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International environmental policy and governance issues

## **Progress in the implementation of resolution 5/12 on environmental aspects of minerals and metals management**

### **Report of the Executive Director**

#### **I. Introduction**

1. The present report provides an update on progress made in the implementation of resolution 5/12 of the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) on environmental aspects of minerals and metals management. In paragraph 2 of resolution 5/12, the Environment Assembly requested the Executive Director of UNEP, subject to available resources, to convene transparent and inclusive intergovernmental regional consultations, including with relevant international organizations and regional and multilateral environmental agreements, with relevant stakeholders acting as observers, to feed into a global intergovernmental meeting, with the aim of developing non-prescriptive proposals to enhance the environmental sustainability of minerals and metals along their full life cycle, in line with the 2030 Agenda for Sustainable Development. In paragraph 3 of the resolution, the Environment Assembly decided that the regional consultations would take stock of existing activities, identify opportunities for enhanced international cooperation, and identify possible ways forward for consideration by the Assembly at its sixth session, as appropriate.
2. In paragraph 4 of resolution 5/12, the Environment Assembly requested the Executive Director, through the Global Resource Information Database – Geneva (GRID-Geneva) to strengthen scientific, technical and policy knowledge with regard to sand, and to support global policies and action regarding the environmentally sound extraction and use thereof.
3. In paragraph 5 of resolution 5/12, the Environment Assembly requested the Executive Director, subject to the availability of resources, with the engagement of the secretariats of relevant multilateral environmental agreements, organizations and stakeholders, as appropriate, and bearing in mind the launch of the *Global Industry Standard on Tailings Management*, to compile a report on knowledge gaps in relation to the environmental aspects of tailings management.
4. In paragraph 6 of resolution 5/12, the Environment Assembly requested the Executive Director to report to it at its sixth session on the progress achieved in the implementation of the resolution, including through a summary report on the consultations for consideration by the Assembly at that session.

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\* UNEP/EA.6/1.

5. For the sake of clarity, in the following sections, intergovernmental regional consultations are referred to as “regional consultations”, the global intergovernmental meeting is referred to as the “global meeting”, and the entire intergovernmental consultation process (regional and global meetings) is referred to as the “intergovernmental process”.

## II. Progress in the implementation of resolution 5/12

### A. Intergovernmental process on environmental aspects of minerals and metals management

6. In October 2022, UNEP invited Member States to appoint a focal point for the resolution 5/12 intergovernmental process, which resulted in the nomination of 115 national focal points.<sup>1</sup>

7. In December 2022, in accordance with paragraphs 2 and 3 of resolution 5/12, the President of the sixth session of the Environmental Assembly, Leila Benali, Minister of Energy Transition and Sustainable Development of Morocco, appointed two Co-Chairs for the intergovernmental process: Saqlain Syedah, High Commissioner and Permanent Representative of Pakistan to UNEP, and Martine Rohn-Brossard, Deputy Head of International Affairs Division of the Swiss Federal Office for the Environment.

8. UNEP set up a dedicated webpage for all information and resources pertaining to the resolution 5/12 intergovernmental process.<sup>2</sup>

9. Under the guidance of the Co-Chairs, UNEP developed a background document to inform the regional consultations,<sup>3</sup> which was disseminated in March 2023. It identified global trends in environmental aspects of minerals and metals management and took stock of existing activities at the regional and international levels, building on knowledge products developed during the implementation of Environment Assembly resolution 4/19, on mineral resource governance.

10. The Co-chairs, with UNEP support, organized a series of virtual briefings (see table 1) to support the preparedness, raise the awareness and encourage the participation of Member States and other stakeholders throughout the intergovernmental process.

Table 1  
Virtual briefings

<i>Target</i>	<i>Dates</i>	<i>Focus</i>
National focal points and members of the Committee of Permanent Representatives to UNEP	14 February 2023 27 March, 19 April and 9 June 2023	Overview of resolution 5/12 and proposed plan of implementation Overview of background document and consultation on the proposed objectives and agenda for each regional consultation and the global meeting
Geneva-based missions and stakeholders from civil society, industry and academia	28 February and 23 August 2023	Updates on preparations for the regional consultations and the global meeting
United Nations Environment Management Group (United Nations entities and secretariats of multilateral environmental agreements)	30 August 2023	Nexus Dialogue on Environmental Aspects of Minerals and Metals Management to create synergies among workstreams across the United Nations system.

