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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

Introduction

1. **Intergovernmental consultations on environmental aspects of minerals and metals management.** In paragraph 2 of its resolution 5/12, the United Nations Environment Assembly (UNEA) of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP 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 resolution 5/12, UNEA decided that those regional consultations will take stock of existing activities, identify opportunities for enhanced international cooperation, and identify possible ways forward for consideration by the Environment Assembly at its sixth session, as appropriate.

2. This report refers to the implementation of operating paragraphs 2 and 3 of resolution 5/12. For the sake of clarity, the intergovernmental regional consultations are henceforth referred to as the “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.”

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3. **Strengthening knowledge around sand extraction and use.** In paragraph 4 of resolution 5/12, UNEA requested the Executive Director, through the Global Resource Information Database (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.

4. **Knowledge gaps in relation to environmental aspects of mine tailings management.** In paragraph 5 of resolution 5/12, UNEA 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.

5. **Progress report.** In paragraph 6 of resolution 5/12, UNEA requested the Executive Director, provides an update on progress made in the implementation of resolution 5/12 in terms of the requests in paragraphs 2-5.

I. Progress in the implementation of resolution 5/12

A. Intergovernmental consultations on environmental aspects of minerals and metals management

6. **National focal points.** Member States were invited by UNEP in October 2022 to appoint a focal point for the resolution 5/12 intergovernmental process, which resulted in nomination of [115 national focal points](#).

7. **Co-chairs.** In December 2022, H.E. Ms. Leila Benali, President of UNEA-6 and Minister of Energy Transition and Sustainable Development of Morocco appointed two co-chairs for the intergovernmental process including regional consultations and a global meeting, in line with paragraphs 2 and 3 of resolution 5/12, namely: H.E. Ms. Saqlain Syedah, High Commissioner and Permanent Representative of Pakistan to UNEP and Ms. Martine Rohn-Brossard, Deputy Head of International Affairs Division of the Swiss Federal Office for the Environment. The co-chairs led the intergovernmental process.

8. **Online platform.** A dedicated [webpage](#) was set up by UNEP for all information and resources pertaining to the resolution 5/12 intergovernmental process.

9. **Background documents for the intergovernmental regional consultations.** A [background document](#) developed by UNEP under the Co-Chairs' guidance to inform the intergovernmental regional consultations, was disseminated in March 2023. It identified global trends on environmental aspects of minerals and metals management and took stock of existing activities at regional and international levels, building upon knowledge products developed during the implementation of UNEA resolution 4/19 on mineral resource governance.

10. **Virtual briefings.** Co-chairs, with UNEP support, organized a series of virtual briefings to support preparedness, raise awareness and encourage participation of Member States and other stakeholders throughout the intergovernmental process.

Target	Date	Focus
National focal points and Members of UNEP's Committee of Permanent Representatives	14 February 2023 27 March 2023, 19 April 2023, 9 June 2023	Overview of resolution and proposed plan of implementation Overview of background document and consulted upon the proposed objectives and agenda of each regional consultation and global meeting
Geneva-based missions as well as stakeholders from civil society, industry, and academia	28 February and 23 August 2023	Updates on preparations for the regional intergovernmental consultations and the global intergovernmental meeting
UN Environment Management Group (UN entities and MEAs)	30 August 2023	Nexus Dialogue on Environmental Aspects of Minerals and Metals Management to create synergies on workstreams across the UN system.

11. Intergovernmental regional consultations and their outcomes. Five, two-day intergovernmental regional consultations were held between April and July 2023 in hybrid format:

Participants	Location	Date	Summary Report
Group of Eastern European Region States (EEG)	Geneva	24-25 April 2023	EEG
Group of Western European and Other States (WEOG)	Paris	27-28 April 2023	WEOG
Group of Latin American and Caribbean States (GRULAC)	Santiago	17-18 May 2023	GRULAC
Group of Asia and Pacific States (AP)	Bangkok	15-16 June 2023	AP
African Group of States (AG)	Dakar	5-6 July 2023	AG

All regional consultations were organized by UNEP. Furthermore, the GRULAC meeting was hosted by the Government of Chile, and the AG meeting was hosted by the Government of Senegal. A total of 79 Member States and 16 accredited observers or 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 to enhance environmental sustainability of

the metals and minerals life cycles. With support by varying number of countries, each regional meeting identified several ‘non-prescriptive proposals’ (NPPs) for further consideration at the global intergovernmental meeting.

12. Written submissions. Member States and accredited organizations were also invited to make, by 31 July 2023, written submissions in addition to, or in lieu of, oral contributions at the regional consultations. Thirty written submissions were made, including 21 from [Member States](#) and 9 from [observer organizations](#) and published online prior to the 5/12 global intergovernmental meeting.

13. Background paper for the 5/12 global intergovernmental meeting. UNEP developed a [background paper](#) for the global meeting under the guidance of the co-chairs. The paper summarized the regional process and analyzed its outcomes. 24 NPPs were discussed at the global intergovernmental meeting, under three thematic groupings: Policies and tools, Value chain aspects and Platforms for international cooperation.

