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**Annual report of the Secretary-General under article 166,
paragraph 4, of the United Nations Convention on the
Law of the Sea**

Implementation of the action plan of the International Seabed Authority in support of the United Nations Decade of Ocean Science for Sustainable Development

Report of the Secretary-General

I. Introduction

1. Pursuant to the United Nations Convention on the Law of the Sea¹ and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982,² the Authority is mandated to promote and encourage the conduct of marine scientific research in the Area. The Authority also has the duty to coordinate and disseminate the results of scientific research when available, and it may also carry out marine scientific research concerning the Area. In addition, the Authority is tasked with encouraging the design and implementation of appropriate programmes for the benefit of developing and technologically less developed States with a view to strengthening their capacity.³

2. In June 2022, at the United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development held in Lisbon, Member States recognized the importance of the United Nations Decade of Ocean Science for Sustainable Development⁴ in achieving its vision for “the science we need for the ocean we want”.⁵

* [ISBA/28/A/L.1](#).

¹ United Nations Convention on the Law of the Sea, art. 143 (2).

² 1994 Agreement, para. 5 (h).

³ United Nations Convention on the Law of the Sea, art. 143 (3).

⁴ Proclaimed by the General Assembly in its resolution [72/73](#), para. 292.

⁵ See the declaration entitled “Our ocean, our future, our responsibility” ([A/CONF.230/2022/14](#), chap. I).



3. The relevance of the Decade for the work of the Authority is highlighted in the strategic plan⁶ and the high-level action plan⁷ of the Authority for the period 2019–2023. Both documents reflect the commitment of the Authority to contributing to the achievement of relevant Goals and targets of the 2030 Agenda for Sustainable Development, in particular, Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development). In 2020, the Assembly of the Authority adopted an action plan in support of the Decade⁸ to formalize and organize the contribution of the Authority to the Decade.⁹ The action plan is structured around six strategic research priorities and will continue to evolve as new strategic research priorities are identified and endorsed by members of the Authority.¹⁰ Argentina continues to serve as champion of the action plan with a view to mobilizing efforts for its achievement.

4. The long-standing cooperation between the Authority and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO) since 2000, with the signing of the memorandum of understanding, continues to support the implementation of the action plan. The secretariat engages actively in the meetings of the Ocean Decade Alliance sherpas and the Advisory Board of the United Nations Decade of Ocean Science for Sustainable Development to advance the planning and implementation of the Decade. In February 2023, the secretariat provided inputs, at the invitation of the secretariat of the Intergovernmental Oceanographic Commission, for a study commissioned to identify opportunities for facilitating the engagement of UN-Oceans members in the Decade. The importance of advancing coherence, coordination and communication in efforts to implement the Decade, in the light of existing frameworks and mandates, was recognized by several organizations as a critical element for ensuring synergies and avoiding duplication in the field of marine scientific research.

5. At the twenty-seventh session of the Assembly, in 2022, the Secretary-General presented a progress report on the first year of the implementation of the action plan.¹¹ The present report provides an overview of the second year of its implementation, from July 2022 to June 2023, through a description of progress with respect to the main activities.¹²

II. Progress in the implementation

6. The present report follows the six strategic research priorities in the action plan for marine scientific research.

⁶ ISBA/24/A/10, annex.

⁷ ISBA/25/A/15, annex II.

⁸ ISBA/26/A/17, annex.

⁹ ISBA/26/A/4.

¹⁰ Ibid., para. 14.

¹¹ See ISBA/27/A/4.

¹² Four scientific objectives have been identified to guide the design and implementation of actions during the United Nations Decade of Ocean Science for Sustainable Development, namely: (a) to increase the capacity to generate, understand, manage and use ocean knowledge; (b) to identify and generate required ocean data, information and knowledge; (c) to build a comprehensive understanding of the ocean and ocean governance systems; and (d) to increase the use of ocean knowledge.