11. Five two-day regional consultations were held between April and July 2023, in a hybrid format (see table 2).

<sup>1</sup> The list of national focal points is available at <https://www.greenpolicyplatform.org/guidance/list-unea-resolution-512-national-focal-points-0>.

<sup>2</sup> See <https://www.greenpolicyplatform.org/initiatives/environmental-aspects-minerals-and-metals-management>.

<sup>3</sup> Available at <https://www.greenpolicyplatform.org/guidance/background-document-guide-intergovernmental-regional-consultations-unea-512>.

Table 2  
Regional consultations

<i>Participants</i>	<i>Location</i>	<i>Dates</i>
Eastern European States <sup>a</sup>	Geneva	24–25 April 2023
Western European and other States <sup>b</sup>	Paris	27–28 April 2023
Latin American and Caribbean States <sup>c</sup>	Santiago	17–18 May 2023
Asia-Pacific States <sup>d</sup>	Bangkok	15–16 June 2023
African States <sup>e</sup>	Dakar	5–6 July 2023

<sup>a</sup> See summary report at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/EEG-Report-FINAL.pdf>.

<sup>b</sup> See summary report at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/WEOG-Report-FINAL.pdf>.

<sup>c</sup> See summary report at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/GRULAC-Report.pdf>.

<sup>d</sup> See summary report at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/Asian-Pacific-Group-Report-V3.pdf>.

<sup>e</sup> See summary report at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/African-Group-Report-V3.pdf>.

12. All regional consultations were organized by UNEP. Furthermore, the Latin American and Caribbean States regional consultation was hosted by the Government of Chile, and the African States regional consultation was hosted by the Government of Senegal. A total of 79 Member States and 16 accredited observers and other international organizations participated in the five intergovernmental regional consultations, where Member States shared information about national and regional practices and initiatives, including good practices and challenges faced, and explored areas for enhanced international cooperation aimed at improving the environmental sustainability of metals and minerals life cycles. Each regional consultation led to the identification of several non-prescriptive proposals, supported by varying numbers of countries, for further consideration at the global meeting.

13. Member States and accredited organizations were also invited to make written submissions by 31 July 2023, in addition to or in lieu of oral contributions at the regional consultations. A total of 30 written submissions, consisting of 21 from Member States<sup>4</sup> and nine from observer organizations,<sup>5</sup> were received and published online prior to the global meeting.

14. UNEP developed a background paper<sup>6</sup> for the global meeting under the guidance of the Co-Chairs. The paper summarized the regional consultation process and analysed its outcomes. It presented 24 non-prescriptive proposals for discussion at the global meeting, under three thematic groupings: policies and tools, value chain aspects, and platforms for international cooperation.

15. The global meeting was held on 7 and 8 September 2023 in Geneva, in a hybrid format, with the participation of 99 Member States and 60 accredited observers and organizations.<sup>7</sup> Participants were presented with a summary from each regional consultation. A technical panel discussed investor, intergovernmental and civil society perspectives. The various non-prescriptive proposals were discussed in informal breakout groups and in plenary session, with interpretation in all United Nations languages, with the aim of streamlining, refining and complementing them. The proposals included:

(a) **Global assessment of existing instruments and standards.** Collection and assessment of existing instruments and standards in the private and public sectors were proposed. This work will be done in cooperation with multilateral environment agreements and other stakeholders, building on previous work in the area. The assessment was seen by many as a prerequisite for future work, including consideration of how the state of knowledge related to the other non-prescriptive proposals.

<sup>4</sup> A compilation of the submissions received from Member States is available at [https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/Member%20States\\_merged.pdf](https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/Member%20States_merged.pdf).

