



**UNITED
NATIONS**

UNEP/EA.7/10



**United Nations
Environment
Programme**

Distr.: General

5 August 2025

Original: English

**UNEDITED
ADVANCE
VERSION**

**United Nations Environment Assembly
of the United Nations Environment Programme
Seventh session**

Nairobi, 8–12 December 2025

Item 5 of the provisional agenda

International environmental policy and governance issues

Progress in implementation of resolution 6/5 on environmental aspects of minerals and metals

Report of the Executive Director

I Introduction

1. This report provides an update on progress made in the implementation of resolution 6/5 on environmental aspects of minerals and metals of the United Nations Environment Assembly of the United Nations Environment Programme (UNEP).
2. In paragraph 2 of resolution 6/5, the Environment Assembly requested the Executive Director of the UNEP, subject to the availability of resources, in cooperation with Member States, to: (a) Establish a digital knowledge hub to compile, among other things, information on existing good practices relevant to the environmental aspects of minerals and metals and to share, as appropriate, that information with all Member States and stakeholders; (b) Develop capacity-building opportunities relating to environmental aspects of minerals and metals with experts on the subject from each region, including but not limited to online training; and (c) Support enhanced cooperation among Member States to strengthen the policy, technological, technical and scientific elements of the management of environmental aspects of minerals and metals.
3. In paragraph 3 of resolution 6/5, the Environment Assembly invited the Executive Director, within the scope of available resources, to strengthen the cooperation between the United Nations Environment Programme and relevant international and regional organizations and forums, and with relevant stakeholders, on environmental aspects of minerals and metals.
4. In paragraph 4 of resolution 6/5, the Environment Assembly requested the Executive Director to report to the Environment Assembly at its seventh session on the progress achieved in the implementation of the present resolution.

II Progress in the implementation of resolution 6/5

A. Establishment of a digital knowledge hub

5. UNEP has reviewed several existing databases and platforms, including those managed by UNEP as well as relevant partners, focusing on those that serve the purpose of managing knowledge on environmental aspects of minerals and metals. This review informed both hosting arrangements and technical design specifications of the proposed Digital Knowledge Hub (Hub).

6. In 2024, UNEP did a survey to gather guidance and input on the desired Hub features to ensure its design and content would be responsive to needs. 72 inputs were received from Member States, including from the National Focal Points of Assembly resolution 5/12, MEA secretariats and other stakeholders (including industry, civil society and academia).

7. UNEP organised a webinar for the Committee of Permanent Representatives, UNEA resolution 5/12 National Focal Points and other stakeholders on 11 February 2025 to brief them on the progress made in the Hub's development and to seek further guidance on next steps. The webinar also served to inform Member States that the online "community of practice" feature is operational and invited Member States to start using it.

8. Drawing from the outcomes of the survey and the webinar with the Committee of Permanent Representatives, the Hub was then designed by UNEP and the Green Growth Knowledge Partnership (GGKP) and aims to (i) provide access to knowledge products, tools and guidelines developed by UNEP; (ii) act as a gateway to facilitate access to curated knowledge and data; and (iii) provide an online platform for capacity building and online communities of practice. More specifically, the Hub is intended to provide access to information and best practices on enhancing environmental sustainability of minerals and metals, structured around seven priority themes: (a) policies, standards and tools; (b) circularity and circular economy approaches; (c) value chain aspects; (d) mine closure and rehabilitation; (e) tailings management; (f) sand mining; and (g) environmental safeguards.

9. The Hub is planned to be launched ahead of the seventh session of the Environment Assembly. Responding to recommendations emerging from the consultations, interoperability and machine-readable data architecture have been integrated into the design of the Hub, and AI functionalities will be integrated in 2026.

B. Development of capacity-building opportunities

10. UNEP has undertaken capacity development activities, including producing new knowledge products such as an online hotspot analysis module and an analytical report by the International Resource Panel; as well as organizing training workshops and webinars, in collaboration with government and non-government experts. These activities, described below, contributed to raising awareness and strengthening knowledge on the environmental aspects of minerals and metals along the entire life cycle.

11. UNEP has developed a dedicated module on mining in the Sustainable Consumption and Production – Hotspot Analysis Tool (SCP-HAT)¹ and dissemination is taking place through activities of the UNEP Life Cycle Initiative. For example, in May 2025, the UNEP life cycle team presented the tool to experts of the UN Commission on Trade and Development, and contributed country profiles in the context of a project in Zambia, Namibia and Madagascar on economic diversification from their current mining focus.