14. Resolution 5/12 Global intergovernmental meeting and its outcomes. The global intergovernmental meeting requested in resolution 5/12 paragraph 2, was held on 7-8 September 2023 in Geneva, in hybrid format, with the participation of 99 Member States and 60 accredited observers and organizations. Participants were presented with a summary from each regional consultation. A technical panel discussed investor, intergovernmental and civil society perspectives. Participants discussed, in informal breakout groups and in plenary with interpretation in all UN languages, the various non-prescriptive proposals, with the aim to streamline, refine or complement those proposals. The non-prescriptive proposals discussed included:¹

- a. A Global Assessment of Existing Instruments and Standards.** The collection and assessment of existing instruments and standards, in the private and public sector, was proposed to be done in cooperation with Multilateral Environment Agreements and other stakeholders, building on existing work in this area. This assessment was seen by many as a pre-requisite for work to advance with up to date understanding of the situation across the other NPPs.
- b. Capacity-Building, Technical Assistance, 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 MS, including across regions. MS highlighted the need for support or action to respond to local needs and conditions and factor national capacities and frameworks. The need to avoid duplication with other existing agencies, instruments and initiatives was also repeatedly emphasized throughout the meeting.
- c. Enhanced International Cooperation**
Proposals includes enhanced collaboration and cooperation between international organizations, including Multilateral Environment Agreements, enhanced collaboration between UNEP and the Intergovernmental Forum on Mining, Minerals and Metals for Sustainable development.

¹ The meeting and its outcomes are summarized in a [Co-Chairs’ Report](#).

d. An Open-Ended / Technical Working Group

Participants in the global meeting mentioned a keen interest to benefit from a platform that would support continued peer-to-peer knowledge exchange among national focal points and how such a platform could help advance the dialogue and further refinement and action identified under the various NPPs.

15. Taking stock of existing activities and actions. The intergovernmental process identified a multitude of existing frameworks, initiatives, standards or 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 UNEA resolution 5/12, identifying more than 30 examples.

16. Opportunities for enhanced international cooperation. The intergovernmental process highlighted, including in a NPP, the need for intergovernmental organizations to enhance their cooperation and information exchange, to identify linkages and avoid duplication of effort, and to provide a more harmonized and streamlined approach to Member States.

B. Strengthening knowledge around environmentally sound extraction and use of sand

17. Sand and Sustainability report. On 26 April 2022, UNEP/GRID-Geneva launched the '[Sand and sustainability: 10 strategic recommendations to avert a crisis](#)'. This report consolidates scientific, technical and policy dimensions of sand and sustainability issues, highlighting the current impacts of extraction, use and (mis)management, while recommending actions to address environmental sustainability needs alongside justice, equity, technical, economic, and political considerations. It triggered large media attention, with an estimated reach of 994 million persons. The findings of the report were also presented at 20 international events and the five regional consultations.

18. Marine Sand Watch data platform. Contributing to Resolution 5/12 paragraph 4, UNEP/GRID-Geneva, Global Fishing Watch and other partners launched in September 2023 '[Marine Sand Watch](#)', the world's first public data platform that tracks and monitors dredging activities in the marine environment world-wide, using vessel signals and artificial intelligence technology. Marine Sand Watch has provided world-first estimates of sediments dredged in the marine and coastal environment, of between 6.4 and 16 Gt/year. The platform aims to raise awareness, and to support initiatives aimed to reduce environmental impacts and improve sustainability of sand.

19. Intergovernmental process. In the context of Resolution 5/12 paragraph 3, Member States and accredited observers to UNEP contributed a range of views and experiences orally and through written submissions throughout the 5/12 intergovernmental process, described in section A above. Furthermore, several Member States and UNEP/GRID-Geneva developed a [concept note](#) in July 2023 during a workshop. The 5/12 regional consultations held between April and July 2023 had a specific agenda item on technical discussion on sand and sustainability, which led to a non-prescriptive proposal on a Global Sand Observatory.

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

20. **Intergovernmental process.** Member States and accredited observers to UNEP contributed a range of views and experiences orally and through written submissions throughout the 5/12 intergovernmental process, described in section A above. The regional consultations had a specific agenda item on technical discussion of tailings management and received over 150 comments from Member States and observers including regional economic commissions and regional environmental agreements.

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

II. **Lessons learned.**

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

22. **Sharing experiences and working together towards common objectives.** The 5/12 intergovernmental process highlighted the heterogeneity of practices and experiences within and between regions. Member States identified some commonalities in both the challenges they faced and in good practices, latter presenting possible replication or scale up potential. The challenges and good practices are summarized in the [summary reports of each 5/12 regional consultation](#), and in the [background document prepared for the global meeting](#). There is the continued need for UNEP to provide a neutral platform to enable multi-stakeholder dialogues to enhance the environmental sustainability of minerals and metals along their full life cycle in line with the 2030 Agenda for Sustainable Development. Finally, there is a need to take advantage of the opportunities generated by the UN Secretary General initiative on critical energy transition minerals, further described under section IV, and the collaborative work by the United Nations entities, initiated in 2023.

