



## 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 Beijing Pioneer Hi-Tech Development Corporation**

#### **Note by the secretariat**

1. On 22 October 2024, the Secretary-General of the International Seabed Authority received an environmental impact statement from Beijing Pioneer Hi-Tech Development Corporation (BPC) relating to the proposed joint test of a deep-sea collector and buffer station to be conducted within the BPC polymetallic nodule contract area located in the Western Pacific Ocean. It was proposed that the technical trial be conducted in the second half of 2025, as envisaged for the period 2025 to 2029 under the BPC 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 BPC 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 objective of the trial is to test and validate the “Manta II” collector machine. BPC also proposes to continue monitoring the potential environmental impacts in different phases before, during and after the test.
5. BPC plans to use a 1:5 scale polymetallic nodule deep-sea collector in combination with a buffer station for a combined test in a 500 m × 500 m area in the south of the Magoshichi-no-Hoshi Seamount in block M2 of its contract area. Based on the characteristics of the test equipment and environmental baseline studies, the

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



collector test area, impact reference zone and preservation reference zone were selected. Testing does not include the recovery of collected nodules by, for example, a riser system. The nodules will be disposed on the seabed after collection.

6. In addition, BPC will deploy deep-sea environmental impact monitoring systems in the impact reference zone and preservation reference zone to collect environmental monitoring data during and after the test. At the same time, surveys related to the potential impacts of nodule collection will be carried out to develop preventive measures for potential future deep-sea exploitation plans and to provide a design basis for the development of responsible nodule collection technology. It is proposed that this environmental monitoring programme be divided into four phases: (a) phase I: environmental baseline surveys before the test; (b) phase II: environmental monitoring (i.e. temperature, salinity, pressure and seawater chemistry using conductivity, temperature and depth profilers; bottom currents using a lowered acoustic Doppler current profiler and current metres; turbidity plume and megafauna using autonomous underwater vehicles; noise using hydrophones; microorganisms using a multicorer; and organisms using the lander system) during the test in the second half of 2025; (c) phase III: recovery of the environmental monitoring equipment after the test and post-test environmental monitoring to be conducted in 2026; and (d) phase IV: long-term environmental monitoring in the third, fifth and seventh years after the test.

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 BPC to provide the following additional information:

(a) **Description of the proposed activity.** BPC was requested to provide more details on the technical design of the collector, i.e. the pick-up process (collection travel mode, throat channel flow, suction hydraulic), depth intersection, pumps, locomotion, collection speed, sensors, sampled sediment, weight of the collector and how BPC can guarantee that the collector will remove (or disturb) only the top 6 cm of sediment. The secretariat would like BPC to provide details on whether the collected polymetallic nodules will be left on the seafloor and the dropping done randomly once the reservoir in the buffer station is filled, or whether dedicated dropping places will be identified. In addition, BPC was asked to provide more information on the following: the defined “standard size” for collected polymetallic nodules, the potential impacts of the discharge of the buffer station and how it will be examined, how the buffer station will remain stable on the seabed or towed behind the collector, and the kind of locomotion of the buffer station and its potential impact on the seabed. BPC must ensure that the preservation reference zone and impact

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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.

reference zone are used and displayed correctly throughout the environmental impact statement;

(b) **Description of the existing physicochemical environment.** The secretariat suggested that BPC should indicate regional seasonal patterns in the upper layers, including whether mid-waters are affected by wind-driven currents, and whether BPC will consider mid-water discharge for the future. The preservation reference zone is about 78 km from the collector test area, not the impact reference zone (according to figure 3.2 of the environmental impact statement), and BPC was asked to clarify this. The plume modelling approach needs to be checked against existing and potentially changing oceanographic conditions and it would seem necessary to include a wider zone in the monitoring programme to exclude potential changes in the current regime;

(c) **Description of the existing biological environment.** The secretariat suggested that BPC provide further explanations of what data are available for nodule fauna, since the nodule fauna in the test area and its surroundings will be significantly affected during the test, and how nodule fauna will be sampled and studied in the 2025–2026 cruises. BPC was requested to submit all data used to support the environmental impact assessment as soon as possible to facilitate further review of the statement;

(d) **Assessment of impacts on the physicochemical environment and proposed mitigation.** More information should be provided on the sampling test, including the test itself and the monitoring results, how similar the sampling test is to the collector test, and why zone B displays greater meiofauna abundance than other zones. BPC was requested to provide the location of its contract area in figure 7-14 of the environmental impact statement, and to explain what the remediation tests in table 7-6 of the statement entail;

(e) **Accidental events and natural hazards.** BPC is strongly encouraged to include in its safety plan a requirement that, in the event of any emergency, the Secretary-General be informed immediately;

(f) **Environmental management, monitoring and reporting.** The secretariat suggested that BPC provide further details for the monitoring to be conducted during phases III and IV, and on how the monitoring results will be compared with the environmental baseline data collected before the test. BPC was requested to ensure that the number of stations described in the first paragraph of section 9.2.5.1 matches the figures in table 9-5. 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, BPC 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. BPC 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 other available information provided by BPC, 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 BPC.
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