12. In November 2014, UNEP organized a regional stakeholders workshop on the environmental and

¹ [Module 2 – SCP Hotspots – SCP Hotspots Analysis](#)

social aspects of critical energy transition minerals and the African Mining Vision, with the African Union Commission-African Mineral Development Centre, African Development Bank and the Pan African Climate Justice Alliance, where capacity building was provided to participants on environmental impact assessments, strategic environmental assessments, and artisanal and small-scale mining by UNEP, and on mine closure best practices by the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF).² The workshop also integrated lessons from the UNEA resolution 6/5 and the recommendations of the UN Secretary-General's Panel on Critical Energy Transition Minerals into practical guidance for participants. Representatives from 18 African countries participated in the workshop.

13. In 2024, to inform and improve the environmental sustainability of the mining sector in the country level, UNEP collated best practices and tools on international environmental sustainability, drawing from background documents developed by UNEP, from written and oral submissions made by Member States and other partners during the intergovernmental process held in 2023 pursuant to UNEA resolution 5/12, and from contributions made by partners such as IGF, the Global Battery Alliance and the secretariat of the Industrial Accidents Convention.

14. These best practices and this partnership approach helped inform a technical assistance model piloted by UNEP to respond to country requests, in collaboration with partners. This model was used in December 2024 to respond to a request from Zambia while it was developing an ESG framework for its mining sector and to South Africa's G20 priority workstream on critical minerals following a request by its knowledge partner, the Council for Scientific and Industrial Research (CSIR).

15. In 2025, the report 'Financing the Responsible Supply of Energy Transition Minerals for Sustainable Development' was launched by the International Resource Panel. It explores how the finance sector can play a critical role in promoting responsible mining, particularly to enable curb the rising demand for energy transition minerals such as lithium, cobalt, and rare earth elements.³ The key findings of the report have been used to inform policy and technical conversations in several events such as at the Investing in African Mining Indaba 2025, the World Circular Economy Forum 2025 and the 4th International Conference on Financing for Development.

16. UNEP also organized six events on minerals and metals management through its Geneva Environment Network, in partnership with UNEP/GRID-Geneva, the UN Economic Commission for Europe, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), the Forum on Trade, Environment and the SDGs (TESS), the International Institute for Sustainable Development (IISD), and the World Resources Forum (WRF), as part of the Geneva Dialogues on Mineral and Metal Resources series.

C. Support for enhanced cooperation among Member States

17. UNEP has supported enhanced cooperation among Member States to strengthen the policy, technological, technical and scientific aspects of the management of environmental aspects of minerals and metals, such as with Member States through the Committee of Permanent Representatives, the G7 or G20.

18. UNEP and the Global Mercury Partnership in collaboration with the Secretariat of the Minamata Convention are developing guidance for countries to undertake review processes on the implementation of national strategies addressing mercury use in artisanal and small-scale gold mining. This supplementary guidance document will support Parties to the Minamata Convention in fulfilling their obligation for periodic review under Article 7. The guidance will be submitted for consideration at the sixth Conference of the Parties to the Minamata Convention in November 2025.

19. In November 2024, UNEP launched the working paper "Critical Transitions: Circularity, Equity, and Responsibility in the quest for Energy Transition Minerals," which serves as a technical resource for policy advocacy, policy guidance and capacity-building activities.⁴ The analysis and findings of this

² [Stakeholders Consultative Workshop on Environmental and Social Aspects of Critical Energy Transition Minerals and the African Mining Vision](#)

³ [Financing the responsible supply of energy transition minerals for Sustainable Development | Resource Panel](#)

⁴ [Critical Transitions: Circularity, equity, and responsibility in the quest for energy transition minerals - Working Paper](#)

working paper has informed scene setting interventions in, for example, the G7 webinar described in the next paragraph.

20. In June 2025, Environment and Climate Change Canada (ECCC), and the Global Alliance on Circular Economy and Resource Efficiency (GACERE) supported by UNEP, co-hosted an online G7 webinar on Circular Economy and Resource Efficiency for Critical Minerals, with 76 participants including members of G7 and GACERE. The aim was to explore good practices, highlight opportunities, and share solutions to strengthen circular economy and resource efficiency in the value chain of minerals critical to the energy transition, while identifying potential areas for G7 leadership.

21. In 2025, UNEP has also been providing technical inputs on best practices on environmental sustainability, such as on environmental assessments, tailings management or circularity to the task force on the environmental aspects of critical minerals under the South African G20 Presidency.

