, civil society, finance, innovation, and policy to examine how NbS are being applied today and where key leverage points for action lie.

This short report distills the insights of the case study research and events series. It seeks to synthesize the recurring themes of these conversations and inform future research and dialogue about the opportunities for NbS in the mining sector.

NATURE-BASED SOLUTIONS AND MINING

What are Nature-based Solutions?

Nature-based Solutions (NbS) are "actions to protect, sustainably manage and restore natural or modified ecosystems, which address societal challenges* effectively and adaptively, while simultaneously providing (1) human well-being and (2) biodiversity benefits." (Cohen-Shacham et al., 2016).

**Societal challenges include climate change, (lack of) food and water security, human health, natural disasters, among others.*

Informed by case study research about the uses of NbS in mining, CCSI proposes six resilience-building categories for NbS in the mining context, emphasizing NbS as a practical, impact-driven intervention. These categories identify how NbS work with specific natural resources to strengthen ecosystems and nature's capacity to carry out its intended functions. These include:

1. **Water Abstraction:** Apply circular approaches to water to create storage or management systems that preserve clean water resources.
2. **Pollution Management:** Filter contaminants to restore resource quality.
3. **Land Stabilization:** Enhancing natural barriers to prevent erosion.
4. **Landscape Recovery:** Promoting regeneration and ecological function of impacted ecosystems.
5. **Land-use Planning:** Organizing and conserving landscapes to preserve resources and promote ecological integrity.
6. **Livelihood Management:** Bolstering ecosystem services to support sustainable livelihoods and build community resilience.

TABLE 1: EXAMPLES OF NBS ACROSS THE RESILIENCE-BUILDING CATEGORIES

RESILIENCE-BUILDING FUNCTION	NBS EXAMPLE	PHASE IN MINING CYCLE	NATURE AND COMMUNITIES BENEFITS	CLIMATE BENEFITS
WATER ABSTRACTION	**Quarry lakes:** Creating reservoirs from mining pits	Reclamation	Increase water security and storage; regulate water flow	Climate resilience (drought and rainfall variability support)
	Water harvesting: Collecting and storing rainwater or stormwater to use for mining	Throughout mining lifecycle		
	Increased watershed capacity: Creating reservoirs and engineered wetlands for water security and reduced erosion	Throughout mining lifecycle		
POLLUTION MANAGEMENT	**Soil bioremediation:** Adding biological components to soil that reduce contaminants and acidity	Operation, Reclamation	Ecosystem and public health; reduce contaminants	Climate mitigation (carbon storage in biomass and soil)
	Treatment wetlands: Artificially constructed floating vegetation (e.g., on a pit lake) that boosts acid mine drainage	Operation, Reclamation		
	Vegetation screens: Purifying particulate matter, limiting noise of mining activities, acting as firewalls	Construction, Operation		
LAND STABILIZATION	**Fiber matting:** Putting natural fibers (straw, jute) on bare surfaces to prevent soil erosion	Construction, Operation	Prevent erosion; improved water and air quality	Climate mitigation (carbon capture and reduced vulnerability to extreme events)
	Cover crops: Planting crops (e.g., alfalfa, rye) to stabilize soil	Operation, Reclamation		
	Revegetation of slopes and drainage basins: Creating buffer zones to reduce sediment erosion in river catchments	Construction, Operation, Reclamation		

RESILIENCE-BUILDING FUNCTION	NBS EXAMPLE	PHASE IN MINING CYCLE	NATURE AND COMMUNITIES BENEFITS	CLIMATE BENEFITS
LANDSCAPE RECOVERY	**Afforestation:** Planting native or naturalized species to restore landscapes, sequester carbon, support biodiversity, etc.	Throughout mining lifecycle	Ecosystem restoration and function	Climate mitigation and resilience (carbon sequestration and reduced flood risks)
	Reprofiling slopes: Reconstructing natural mountain topography	Reclamation		
	Removal of alien species: Taking invasive species out of the area	Throughout mining lifecycle		
LAND-USE PLANNING	**Protected areas:** Designating land as e.g., national parks, nature sanctuaries	Throughout mining lifecycle	Ecosystem preservation; tourism	Climate resilience (better ecosystem functions for carbon cycling and climate regulation)
	Wildlife corridors: Reforestation and rewilding of degraded lands	Throughout mining lifecycle		
	Decommissioning roads: Closing roads to human use and rewilding	Reclamation		
LIVELIHOOD MANAGEMENT	**Agroforestry:** Integrating trees into cropland and/or pastures	Throughout mining lifecycle	Income generation; support ecosystem function	Climate mitigation and resilience (carbon capture and reduced vulnerability to extreme events)
	Beekeeping: Rescuing bees from mining sites, planting wildflowers to support growth of population	Throughout mining lifecycle	Income generation; support ecosystem function (pollination)	Healthy plants for pollinators increase ecosystem resilience
	Sustainable Agricultural Production: e.g., Repurposing pastureland for livestock	Reclamation	Depending on the agricultural practice: improved soil quality and income generation	Depending on the agricultural practice: enhanced soil carbon storage and better water retention