<sup>5</sup> A compilation of the submissions received from observers is available at [https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/Accredited%20organisations\\_merged.pdf](https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/Accredited%20organisations_merged.pdf).

<sup>6</sup> Available at <https://www.greenpolicyplatform.org/guidance/background-document-guide-global-intergovernmental-meeting-unea-512-1>.

<sup>7</sup> The meeting and its outcomes are summarized in a Co-Chairs' report, available at <https://www.greenpolicyplatform.org/sites/default/files/downloads/tools/UNEA%205.12%20co-chairs%20summary%20report%20-%20advance.pdf>.

(b) **Capacity-building, technical assistance and technology transfer.** There was general agreement on the need for technical assistance, financial support and technology transfer for developing countries, and on the potential for knowledge to be leveraged between Member States, including across regions. Member States highlighted the need for support or action to address local needs and conditions and factor in national capacities and frameworks. The need to avoid duplication with other entities, instruments and initiatives was also repeatedly emphasized throughout the meeting.

(c) **Enhanced international cooperation.** Proposals on this topic related to enhanced collaboration and cooperation between international organizations, including multilateral environment agreements, and enhanced collaboration between UNEP and the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development.

(d) **An open-ended/technical working group.** Participants in the global meeting showed keen interest in having a platform to support continued peer-to-peer knowledge exchange among national focal points, and in how such a platform could help advance the dialogue, enable further refinement, and catalyse action identified under the various non-prescriptive proposals.

16. The intergovernmental process identified a multitude of existing frameworks, initiatives, standards and policies applicable to the life cycle of minerals and metals. Participants also noted the range of international and regional organizations and multilateral environmental agreements whose work is relevant to the scope of Environment Assembly resolution 5/12, identifying more than 30 examples.

17. The intergovernmental process highlighted, including in a non-prescriptive proposal, the need for intergovernmental organizations to enhance their cooperation and information exchange in order to identify linkages, avoid duplication of effort, and provide Member States with a more harmonized and streamlined approach to enhancing the environmental sustainability of minerals and metals along their full life cycle.

## **B. Strengthening knowledge concerning environmentally sound extraction and use of sand**

18. On 26 April 2022, the Global Resource Information Database (GRID-Geneva) launched *Sand and Sustainability: 10 Strategic Recommendations to Avert a Crisis*. The report consolidates the scientific, technical and policy dimensions of sand and sustainability issues, highlighting the current impact of extraction, use and (mis)management and recommending actions to address environmental sustainability needs alongside justice, equity, technical, economic and political considerations. The launch drew substantial media attention, with an estimated reach of close to 1 billion people. The report findings were also presented at 20 international events and the five regional consultations.

19. Contributing to the implementation of paragraph 4 of resolution 5/12, in September 2023 GRID-Geneva, Global Fishing Watch and other partners launched Marine Sand Watch, the world's first public data platform that tracks and monitors dredging activities in the marine environment worldwide using vessel signals and artificial intelligence technology. Marine Sand Watch has provided world-first estimates of between 6.4 and 16 Gt/year of sediments dredged in the marine and coastal environment. The platform aims to raise awareness and support initiatives aimed at reducing sand's environmental impact and improving its sustainability.

20. The regional consultations held between April and July 2023 included an agenda item dedicated to a technical discussion on sand and sustainability, which led to a non-prescriptive proposal for a global sand observatory. Several Member States and GRID-Geneva developed a concept note for the global sand observatory<sup>8</sup> in July 2023 during a workshop.

## **C. Knowledge gaps in relation to environmental aspects of mine tailings management**

21. Member States and accredited observers to UNEP contributed a range of views and experiences orally and through written submissions throughout the intergovernmental process described in section A above. The regional consultations included an agenda item dedicated to a technical discussion of tailings management, with more than 150 comments received from Member States and observers, including the secretariats of regional economic commissions and regional environmental agreements.

<sup>8</sup> Available at <https://www.greenpolicyplatform.org/guidance/concept-note-global-sand-observatory>.