23. **Cross-cutting issues:** During the consultations, the intersection between environmental sustainability of minerals and metals, with human rights, social issues and climate change, was frequently noted. Other cross-cutting issues identified included: the importance for Member States' exchange of knowledge and experiences; recognition that international initiatives should be adaptable at the national level to factor specific local conditions; the importance of meaningful community and stakeholder engagement, and of transparency across the full minerals and metals life cycles.

24. **Non-prescriptive proposals.** The intergovernmental process enabled exchange of ideas and experiences and generated valuable knowledge on critical issues around the

environmental sustainability of mining and metals across their full lifecycle. The global intergovernmental meeting presented an opportunity for further discussion, prioritization and refinement of these proposals, and the outcome and resulting recommendations are summarized in the ‘Recommendations’ section below and at Annex I. The non-prescriptive proposals arising from this process did not necessarily represent consensus and are intended to be considered by UNEA-6.

National experts. During the implementation of resolution 5/12, it was recognized by many participants that there may be a positive and constructive role to be played in the longer term by harnessing the momentum and expertise of the national focal points established initially for the purposes of the intergovernmental process.

B. Strengthening knowledge around sand extraction and use

25. The 5/12 regional consultations provided valuable insights regarding sand extraction and use. The issue is significantly affecting all countries and regions, driven by population growth, migration from rural to urban areas, and pressure to develop infrastructure such as roads, public buildings, dams. Consultations suggest that development agencies are not ensuring the sustainable sourcing of building materials for projects they fund. The informal sector is currently a major player in sand supply globally and should be integrated in any support activities.

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

26. **Existing work on tailings.** Ongoing work by UNEP and partners to promote the [Global Industry Standard for Tailings Management](#) and to establish the multi-stakeholder independent Global Tailings Management Institute (with a focus on auditing implementation of the Global Industry Standard for Tailings Management), was acknowledged and supported by Member States during the UNEA resolution 5/12 consultations.

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

28. **Tailings knowledge actions.** Drawing from the tailings knowledge gaps report and the 5/12 intergovernmental consultations, lessons learnt to date indicate the following possible needs for UNEP to fulfil:

- a. Grid-Arendal to continue to host and build upon the [Global Tailings Portal](#), in close collaboration with the Global Tailings Management Institute, to consider including closed facilities, and classification of tailings facilities, including toxicity and hazard mapping Member States to encourage miners within their jurisdiction to disclose relevant information to the Portal.
- b. UNEP to continue its support in the establishment of a new Independent Global

Tailings Management Institute, which can provide 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 enhance cooperation with relevant partners, including Multilateral Environmental Agreements, UN entities such as the Regional Economic Commissions and other international organizations to provide support to governments in policy and legislative gap analysis and reform at the national level to address tailings management, including with regard artisanal and small-scale mining.
- d. Research into emerging issues and issues of concern, such as (i) reducing mine tailings by improving material extraction and shifting to alternate uses and practices, (ii) improving the safety and environmentally sound management and safe disposal of tailings facilities, (iii) waste trafficking in the context of mine tailings, or (iv) natural-hazard triggered technological accidents and the effect of climate change on tailings management.

III. Recommendations and suggested actions

29. The [Report of the UNEP Executive Director to UNEA-6](#) highlights the importance of ensuring responsible mining and sustainable minerals and metals use for the sustainability transitions needed as follows:

30. UNEP has advocated for a well-managed and responsible extraction of critical energy transition minerals that supports reaching net-zero by 2050, while not imperilling other environmental goals. The UNEP International Resource Panel (IRP) report on mineral resource governance issued in 2020 explored practical actions to improve the international mining governance architecture.

31. On the multilateral front, to coordinate and increase impact across the UN system on this issue, in 2020 the Secretary General launched the Working Group ‘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 – 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 minerals supply chains, while also supporting the transformation of these supply chains to harness opportunities and capacities in support of longer term sustainable development of the producer countries.² This effort, known more formally as the UN Secretary General’s initiative on critical minerals (*Harnessing Critical Energy Transition Minerals for Sustainable Development in Least Developed and Land-Locked Developing Countries Just Transitions in Low Carbon Technologies*), represents a major opportunity to build on and expand the impact of the UNEA 5/12 consultation process.

32. UNEA has also already taken some preliminary action on mineral and metal resources through two previous resolutions: UNEA 4/19 on Mineral Resource

² https://www.un.org/sites/un2.un.org/files/sg_policy_brief_extractives.pdf

Governance, which requested UNEP to collect information on existing practices, knowledge gaps and approaches for sustainable management of metal and mineral resources; and UNEA 5/12 on Environmental Aspects of Minerals and Metals Management, which requested UNEP to organize regional intergovernmental meetings and a global event to develop non-prescriptive proposals to enhance environmental sustainability of minerals and metals.

33. Member states may wish to build upon these previous resolutions and request UNEP to provide guidance to strengthen and harmonize policy frameworks for responsible mining. Such a 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, and recycling as well as service provisioning can reduce material footprints and increase economic opportunities.

34. Member states may also consider requesting UNEP, working with UN partners and other stakeholders, to accelerate progress on the Secretary General's Working Group. Such work could include technical guidance and capacity support to developing countries with critical energy transition minerals.