



## Legal and Technical Commission

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Item 11 of the provisional agenda\*

### Review of the environmental impact statements submitted by contractors

## Review of the environmental impact statement submitted by China Minmetals Corporation

### Note by the secretariat

1. On 24 October 2024, the Secretary-General of the International Seabed Authority received an environmental impact statement from China Minmetals Corporation (CMC) relating to the proposed testing of its prototype polymetallic nodule collector vehicle at a depth of 5,000 m to 5,500 m within block A-5 of the CMC contract area located in the Clarion-Clipperton Zone in the Pacific Ocean. The test is scheduled for July–October 2025 as envisaged for the period 2022 to 2027 under the CMC programme of activities for the second five-year period.
2. According to the contractor, the statement was prepared on the basis of the recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area.
3. Pursuant to paragraph 33 of the recommendations, the technical tests proposed by CMC are activities that require a prior environmental impact assessment, as well as an environmental monitoring programme to be carried out during and after the specific activities, in accordance with paragraphs 33 and 38 of the recommendations. In accordance with paragraph 34 of the recommendations, the environmental impact statement and the information set out in paragraph 38 of the recommendations are to be submitted to the Secretary-General at least one year in advance of the activity taking place.
4. The collector vehicle to be tested consists of a collector vehicle, an acoustic positioning system, an umbilical cable and a surface support vessel. According to the statement, the project is aimed at achieving two objectives: (a) testing and improving the collector vehicle's technical performance, including to verify its collecting function, locomotion, navigation and positioning, launch and recovery, environmental monitoring and sampling functionalities, as well as its operability, reliability and nodule-collecting efficiency, so as to provide data for the design of the collector system; and (b) monitoring and assessing the environmental impact of the collector

\* ISBA/30/LTC/L.1.



vehicle. CMC will carry out environmental monitoring before, during and after the proposed test.

5. The test will take place in the western basin of block A-5 in an area of approximately 500 km<sup>2</sup>, which is defined as the proposed target mining area. For the environmental impact assessment prior to, during and after the collector vehicle test, an impact reference zone (6 km × 5 km) and a preservation reference zone were delineated in the target mining area. The delineation is based on the similarity of the topography, the geological characteristics of sediments and environment baselines. An area of about 0.6 km<sup>2</sup> (1 km × 0.6 km) is delineated in the impact reference zone as the collector test area.

6. Following the analysis of potential environmental impacts, CMC proposes that its environmental management and monitoring plan be focused on monitoring the bottom environment and benthic and near-bottom ecosystems. To assess the environmental impact of the test, four environmental monitoring measures are proposed: (a) installing on the collector vehicle an environmental monitoring and in situ sampling system, including a small remotely operated vehicle for simultaneous environmental monitoring and assessment of the operational safety risk during the test; (b) deploying a mooring buoy system for environmental monitoring in and around the collector test area; (c) using the environmental monitoring vessel's shipboard equipment, the remotely operated vehicle and the autonomous underwater vehicle to conduct monitoring, sampling and surveys; and (d) deploying a set of near-bottom long-term environmental observation equipment in the collector test area, and conducting annual return visits and sampling during the subsequent survey cruises to obtain data on the potential impact and recovery of the disturbed area.

7. In alignment with paragraphs 65 and 66 of the recommendations, the environmental impact statement should contain a description of stakeholder<sup>1</sup> engagement activities that took place during the process, including the consultation timelines, consultation methods and publication milestones. In addition, the statement should include a list of any stakeholders that were consulted and a description of the process by which they were identified.

8. Furthermore, in accordance with paragraphs 41 (c) and 69 of the recommendations, the Legal and Technical Commission will review the environmental impact statement for completeness, accuracy and statistical reliability. In line with paragraph 41 (b) of the recommendations, in order to assist the Commission in that regard, the secretariat performed a completeness check of the statement against the template contained in annex III to the recommendations.

9. As a result of the completeness check, the secretariat requested CMC to provide the following additional information:

(a) **Description of the proposed activity.** CMC was requested to explain the acronym "ESRZ" and its purpose and to provide any technical details, such as the collection mechanism, the principals of locomotion, manoeuvrability and track penetration depths. In addition, the secretariat suggested that CMC provide high-resolution bathymetric maps, with overlaid track plans, for site verification;

(b) **Description of the existing biological environment.** CMC was requested to clarify the location from which the phytoplankton and zooplankton samples were collected and to specify the location of the sampling stations. Furthermore, for the bottom water, the secretariat suggested that CMC explain the location of sampling, how it was sampled, and how far from the seafloor it was collected;

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<sup>1</sup> "Stakeholder" means a natural or juristic person or an association of persons with an interest of any kind or with relevant information or expertise.

(c) **Assessment of impacts on the physicochemical environment and proposed mitigation.** CMC explained that the Finite Volume Community Ocean Model modelling parameters for a scope of 40 km × 40 km are set in the simulation model, with a mesh resolution of 2,000 m at the model boundary and 100 m in the test-mining centre (5 km × 5 km). The secretariat noted that the model does not take into account sediment mobilization and plume development during locomotion. CMC was requested to clarify why it considers the disturbance to be minor;

(d) **Accidental events and natural hazards.** CMC was asked to check for the possibility of seismically induced submarine avalanches and mud flows and provide survey data if they exist. In addition, CMC was asked whether it has considered the use of biodegradable hydraulic oil, which is routinely used in marine scientific research activities;

(e) **Environmental management, monitoring and reporting.** The chapter on environmental management, monitoring and reporting provides significant information about the environmental management, monitoring and reporting design and the equipment and methods to be used. However, it lacks a detailed schedule and plan of monitoring activities to be undertaken after the test and during long-term monitoring. The secretariat suggested that CMC provide a more detailed plan, including a timeline, for such monitoring activities. Furthermore, the test will be a good opportunity to collect empirical data for assessing the impacts of the proposed activity and to validate the predictions presented in the environmental impact statement. Given the limited sample size for most biological variables in the environmental baseline studies, in particular for the benthic communities, CMC was requested to explain how the sampling effort will be enhanced before, during and after the test, so that the data collected can support a statistically reliable analysis of the impacts caused.

10. CMC was requested to respond to the aforementioned requests by 19 February 2025, that is, within 30 days, or request a reasonable extension of this period as stipulated in the recommendations.

#### **Review by the Commission**

11. The review of the environmental impact statement, along with any other available information provided by CMC, will be initiated by the Commission at its next meeting, in March 2025.

12. Pursuant to the recommendations, the Commission is invited to:

(a) Review the environmental impact statement for completeness, accuracy and statistical reliability;

(b) Report to the Council on the results of the review;

(c) Provide recommendations to the Secretary-General as to whether the environmental impact statement should be incorporated into the programme of activities under the exploration contract of CMC.