22. The report on knowledge gaps in relation to the environmental aspects of tailings management requested in paragraph 5 of resolution 5/12 was developed using information gathered during the intergovernmental process and through a desktop literature review, as well as through expert technical reviews. The report was also informed by the independent Global Tailings Review process and by the *Global Industry Standard on Tailings Management* process initiated by UNEP and its partners. The report will be made available to the Environment Assembly at its sixth session as information document UNEP/EA.6/INF/8.

### III. Lessons learned

#### A. Intergovernmental process on environmental aspects of minerals and metals management

23. The intergovernmental process undertaken pursuant to resolution 5/12 highlighted the heterogeneity of practices and experiences within and between regions. Member States identified some commonalities both in the challenges they faced and in good practices, with the latter presenting some replication and scale-up potential. The challenges and good practices are summarized in the summary reports for the regional consultations<sup>9</sup> and in the background document prepared for the global meeting.<sup>10</sup> There is a continued need for UNEP to provide a neutral platform that enables multi-stakeholder dialogues on enhancing the environmental sustainability of minerals and metals along their full life cycle, in line with the 2030 Agenda. Finally, there is a need to take advantage of the opportunities generated by the Secretary-General's initiative on critical energy transition minerals, described further in part IV of the present report, and collaborative work initiated in 2023 by United Nations entities.

24. During the regional consultations, the intersection between the environmental sustainability of minerals and metals and human rights, social issues and climate change was frequently noted. Other cross-cutting issues identified included: the importance of exchange of knowledge and experiences among Member States; the need for international initiatives to be adaptable at the national level to factor in specific local conditions; and the importance of meaningful community and stakeholder engagement and of transparency across the full life cycle of minerals and metals.

25. The intergovernmental process enabled the exchange of ideas and experiences and generated valuable knowledge on critical issues around the environmental sustainability of mining and metals across their full life cycle. The global meeting presented an opportunity for further discussion, prioritization and refinement of the non-prescriptive proposals; the resulting outcome and recommendations are summarized in part IV of the present report. The non-prescriptive proposals arising from this process did not necessarily represent consensus and are intended for consideration by the Environment Assembly at its sixth meeting.

26. During the implementation of resolution 5/12, many participants in the intergovernmental process recognized that there could be a positive and constructive role to be played in the longer term by harnessing the momentum and expertise of the national focal points appointed for the purposes of the intergovernmental process.

#### B. Strengthening knowledge concerning sand extraction and use

27. The regional consultations provided valuable insights regarding sand extraction and use. The issue has become significant for all countries and regions, driven by population growth, rural-to-urban migration and pressure to develop infrastructure such as roads, public buildings and dams. The regional consultations indicated that development agencies are not ensuring the sustainable sourcing of the building materials used for the projects they fund. The informal sector is a major player in sand supply globally and should be integrated into any support activities.

#### C. Knowledge gaps in relation to environmental aspects of mine tailings management

28. During the resolution 5/12 intergovernmental process, Member States acknowledged and supported the ongoing work by UNEP and its partners to promote the *Global Industry Standard on Tailings Management* and establish the multi-stakeholder, independent Global Tailings Management

<sup>9</sup> See notes to table 2 of the present report.

<sup>10</sup> Available at <https://www.greenpolicyplatform.org/guidance/background-document-guide-global-intergovernmental-meeting-unea-512-1>.

Institute (with a focus on auditing the implementation of the *Global Industry Standard on Tailings Management*).

29. The report on knowledge gaps in relation to environmental aspects of tailings management<sup>11</sup> compiled pursuant to paragraph 5 of resolution 5/12 shows that, despite significant efforts towards reform in recent years, risks and gaps remain in relation to management of tailings from both large-scale mining and artisanal and small-scale mining. The report highlights the need to significantly reduce tailings volumes – for example, through enhanced extraction techniques and tailings reprocessing or re-purposing – as well as to shift away from riskier practices such as wet tailings. Where information does exist, it is not necessarily reaching relevant policymakers and regulators.