Source: CCSI

The opportunities for NbS exist throughout the mining lifecycle, from exploration to closure and rehabilitation. The planning phase remains particularly important for establishing their organization, method of integration, and strategic intent (see Figure 1).


Image by Ahmet Yüksek

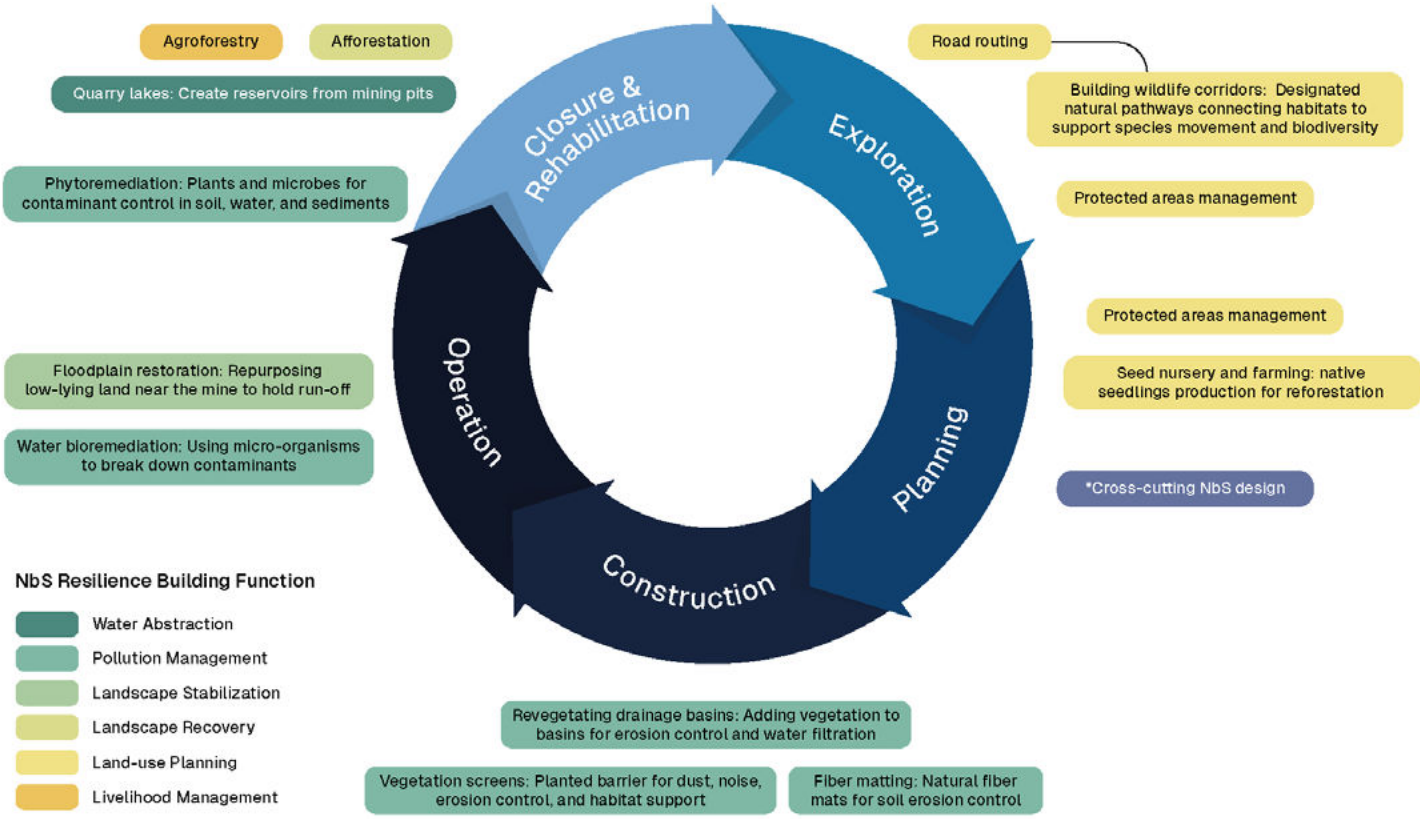

FIGURE 1: NBS IN THE MINING LIFECYCLE

Source: CCSI

Mining and critical minerals underpin the energy transition and will continue to shape the global economy for decades. The pressing challenge is to ensure that mining practices minimize environmental harm while contributing to climate resilience and just transitions. Nature-based solutions offer one emerging model for what environmentally conscious mining can look like in practice. Read the insights from our events at Climate Week NYC and COP30 to learn how experts imagine this potential.

I. Climate Week NYC Event Summary

Image by The Global Guy

As part of Climate Week NYC 2025, CCSI and Vale Base Metals convened the roundtable, *Mining Together: Nature, People, and Just Transitions*, as the first event in a series reimagining the mining sector's potential for responsible land management. The roundtable gathered industry, policy, NGO, and research stakeholders to explore how nature-based solutions (NbS) and circular economy approaches can advance biodiversity, community well-being, and climate resilience. Discussions focused on practical strategies for integrating land-use planning with ecological and social goals, lessons from real-world NbS design and implementation, and pathways for ensuring long-term value beyond mine closure.

Main Takeaways

Mining's Role: Reimagining Land Management

Mining companies have a unique opportunity to turn expected negative externalities into beneficial environmental and social outcomes. Realizing this potential requires broadening conceptions of responsible land management beyond harm reduction and compliance, and moving towards a holistic approach to stewardship that actively supports ecological recovery and community well-being. Participants highlighted some elements of effective stewardship, including embedding nature-positive thinking throughout the mining lifecycle, especially during project planning; co-designing solutions with communities to meet their needs and promote shared benefits; and embedding Indigenous peoples and local communities (IPLC)'s knowledge into all