22. Regarding sand, in 2024, UNEP/GRID-Geneva organised two Sand and Sustainability Roundtables, engaging over 80 global experts from academia, industry, civil society, and government. These roundtables focused on the impact of sand mining on biodiversity, and on the strategic importance of sand in the built environment. They are informing the development of the 2025 Sand and Sustainability Report, which will provide data on extraction rates, environmental impacts, and policy recommendations. Moreover, the Marine Sand Watch platform, which was launched in 2023, currently monitors approximately 60 percent of global dredging vessels. Analysis conducted through the platform has identified approximately 6 billion tons of marine sand extracted annually and globally, equivalent to over 1 million trucks daily. In 2025, the platform has been enhanced to help evaluate the potential dredging impacts on high biodiversity areas and to calculate global dredging volumes more accurately. This information enables Member States in developing evidence-based policies for sustainable sand management.

D. Strengthening cooperation with relevant international and regional organizations

23. UNEP has continued its collaborative efforts and partnerships to advance the environmental sustainability of the management of minerals and metals along their full life cycle.

24. UNEP has been engaging in multiple fora, contributing environmental sustainability thinking. The partnership formalised with the IGF demonstrates the potential of strategic collaboration to amplify impact with limited resources. The partnership leverages IGF's network of 85 member countries and established technical expertise, enabling UNEP to deliver on multiple aspects of resolution 6/5 in a coordinated manner, including on knowledge development and country support. Furthermore, in 2024 and 2025, UNEP has also contributed to multistakeholder conversations held at the OECD Forum on Responsible Minerals Supply Chains, and to the Sustainability Initiative of the Future Minerals Forum.

25. UNEP has supported the secretariat and Technical Advisory Group of the United Nations Secretary General Panel on Critical Energy Transition Minerals.⁵ The Panel was established to seek to build trust between governments, local communities and industry, by addressing issues relating to equity, transparency, investment, sustainability and human rights. It built on existing initiatives, particularly the UN Working Group on Transforming the Extractive Industries for Sustainable Development and its 'Harnessing Critical Energy Transition Minerals for Sustainable Development' initiative. The Panel brought together 25 governments and 14 other actors representing intergovernmental and international organizations, industry and civil society. In August 2024 UNEP also hosted the second meeting of the Panel in Nairobi, and alongside the Executive Director of UNEP, the Deputy Administrator of the United Nations Development Programme and the Assistant Secretary General of the Executive Office of the Secretary General, briefed the Committee of Permanent Representatives on the progress made by the Panel.

26. The Panel's report 'Resourcing the energy transition principles to guide critical energy transition Minerals Towards Equity and Justice' was released in September 2024 and comprises a set of seven voluntary Principles and five Actionable Recommendations.⁶ UNEP leveraged the outcomes of the

⁵ [The UN Secretary-General's Panel on Critical Energy Transition Minerals | United Nations](#)

⁶ [report_sg_panel_on_critical_energy_transition_minerals_11_sept_2024.pdf](#)

UNEA 5/12 intergovernmental process and the UNEA 6/5 mandate, including key elements such as the life cycle thinking, value chains, traceability, transparency and accountability, material efficiency, and circularity in the Actionable Recommendations and provided input on environmental rights, environmental impacts and the concept of ‘beyond doing no harm’ to its seven Principles.

27. In 2024, UNEP participated in the 13th Conference of Parties of the UNECE Industrial Accidents Convention and contributed environmental inputs to its 2025-2026 biennial workplan.

28. UNEP also participated in the UNECE Resource Management Week (held from 24-28 March 2025 in Geneva, Switzerland) and contributed to an official session exploring the Clean Energy Transition Minerals Principles and Actionable Recommendations developed by the UN Secretary-General's Panel on Critical Energy Transition Minerals. The discussion focused on environmental and social safeguards in mining and processing, as well as practical steps for strengthening responsible mineral extraction, processing, and trade.

29. UNEP contributed to the Asian Development Bank database on critical minerals trade data and related policies, developed jointly with the World Trade Organization (WTO). UNEP's inputs focused on national environmental protection policies gathered during the UNEA 5/12 intergovernmental process, in particular from the written submission made by Member States and oral contributions during the meetings held in 2023.

30. UNEP has contributed technical advisory support to the Global Investor Commission for Mining 2030, facilitating dialogue between Member States, academia, private sector entities, and investors on responsible mining practices and environmental sustainability approaches.