A. Strategic research priority 1: advancing scientific knowledge and understanding of deep-sea ecosystems, including biodiversity and ecosystems functions, in the Area

7. Advancing scientific knowledge and understanding of the deep-sea ecosystems and functions is essential to supporting informed decision-making processes and the continued application of the precautionary approach by the Authority.

8. In the framework of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, the secretariat co-organized, with the Division for Ocean Affairs and the Law of the Sea, two workshops aimed at informing the scoping process of the third World Ocean Assessment in Kingston, in September 2022. Multidisciplinary experts from more than 15 countries, including representatives of middle-income countries, landlocked developing countries and small island developing States, participated. As a follow-up, the secretariat contributed to the eighteenth Meeting of the Ad Hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, held in New York in March 2023. At that meeting, the secretariat highlighted the specific mandate and activities of the Authority to advance marine scientific research in the Area. The seabed and marine mineral resources were recognized as an important element to include in the third World Ocean Assessment as part of the overview of social and ecological systems. Building on those discussions and outcomes, a workshop is to be hosted by the Authority in Kingston in June 2023 in partnership with the Division so as to enable further discussions and progress on the preparation of the third World Ocean Assessment, which is planned to be released in 2025.

9. At the regional level, progress was made in relation to the collection of background scientific information in support of the development of the regional environmental management plan for the Area in the Indian Ocean. The scientific information compiled was discussed at the first workshop on the environmental management plan for the region, organized in May 2023 in Chennai, India, in collaboration with the Ministry of Earth Sciences and the National Institute of Ocean Technology of India. The event was attended by 32 experts from 15 countries nominated by States members of the Authority, as well as observers, contractors and academic institutions. The workshop led to the identification of parameters for defining an appropriate geographical boundary for the development of the regional environmental management plan and enabled the review of the environmental, geological and/or geophysical data, as well as the scientific knowledge available for the Indian Ocean. The regional environmental assessment will be completed based on the feedback and further inputs received during the workshop. In February 2024, the secretariat plans to organize a workshop to continue developing a regional environmental management plan for the Area in the North-West Pacific, in collaboration with Japan, building on the results of previous workshops for the region held in 2018 and 2020.

10. Continuing efforts to improve environmental baselines through enhanced ocean observations (also beyond contract areas) is important for the implementation of this strategic research priority. Additional scientific information on areas adjacent to the contract areas, such as the areas of particular environmental interest, will further support the effective management of activities in the Area. In June 2023, the secretariat will launch a call for proposals inviting experts to define the needs and priorities for, and the actors who will set up, sustained deep ocean observations that will include a data synthesis across the Clarion-Clipperton Zone, as a follow-up to existing scientific publications.

B. Strategic research priority 2: standardizing and innovating methodologies for deep-sea biodiversity assessment, including taxonomic identification and description, in the Area

11. Significant progress was achieved in the implementation of the Sustainable Seabed Knowledge Initiative launched in 2022 at the Ocean Conference. The project is designed to improve the generation, standardization and sharing of deep-sea biodiversity data, tools and expertise, especially in deep-sea taxonomy, for the effective management of activities carried out in the Area, as well as other relevant global processes for sustainable ocean governance. It is anticipated that the contributions of the Initiative to improving and standardizing deep-sea biodiversity assessments will directly support the implementation of the draft agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, especially in establishing a robust scientific basis for developing environmental impact assessments and area-based management tools in areas beyond national jurisdiction.

12. The Initiative is aimed at delivering ambitious targets to advance deep-sea biodiversity knowledge, such as describing at least 1,000 new deep-sea species in the Area by 2030, and supporting the increased scientific capacity of developing countries on deep-sea biodiversity assessments. The Initiative will also effectively support the implementation of the new Kunming-Montreal Global Biodiversity Framework adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, in December 2022. During that meeting, the secretariat of the Authority and the secretariat of the Convention co-organized a side event, that demonstrated the importance of the Initiative's activities in advancing deep-sea biodiversity research, capacity and data for the successful implementation of the Global Biodiversity Framework. The secretariat of the Authority will continue to collaborate with the secretariat of the Convention to maximize the synergies between the implementation of the Authority's action plan on marine scientific research and that of the Global Biodiversity Framework.