nature-positive solutions. Moreover, companies may consider asset transfers to governments or communities after closure to ensure land is responsibly managed beyond project time scales. Successfully reframing mining's role in practice will also depend on the support of a broader ecosystem of actors, including governments, investors, and civil society. Yet, mining companies themselves can be powerful catalysts for this shift, thanks to their deep national presence and their ability to convene diverse stakeholders around shared projects.

Government's Role: Enabling Policy Frameworks

Governments hosting mining operations have an essential role in creating policies and conditions that enable nature-positive outcomes. Governments can align company behavior with environmental and social objectives through the implementation of standards, contracts, and permits.

CASE STUDY: BIODIVERSITY NET GAIN (BNG) LEGISLATION IN THE UNITED KINGDOM

Beginning in 2024, development projects in the UK are legally required to deliver a quantifiable increase in biodiversity value compared to pre-project conditions. (Wentworth, 2024). This policy, which centers ecological outcomes over method (e.g., requiring a 10% net gain in biodiversity rather than planting a number of trees), appoints independent bodies to oversee the long-term management of these initiatives and ensure their implementation.

Developers must draft biodiversity net gain plans that are approved by local planning authorities (LPAs) before the project may begin. During the project, LPAs and other national bodies (including Natural England and Defra) monitor the implementation of these plans, ensuring the presence of a regulatory force throughout the development process. There are some concerns about whether LPAs have the resources to effectively maintain monitoring efforts long-term, especially as the majority of BNG agreements rely on developers to follow through on their commitments (zu Ermgassen et al., 2021).

However, the legislation empowers regulators: LPAs may charge developers monitoring fees that are associated with monitoring and reporting; moreover, it is within their rights to implement the BNG at the cost of the developer in instances where the developer does not fulfill their obligation. The legislation's emphasis on the power of enforcers reflects the important role the government plays in ensuring the implementation of environmental initiatives.

