



Legal and Technical Commission

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Agenda item 11

Review of the environmental impact statements submitted by contractors

Review of the environmental impact statement submitted by the Federal Institute for Geosciences and Natural Resources

Note by the secretariat

1. On 9 February 2026, the Secretary-General of the International Seabed Authority received an environmental impact statement from the Federal Institute for Geosciences and Natural Resources (BGR) relating to the proposed testing of an advanced, image-controlled, autonomous, robotic underwater nodule collector, Eureka III, that is currently being developed by the company Impossible Metals USA (IM). This test is planned to occur in the eastern part of the BGR polymetallic nodules contract area in the Clarion-Clipperton Zone in the Pacific Ocean. The test area will have a size of 250 m x 45 m (11,250 m²), and testing will occur over four days in the third quarter of 2027.
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 ([ISBA/25/LTC/6/Rev.3](#)).
3. Pursuant to paragraph 33 of the recommendations, the technical tests proposed by BGR 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. According to the statement, the Eureka III nodule collector was still being developed and built at the time of writing of the statement. This nodule collector builds upon the knowledge gained during the construction and testing of Eureka I and II, developed by IM. It is described as an autonomous underwater vehicle that descends and ascends using buoyancy engines, hovers over the seafloor and uses



cameras and artificial intelligence to identify and pick up nodules using 16 robotic arms. According to the statement, this project aims to demonstrate the technical feasibility and low environmental impact of selective nodule collection from the deep seafloor using specially adapted autonomous underwater vehicles as an alternative to tracked hydraulic or mechanical systems and riser and lifting system technologies, and is designed to minimize environmental impacts.

5. This test will take place in the eastern BGR contract area, in an economically prospective nodule field called Prospective Area #1. Monitoring will be conducted in the test area, as well as within its surrounding area (the “trial site”), which lies in the western part of Prospective Area #1. For the planned Eureka III test, a control reference site has been chosen, against which the impacts will be assessed and monitored. The chosen reference site for Eureka III will be the same as the reference site chosen for the Patania II test in 2021. In addition, a preservation reference zone and an impact reference zone were defined in this region in 2013.

6. The project involves cooperation between IM, for technology development and testing, and BGR, for the environmental monitoring and impact assessment related to technology testing. Environmental monitoring by BGR involves pre-test (baseline) and post-test (impact) monitoring, in addition to monitoring of the collector test itself and monitoring of a reference site. Post-test monitoring will occur immediately after the test and two and three years after the test. The environmental monitoring plan involves the following phases: (a) planning of the layout for the environmental monitoring plan at the Eureka III trial site (test area and plume impact area); (b) cruise station time planning; (c) on-site pre-impact physical, chemical and biological assessment of the trial site and the reference site; (d) in situ plume monitoring survey of the Eureka III test and validation of plume modelling; (e) on-site post-impact physical, chemical and biological assessment; and (f) long-term impact monitoring. The monitoring programme may be subject to further adaptation and refinement before the test.

7. BGR carried out stakeholder consultations in accordance with the recommendations.

8. 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 BGR to provide the following additional information:

(a) **Description of the proposed activity.** BGR was requested to provide detailed information about the readiness of the Eureka III system, the set of sensors used, the launch and recovery process, the testing schedule and overall system control. It was also requested to provide the ratio of sediment separated from the mineral source by the collector, the volume and size spectra of material rejected by the collector, the size and geometry of seabed-disturbance plumes and the trajectory and spatial extent of the plumes relative to the particle sizes within, and the methods for dealing with the abraded fines and sediment. In addition, BGR was asked to provide information on the chemical and physical characteristics of the discharge and behaviour of the plume in mid-water and at the surface;

(b) **Description of the existing physicochemical environment.** BGR was requested to provide the data analysis of sea surface temperature and productivity over multiple years, and the dispersal potential of harmful by-products;

(c) **Study team.** BGR has listed the project partners, consultants and scientific partners who have contributed to its environmental impact statement. However, the list of personnel who contributed directly or indirectly (i.e. planning, collecting and analysing data) and the evidence that they are well qualified are missing. BGR was requested to provide the list of personnel who had contributed to the environmental impact statement and their respective qualifications and relevant experiences.

10. BGR was asked to respond to the aforementioned requests 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 BGR, will be initiated by the Commission at its next meeting.

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 BGR.