13. In December 2022, in collaboration with the Ministry of Oceans and Fisheries of the Republic of Korea and the National Marine Biodiversity Institute of Korea and the European Commission,¹³ the secretariat organized an inception workshop of the Sustainable Seabed Knowledge Initiative, in Seocheon, Republic of Korea.¹⁴ The workshop was attended by a wide range of stakeholders, including non-governmental organizations, universities, think tanks, scientific networks and research institutes. The participants recognized the relevance of the Initiative in facilitating global actions to ensure a better knowledge of biodiversity and habitats in the Area. A multiannual project document (2023–2030) was developed, drawing from the results of the workshop and inputs received from experts. Implementation and monitoring mechanisms and indicators have been identified to deliver against five priority outcomes, namely: (a) increasing the knowledge of deep-sea biodiversity and improving the understanding of evolutionary history and the resilience of deep-sea ecosystems; (b) improving the consistency, efficiency and reusability of scientific data and information for biodiversity assessments through integrative tools;

¹³ In December 2022, the Council of the European Union, in its conclusions on international ocean governance for safe, secure, clean, healthy and sustainably managed oceans and seas, explicitly expressed its support for the Sustainable Seabed Knowledge Initiative as an opportunity for Member States to strengthen the scientific foundation of environmental protection and management in the vast deep-sea regions beyond national jurisdiction in line with the ISA Marine Scientific Research Action Plan, taking note with satisfaction of the fact that the Initiative is financially supported by the European Union (document 15973/22, para. 18).

¹⁴ See www.isa.org.jm/events/inception-workshop-sustainable-seabed-knowledge-initiative/.

(c) increasing the generation and flow of taxonomic data and information, including enhanced availability, accessibility and interoperability; (d) increasing global scientific capacity in deep-sea biodiversity assessments; and (e) enhancing the information considered during decision-making processes and relevant global policy agendas through improved knowledge of deep-sea biodiversity.

14. One of the activities initiated under the Initiative is the development of inventories of species in specific geographical areas or habitats to support environmental management through taxonomic harmonization of multiple baseline studies across the regions. In collaboration with the World Register of Marine Species, a species checklist is being developed for the Area of the Clarion-Clipperton Zone. In addition, the secretariat is currently preparing for the organization of a workshop in October 2023 in Viet Nam on advancing deep-sea taxonomy to improve data standardization, for participants to discuss best practices for generating findable, accessible, interoperable and reusable (FAIR) data, and to build capacity in sharing deep-sea biological data. The workshop will be the fourth edition of the workshop series on deep-sea taxonomic standardization convened since 2020.

C. Strategic research priority 3: facilitating technology development for activities in the Area, including ocean observation and monitoring

15. Through this strategic research priority, the Authority is committed to monitoring and reviewing technology trends and developments relating to ocean observation, environmental monitoring and modelling, and mineral processing, including advanced automated and autonomous technological solutions and robotics relating to prospecting for and the exploration of mineral resources in the Area. In March 2023, India formally agreed to spearhead the work of the Authority in this area as a “Deep-Sea Technology Champion” through the leadership of the Ministry of Earth Sciences.

16. The secretariat commissioned a desktop review of the current scientific and industrial developments, including the identification of critical gaps. The review found that new autonomous technologies enable faster mineral resource identification and environmental assessments at a larger scale. It also concluded that technology transfer from other industries should be further explored, for example to design more efficient mineral resource assessment models. When comparing the technologies of mining systems and operations, most candidate technological systems have been developed and tested for polymetallic manganese nodules, while very limited trials have been carried out as yet for polymetallic sulphides and ferromanganese crusts. Lastly, it was recommended that state-of-the-art theoretical models developed in academic frameworks need to inform the action taken by industry with respect to advancing their technological application. These key findings will inform an upcoming workshop in 2023 on technological developments for responsible mining and environmental protection and monitoring.