30. Emerging from the tailings knowledge gaps report and the resolution 5/12 intergovernmental process, the lessons learned to date indicate the possible need for:

- (a) GRID-Arendal to continue to host and build on the Global Tailings Portal, in close collaboration with the Global Tailings Management Institute, and to consider including closed facilities and classification of tailings facilities, including toxicity and hazard mapping of Member States, in order to encourage miners in their jurisdiction to disclose relevant information to the portal;
- (b) UNEP to continue its support for the establishment of the new Independent Global Tailings Management Institute, which can serve as a platform for sharing of information and best practices, as well as training and support in national-level monitoring and auditing of tailings facilities;
- (c) UNEP to continue and to enhance cooperation with relevant partners, including multilateral environmental agreements, United Nations entities such as the Regional Economic Commissions and other international organizations, to support Governments in policy and legislative gap analysis and reform at the national level to address tailings management, including with regard to artisanal and small-scale gold mining;
- (d) Further research into emerging issues and issues of concern, such as (a) reducing mine tailings by improving material extraction and shifting to alternate uses and practices; (b) improving the safe and environmentally sound management of tailing facilities, as well as safe disposal of mine tailings; (c) waste trafficking in the context of mine tailings; (d) technological accidents triggered by natural hazards; and (e) the effect of climate change on tailings management.

## IV. Recommendations and suggested actions

31. The following overview highlights the importance of certain actions to ensure responsible mining and sustainable use of minerals and metals for the sustainability transitions needed:

(a) UNEP has advocated well-managed, responsible extraction of critical energy transition minerals that supports reaching net zero by 2050 without imperilling other environmental goals. The International Resource Panel report entitled *Mineral Resource Governance in the Twenty-First Century: Gearing Extractive Industries towards Sustainable Development* explored practical actions to improve the international mining governance architecture.

(b) On the multilateral front, to coordinate and increase impact across the United Nations system on this issue, in 2020 the Secretary-General launched the Working Group on Transforming the Extractive Industries for Sustainable Development. Recognizing the fundamental role that minerals and metals play in supporting the energy transition required to meet the Paris Agreement and the window of 20 to 30 years for resource-rich countries to take advantage of the opportunity to accelerate the achievement of sustainable development, the Working Group is focused on building trust, reliability, sustainability and benefit-sharing in existing energy transition mineral supply chains, while also supporting the transformation of those supply chains to harness opportunities and capacity in support of longer-term sustainable development in producer countries.<sup>12</sup> This effort, known more formally as the Secretary-General's initiative on harnessing critical energy transition minerals for sustainable development in least developed and land-locked developing countries, represents a major opportunity to build on and expand the impact of the resolution 5/12 intergovernmental process.

(c) The Environment Assembly has taken preliminary action on mineral and metal resources through two resolutions: resolution 4/19 on mineral resource governance, which requested UNEP to collect information on existing practices, knowledge gaps and approaches for sustainable management of metal and mineral resources; and resolution 5/12 on environmental aspects of minerals

<sup>11</sup> UNEP/EA.6/INF/8.

<sup>12</sup> See United Nations, *Policy Brief: Transforming Extractive Industries for Sustainable Development* (May 2021). Available at [https://www.un.org/sites/un2.un.org/files/sg\\_policy\\_brief\\_extractives.pdf](https://www.un.org/sites/un2.un.org/files/sg_policy_brief_extractives.pdf).



and metals management, which requested UNEP to organize intergovernmental regional consultations and a global meeting to develop non-prescriptive proposals to enhance the environmental sustainability of minerals and metals.

32. The Environment Assembly may wish to build on its two previous resolutions and request UNEP to provide guidance for strengthening and harmonizing policy frameworks for responsible mining. Such harmonization would bring together the many existing standards and certifications that respond to different metrics to advance responsible mining and circularity along the full life cycle of minerals and metals and, beyond extraction, to identify how reuse, recovery, recycling and service provision can reduce material footprints and increase economic opportunities.

33. The Environment Assembly may also wish to consider requesting UNEP, working with United Nations partners and other stakeholders, to accelerate progress in the work of the Working Group on Transforming the Extractive Industries for Sustainable Development. Related work could include technical guidance and capacity support to developing countries with critical energy transition minerals.

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