Finance's Role: Aligning Capital with Nature

Finance is also an important lever for scaling NbS, yet funding security remains a significant barrier to their implementation. Participants raised the importance of incorporating nature-related risks into financial decision-making, agreeing that a stronger understanding of the financial risks posed by nature loss could support harm avoidance. Among the potential mechanisms mentioned were a nature risk premium, imposed by financiers, in which projects that pose greater risk to nature face a higher cost of capital and are more difficult to finance, thereby incentivizing better environmental practices.

Participants also raised the potential of biodiversity compensation markets, such as the UK's BNG framework, which require developers to offset biodiversity losses by funding or developing biodiversity gains elsewhere. Voluntary carbon markets, such as REDD+, similarly provide financial incentives for nature conservation and assist in more effectively pricing temporal and ecological risk. Participants, however, recognized the limitations of these mechanisms, given that (1) compensation can only be a last resort and cannot substitute for robust avoidance efforts; (2) using biodiversity credits for offsetting would only mitigate biodiversity loss, not create "net gain;" (3) there is no agreed metric for biodiversity comparable to "CO2 equivalent," and simplified proxy metrics risk misrepresenting ecological diversity.

Dedicated financing solutions could help mobilize capital for nature-positive projects. These may include nature-linked bonds or other debt instruments, trust funds jointly financed by several mining companies, and legally mandated mine closure funds provisioned throughout the mine's life. However, without mandatory regulation, progress toward conserving and restoring nature will remain slow, hindered by fragmented action across the financial sector and difficulties in valuing nature-related risks. Regulatory compliance remains the main driver for conservation and restoration measures, especially given the inherent complexity of biodiversity. Therefore, it is essential that financing tools do not erode existing legal protections in domestic and international environmental law, and legitimize harmful practices, such as biodiversity credits for offsetting purposes.

Designing Effective NbS

Participants identified a number of elements conducive to successful NbS design.

Strong data collection and sharing was seen as important for facilitating stakeholder collaboration, fostering transparency, and designing more informed NbS. In one instance, data collection proved essential when it led a company to discover a protected species inhabiting a potential mining site. As a result of data sharing, the company and local community worked in conjunction to identify and designate potential conservation areas from the onset of operations.

Including NbS design from the early stages of the mining lifecycle is also crucial, as contract negotiation, environmental impact assessments, mining design, and mining development will determine how companies can avoid negative impacts and maximize the benefits to be gained from NbS.

Successful NbS must also be tailored to context-specific conditions. Participants noted that NbS often fail when projects are implemented without knowledge of local contexts and are thus unable to articulate benefit-sharing. This unfamiliarity with the operating environment sets companies up for inconsistent and uninformed approaches to NbS implementation. However, participants noted that the importance of site-specific approaches may also make it difficult to identify universal standards for NbS.

Community Collaboration and Co-creation

Participants emphasized that successful NbS require community consultation and engagement. Because mining companies' objectives and IPLC needs are not always aligned, co-design and co-management of NbS are essential for building resilient and equitable initiatives. Collaborating with communities from the beginning of a project strengthens buy-in and ensures benefit sharing between mining companies and affected communities. Mining companies should emphasize and prioritize the social benefits of NbS, including generating income, job opportunities, education, and air and water quality.

Models of IPLC engagement may evolve over time but should focus on resourcing and empowering communities to engage in the design, implementation, and maintenance of NbS. Participants pointed to examples where sustained and active community engagement at a legacy mining site enabled the mining company to effectively remediate negative mining impacts — in this case, water quality and wetland restoration — in support of local livelihoods. These examples highlighted that in instances where communities were included early on, the goals of NbS were more precise and thus the outcomes were more positive. Crucially, participants also noted that the effectiveness of community engagement depends on community capacity and proactivity, which underscores the importance of investing in capacity building to ensure the best outcomes.

Challenges

Ambiguity of Mining Boundaries

Participants repeatedly highlighted that one of the biggest barriers to implementing NbS in the mining context is the spatial and temporal ambiguity of mining sites. Because mining projects often operate on long timelines that outlast governments, it can be difficult to implement policies and frameworks that ensure continuity, accountability, and alignment between mining and nature-positive practices. Similarly, at the mining entity level, institutional memory can be complicated over long timescales.