17. The secretariat, in collaboration with the National Institute of Oceanography and Fisheries of Egypt, organized a side event at the twenty-seventh Conference of the Parties to the United Nations Framework Convention on Climate Change, held in November 2022 in Sharm el-Sheikh, Egypt, on the topic of technological and scientific knowledge in support of prospecting marine mineral resources in deep waters, including for Africa. Participants from diverse backgrounds discussed the importance of science, technology and capacity development in facilitating the sustainable use of the oceans. Participants highlighted that deep-sea minerals present a valuable opportunity to satisfy the increasing demand for critical minerals. In

particular, deep-sea exploration was mentioned as an important opportunity for African countries to advance the progress towards the blue economy.

18. The secretariat joined the advisory board of a project to develop a technology-based impact assessment tool for sustainable, transparent deep-sea mining exploration and exploitation (known as TRIDENT),¹⁵ launched in January 2023. The initiative is led by the Institute for Systems and Computer Engineering, Technology and Science (Portugal), with a consortium of 22 European scientific partners, and is financially supported by the European Commission. The project is aimed at developing remote and automated monitoring systems for deep-sea mining. It will support the development of reliable and cost-effective systems for environmental impact monitoring of activities in the Area, which will also support strategic research priority 4.

19. In June 2023, the secretariat will present the progress under this research priority at the twenty-third meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, on the theme “New maritime technologies: challenges and opportunities”.

20. Considering the growing interest in developing technologies for environmentally responsible management of activities in the Area, the work under this strategic research priority will be instrumental for developing a technology road map for the Authority, together with the support of interested stakeholders. Preliminary work for the development of the road map has been undertaken, with a view to exploring a pathway towards unlocking the full potential of technology development and innovation, in support of the sustainable development of activities in the Area, including through the use of smart tools, such as artificial intelligence and robotics.

D. Strategic research priority 4: enhancing scientific knowledge and understanding of potential impacts of activities in the Area

21. In response to the continued demand for enhanced understanding of the potential impacts of activities in the Area, the secretariat commissioned scientific studies to further provide data and information, with a view to supporting the work of the Authority on ensuring the sustainable management of activities in the Area based on the precautionary approach.

22. The secretariat commissioned an analysis of the spatial interaction of deep-sea fisheries with activities in the Area, which will be published as a technical study in August 2023. The results show a negligible overlap between the occurrence of fishing with gear that operate at or near the sea floor in areas beyond national jurisdiction. The findings also suggest that direct conflicts between fisheries and activities in the Area should be infrequent and readily managed. Discussions with the Food and Agriculture Organization of the United Nations have also progressed for the signing of a memorandum of understanding to enhance the cross-sectoral collaboration on promoting scientific research and a coherent approach to management measures in areas beyond national jurisdiction.

23. The Secretariat commissioned a literature review on the occurrence of microplastics in the deep sea, the results of which will be published as a scientific paper. It was found that deep-sea locations sampled for microplastics are widely spread over the world and that the reported concentrations vary largely. The experts are currently investigating the Authority’s potential contribution to understanding the impact of microplastics in the deep sea, including through the use of the data stored in DeepData.

¹⁵ See <https://cordis.europa.eu/project/id/101091959>.

24. In addition, a study was performed to examine the Authority's potential contribution to assessing and monitoring the health of the ocean. The majority of ocean health indicators currently refer to the sea surface or to the mid-water column, which could be complemented by the data contained in DeepData for a more comprehensive assessment of the health of the ocean. A dashboard with a selection of parameters will be created on DeepData to facilitate further research and raise awareness of the health of the deep sea.

25. The secretariat participated in two scoping meetings organized by the Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) in October 2022 and March 2023. These meetings served to identify knowledge gaps and research priorities to inform the potential successor project to the MiningImpact projects¹⁶ that provided insights into the potential environmental impacts and risks of deep-sea mining.