31. UNEP has continued collaboration with the International Council on Mining and Metals (ICMM) and the UN-backed Principles for Responsible Investment (PRI) leading to the establishment of the Global Tailings Management Institute (GTMI). This institute, an independent, multi-stakeholder governed organization dedicated to improving the safety of mine tailings facilities worldwide, was launched on 21 January 2025.⁷ Based in South Africa, the GTMI will audit tailings facilities to review their compliance with the Global Industry Standard on Tailings Management (GISTM), which was co-developed by UNEP, ICMM and PRI and launched in 2021. To date, over 200 mining companies have committed to adopting the Global Industry Standard on Tailings Management.⁸

III. Lessons learned

32. Implementing resolution 6/5 has benefited significantly from the support of Member States, and in particular, the UNEA resolution 5/12 National Focal Points and other stakeholders. One clear example is the guidance they provided to the design of the Digital Knowledge Hub, by identifying priorities, building and strengthening partnerships, and gathering and contributing technical inputs.

33. The networks established through UNEA resolution 5/12, including appointed National Focal Points and other stakeholders, provided a robust community for implementing UNEA resolution 6/5. UNEP continues to build on this engagement and partnerships to leverage synergies and avoid duplication of efforts.

34. The UN Secretary-General's Panel on Critical Energy Transition Minerals has contributed significantly to strengthening and accelerating the policy and technical conversations among key actors of the global minerals value chains and to building trust. The Panel's report provides a valuable framework for UNEP's contribution towards the implementation of activities supporting the Principles and Actionable Recommendations, including under this resolution.

35. Establishing strategic partnerships, like those with IGF, have proven effective in pooling expertise

⁷ [New independent institute to drive and assess the implementation of Global Industry Standard on Tailings Management](#)

⁸ <https://www.churchofengland.org/about/leadership-and-governance/national-church-institutions/church-england-pensions-board/pension>

and resources, enabling combined resource mobilization, and enhancing technical assistance to countries. Such partnerships avoid duplication of efforts and maximize impact with limited resources. UNEP will aim to identify and formalise additional partnerships to institutionalise its collaborative efforts to deliver on both relevant UNEA resolutions and approved Medium-Term Strategy and Programme of Work.

36. The science-policy underpinnings of UNEP's work on minerals and metals continue to be informed by lifecycle approaches and relevant work of the UNEP-hosted International Resource Panel. This scientific foundation strengthens the credibility and impact of implementation activities.

37. Data availability, especially public access to reliable information on minerals and metals value chains, remains constrained. This limitation affects the quality and coverage of the digital knowledge hub, and impacts evidence-based policymaking by Member States.

38. Adapting to evolving market dynamics and policy landscapes poses additional strategic and operational challenges. The volatility in mineral and metal markets, changes in national policies, and geopolitical tensions affecting supply chains create a complex context for implementing the resolution.

39. Lack of convergence among the increasing multiplicity of initiatives may disperse efforts. The proliferation of initiatives related to minerals and metals, while indicating growing attention to the issue, requires careful coordination to avoid fragmentation and duplication.

IV. Recommendations and suggested actions

40. The report of the Executive Director to the Environment Assembly at its seventh session⁹ highlights the importance of ensuring responsible mining and sustainable use of minerals and metals needed for the digital and energy transitions, and proposed that the Environment Assembly may wish, to:

- a) Task UNEP with working on environmental aspects of minerals that are critical for the industries of the future, in coordination with Member States; thereby, based on individual country requests, support the delivery of relevant elements of multilateral environmental agreements;
- b) Invite UNEP to support mineral-producing countries in accessing environmentally sound technology and finance and developing capacities to increase resource extraction efficiency in order to prevent environmental contamination, remediate legacy areas and reduce pressure on biodiversity and land;
- c) Invite UNEP to support Member States to identify appropriate policy and market signals required by the recycling and manufacturing sectors, enabling them to take advantage of circular economy approaches to manage demand pressures;
- d) Task UNEP with supporting the building of transparency and traceability opportunities to ensure stable and resilient supply chains and markets. Such actions would help strengthen the social compact with diverse stakeholders and build trust, which are critical to increase resilience in the sector.

41. The Environment Assembly may also wish to:

- a) Encourage Member States and other stakeholders to scale up and accelerate their actions to support the environmentally sustainable management of minerals and metals along their full life cycle, in line with the 2030 Agenda.
- b) Provide additional and sufficient funding to enable UNEP and UNEA to continue providing a neutral platform that enables multi-stakeholder dialogues and strengthen their capacity to continue and more comprehensively support Member States and stakeholders.

⁹ UNEP/EA.7/2: Priorities for advancing sustainable solutions for a resilient planet, Report of the Executive Director: Part 1, para.15, <https://wedocs.unep.org/bitstream/handle/20.500.11822/47435/EDReport.pdf>