In addition to difficulty enforcing NbS over prolonged timescales, it can be challenging to define the geographic boundaries of a company's responsibility because the active mining site may only be a portion of a larger land area impacted by mining activities. Participants emphasized that the land surrounding mining operations, which may be impacted by leakage, complicates understandings of impacted communities.

Thus, because the effects of mining can extend past extraction zones and persist after closure, one of the challenges in designing lasting NbS is accounting for and distinguishing responsibility across diffuse spatial and temporal scales. These challenges highlight the importance of integrating a landscape-level approach in planning NbS to ensure interventions account for downstream and cumulative impacts and support holistic ecosystem recovery.

"Nature-positive" Frameworks

There was general consensus on the importance of achieving nature-positive outcomes in mining. However, the absence of a shared definition or standardized accounting framework hinders its usefulness, as does the ambiguity surrounding the appropriate time scale for defining "nature positive." As a result, many discussions remain focused on avoiding harm rather than proactively pursuing social benefits and ecological regeneration.

While most mining companies acknowledge the importance of advancing nature-positive outcomes, participants noted that firms are often reluctant to lead these efforts independently. Collective, industry-wide initiatives may be more effective in setting ambitious standards, mobilizing resources, and signaling commitment to governments and investors.

NbS are increasingly recognized across disciplines, from finance to engineering, as a practical mode of operationalizing nature-positive goals. However, many of the challenges to successful application are familiar, particularly those pertaining to meaningful community engagement and practical implementation.

NbS in mining have tremendous potential to create business value while supporting conservation and social goals. When effectively designed, NbS can offer tangible benefits to mining operations and stakeholders, including enhancing ecosystem services, strengthening relationships with IPLC, reducing long-term environmental liabilities, and supporting climate commitments. Realizing this potential will require stronger interdisciplinary collaboration to bridge the knowledge and disciplinary gaps between the stakeholders and experts.

Since the full range of ecosystem functions remain only partially understood, attempts to quantify nature's value should be treated with caution. Nature should be conserved, restored, and sustainably managed regardless of whether it presents a compelling business case. For this reason, a combination of policy, regulatory, private and public finance is critical, and it remains essential to involve diverse competencies in the planning and design of NbS to realize the full potential of their application in mining.

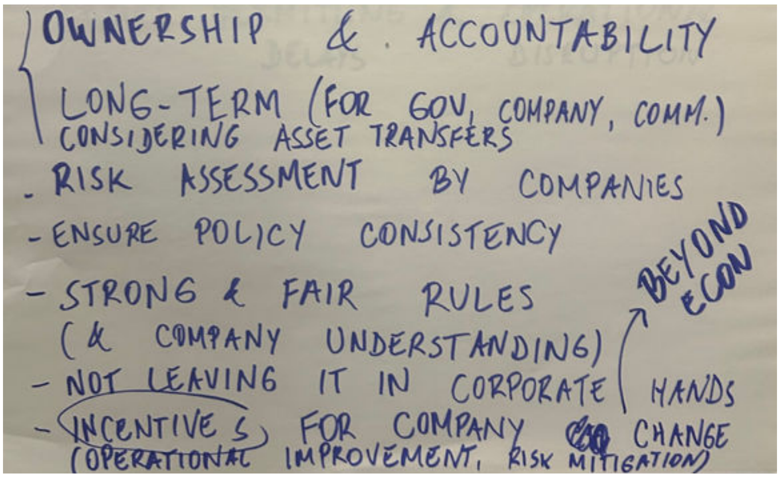

Image: Participant discussion notes from the Climate Week NYC event.

II. COP Events Summary

Image by Bruna Brandão - MTUR

The COP 30 agenda in Belém, Brazil centered on integrating nature forward solutions to climate resilience and mitigation, advancing the socio-bioeconomy approach, and strengthening the global push to protect and restore nature. Known as the "Implementation" and "Nature" COP, COP 30 provided rich thematic grounding to continue discussions from Climate Week NYC about nature-based solutions. Against this backdrop, CCSI and Vale Base Metals collaborated on two events exploring the application and potential of NbS in the mining sector. The first event, a panel conversation convening speakers from mining and nature perspectives, investigated how to scale NbS in mining operations and the conditions that best enable their development. The second event, a practitioner-oriented workshop, focused on the innovation opportunities for nature-positive interventions in the mining lifecycle (see *Events Annex* below).

Main Takeaways

Systems-based Approach to Mine Planning

A systems-based approach to mine planning involves designing and operating a mine as an interconnected part of its surrounding environment, communities, and economy, rather than treating environmental or social issues as isolated or secondary concerns.

Using a systems-based approach to mine design and the development of NbS is essential for ensuring long-term, sustainable outcomes. This is because industrial operations are often engines of development, generating impacts — and opportunities — that extend across the regional landscape and economy. Thus, rather than treating environmental and social considerations as separate questions, mining projects should consider ecosystem and community needs from the onset of project planning in order to produce a positive legacy.

Integrating NbS from the planning stage ensures biodiversity and social considerations are embedded in the core strategy, rather than being retrofitted later. NbS are not only an economical way of responding to the potential environmental and social impacts of mining operations, they also generate a multitude of benefits — including income opportunities for communities, enhanced ecosystem function, and improved water resource quality. A systems-based approach to planning is a necessary first step for NbS because it enables nature-based interventions to function over the long term by integrating ecological processes, community needs, and mining operations from the outset.

Collaborative Implementation is Essential

NbS require a collaborative, cross-disciplinary implementation process to ensure their full potential. Because one of the core elements of NbS is to produce community benefits, it is crucial they be co-designed with community needs in mind. It is especially important to account for the perspectives of IPLC in regions where mining operations are in close proximity to IPLC land. Especially in these instances, there is growing recognition of the importance of integrating Indigenous knowledge into companies' biodiversity strategies. The co-creation of environmental strategies between industry and IPLC strengthens the grounding and particular relevance of NbS while also creating pathways for companies and communities to "do business" together in ways that respect local knowledge systems and support shared land management.

Collaboration must also be sustained for the duration of operations. The lifecycle of the mine may appear a linear process from an investment or engineering perspective; however, community engagement must be iterative throughout, rather than occurring once at the onset of operations.

In addition to collaboration across stakeholder groups, NbS also involve collaboration across disciplines. Transforming NbS into practice requires continuous exchanges between technology, research, and innovators, who each contribute unique expertise. The full potential of NbS can be realized when practitioners (1) "connect the dots" between the ecological perspective and technological tools and (2) use existing skills with innovative approaches to address environmental and social challenges.

Financing and Valuation Challenges Persist

One of the barriers to scaling up NbS initiatives in the mining sector is the difficulty with measuring, reporting, and valuing their ecological and social benefits. These benefits often unfold gradually and can be hard to capture with conventional metrics; examples include improved water management, restored soil health, and enhanced ecosystem function. Because NbS operate on longer timescales, they do not always align with the short-term benchmarks typically used to evaluate project or investment success. Mining projects, however, are similarly long-term ventures, making them particularly compatible settings for NbS implementation, given companies' decades-long presence in mine sites.

The benefits of NbS are diverse and cumulative: healthier ecosystems can reduce erosion, stabilize water flows, and support biodiversity, while also lowering the likelihood of costly remediation and compliance in the future. As a result, NbS act as preventative measures that safeguard both the environment and long-term site viability.

To strengthen their role, NbS should be integrated directly into the design of the new mining operations and the initial cost structure. Equally important is the development of monitoring frameworks that can track ecological and social outcomes over time, and articulate their direct connection to operational resilience and financial performance. Without such systems, it remains difficult to capture the full value of NbS and mobilize capital towards their adoption. In the long term, the success of NbS will depend on whether the ecological and social benefits they generate are recognized as fundamental to resilient mining operations and whether they perform financially, especially when compared to alternative land uses.

Events Annex

Panel Discussion

The panel discussion brought experts from the mining industry and nature together in conversation to discuss the opportunities and challenges for scaling NbS as a sector-wide practice. Panelists were asked to think through the biggest opportunities and hesitations for NbS, and the path to institutionalizing and integrating NbS initiatives at a landscape level.

Our Panelists

- Kirsten Hund, Head of Climate and Nature, Vale Base Metals
- Jonathan Dunn, Head of Climate, Anglo American
- Marcio Sztutman, Executive Director, The Nature Conservancy (TNC) Brazil

Key Questions

- What governance or stakeholder engagement models have proven effective in ensuring NbS deliver both ecological and social benefits?
- How can NbS be operationalized to create value for local economies?
- What is the role of local communities in ensuring NbS are durable and legitimate? How can companies create and share benefits with these communities?

Practitioner Workshop

The practitioner workshop convened a small group of practitioners working in or alongside the mining sector in technical capacities. Participants were given a brief introductory presentation about NbS and their uses in mining; they were subsequently presented with a case study exercise in NbS design and application. The group was divided into two subgroups for English and Portuguese speakers.

The case study imagined an active nickel mine in Brazil experiencing a multitude of environmental challenges, including surface runoff and heavy metal contamination, catalyzed by intensified rainfall. The site's location in a local watershed further increased the operational, ecological, and regulatory risks associated with it. Participants were asked to assume the role of a multidisciplinary advisory team and propose an NbS-based strategy for runoff and water quality management. In addition to the application of NbS, groups were asked to consider how their proposed approach would integrate with existing gray infrastructure, what technologies would be necessary to operationalize their solution, and how partnerships — with communities, investors, and governments — may inform their success.

This case study scenario engaged participants in parallel discussions that surfaced distinct approaches and insights. In particular:

Group 1 (Portuguese)

Water, Biochar[1] , and Community Scale-Up

Group 1 identified solutions focused on water management, stressing the need for water contention and mitigating effluent contamination. Their core NbS strategy centered on improving soil quality using biochar1 derived from the operation's suppressed wood. This biochar is applied in regenerative agriculture and agroforestry to enhance soil permeability and prevent erosion. The success of this

1 Biochar is a type of charcoal derived from biomass (organic material e.g., wood) that has been heated in a low-oxygen environment. It is carbon rich and porous and has been used to enhance carbon sequestration.

approach hinges on creating local productive arrangements involving the operation (as the feed material supplier), technology owners, and local producers or cooperatives. This structure allows communities to apply the biochar and co-own resulting carbon credits, ensuring sustainable supplier development that integrates climate, nature, and social criteria from the start.

Group 2 (English)

Holistic Context, Systems Integration, and Systemic Change

Group 2 emphasized the necessity of understanding the holistic ecological context of the mine, such as existing water flows and vegetation retention, and using a multidisciplinary approach (including ecologists, social scientists, and engineers) rather than a sequential or siloed engineering procedure. They highlighted major systemic obstacles, primarily the need to broaden the inflexible licensing process to cover the entire mineral landscape rather than site-specific requirements. Financially, they recommended assessing investments based on multiple value buckets (e.g., reputation, revenue protection, cost savings) and potentially using concessional capital. They stressed the importance of iterative community engagement and closing the education gap to successfully connect finance, environmental, and climate information.

These parallel discussions converged on the need for both fundamental shifts in planning and governance (multidisciplinary collaboration, landscape-scale licensing, and valuing NbS for benefits beyond cost savings) and specific technological solutions (like biochar for soil health). Technology and innovation repeatedly emerged as a key lever for enabling the uptake and credibility of NbS, particularly by providing better data, tools, and monitoring. These advancements in technology will continue to support the effective design and scaling of NbS in mining contexts.

III. Conclusions

Image by Tom Fisk (Pexels)

The discussions at NYCW and COP 30 emphasized how the integration of NbS across the mining sector will require a systems-based approach to planning, iterative collaboration with communities and cross-disciplinary partners, and better approaches for evaluating and promoting ecological and social benefits. Both events also underscored how financing remains a barrier to wider adoption of NbS, despite their cost-effective nature. Tackling this challenge is critical for translating these otherwise shared ambitions of environmental resilience and community well-being into scalable, sector-wide practice.

The events at Climate Week NYC and COP 30 are part of broader efforts by VBM and CCSI seeking to further multistakeholder conversation about the opportunities posed by NbS and the partnerships and innovations necessary to support their integration. This dialogue is evolving and we welcome further engagement and input. If you are interested in engaging on these topics, please reach out to our research team, Lara Fornabaio (lf2804@columbia.edu) and Sara Saloum (srs2308@columbia.edu).

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