E. Strategic research priority 5: promoting dissemination, exchange and sharing of scientific data and deep-sea research outputs and increasing deep-sea literacy

26. Pursuant to the Convention, the Authority has the duty to coordinate the dissemination of the research results carried out in the Area. Enhanced access to data and research outputs facilitates and enables further research, stakeholder participation and informed decision-making towards the conservation and sustainable use of deep-sea resources for the benefit of all. This plays a key role in raising awareness of the deep sea and the work of the Authority in ensuring effective management of seabed resources beyond national jurisdiction. With the launch of its DeepData database¹⁷ in 2019, the Authority has developed a repository to share all environmental data and information collected in the Area in an open and transparent manner. As of May 2023, DeepData contains over 10 terabytes of data collected in the Area, and had approximately 2.4 million hits from 57,209 visitors and users between July 2022 and May 2023. Three countries account for approximately half of the total visitors: the United States of America (32 per cent); China (10 per cent); and the Russian Federation (8 per cent) of the total number of visitors.

27. The secretariat has engaged in several strategic partnerships to enhance the availability, accessibility and interoperability of data and information contained in DeepData. Building on the partnership with the Intergovernmental Oceanographic Commission, the secretariat participated in the second International Ocean Data Conference, held in Paris in March 2023. The opportunity to engage with the wider community of data experts increased the international visibility of DeepData and served to stimulate greater usage of the database and to initiate dialogues with potential partners for new collaborations.

28. While the linkage between DeepData and the Ocean Biodiversity Information System has expanded the sharing of environmental data and increased the visibility of DeepData, the secretariat has undertaken collaborative activities with various partners to improve the quality of the environmental data contained in DeepData so as to further increase the utility of the data. The quality of the taxonomic data has significantly improved following the review of more than 60,000 biological records across all regions in which exploration activities are taking place. Furthermore, a review and synthesis of more than 11,000 biological records for the Indian Ocean has been conducted, resulting in increased quality of biological data in DeepData to

¹⁶ See www.jpi-oceans.eu/en/miningimpact.

¹⁷ See <https://data.isa.org/jm/isa/map/>.

inform the ongoing process relating to the regional environmental management plan. The existing partnership with World Register of Marine Species adds an additional quality control mechanism by using new automated procedures for taxon match queries and scientific reviews by World Register of Marine Species editors.

29. By the end of June 2023, four exploration contractors are expected to have agreed to share their bathymetric data with the International Hydrographic Organization through the AREA2030 initiative.¹⁸ The Interoceanmetal Joint Organization provided data collected from 1992 to 2001 in the Clarion-Clipperton Zone, Belgium's Global Sea Mineral Resources (GSR) has made data from its contract area publicly available, Japan's Deep Ocean Resources Development Co. Ltd. (DORD) provided data on areas of particular environmental interest in the Clarion-Clipperton Zone and Germany's Federal Institute for Geosciences and Natural Resources provided bathymetry data for a total of 120,000 km² of seabed in the Clarion-Clipperton Zone and for 188,500 km² of seabed along the Indian Ocean ridges.

30. The secretariat carried out an assessment of the quality of oceanographic data from the Indian Ocean and the North-West Pacific contained in DeepData. The data were compared to those of the World Ocean Database and World Ocean Circulation Experiment. The results highlighted the uniqueness of oceanographic data below 2,000 m water depth in DeepData. As a next step, the oceanographic data will be exchanged with the International Oceanographic Data and Information Exchange of UNESCO under the existing partnership. Additional assessment of oceanographic data will be carried out for the Clarion-Clipperton Zone, Mid-Atlantic Ridge and South Atlantic to support the work of the Authority and the Legal and Technical Commission.

31. A data management strategy is being developed in close collaboration with the Legal and Technical Commission. In parallel, structural components of DeepData have been redesigned and new features developed on the basis of feedback from stakeholders and users. The DeepData architecture was updated to accommodate revisions to the data reporting templates. The revised templates allow contractors to submit more information, such as resource information and assessments, as well as additional biological parameters. DeepData has been updated to accommodate the volume of additional data. New features were implemented to allow users of DeepData to visualize data availability in contract areas. Different modules were improved, for example, through interactive plots to visualize conductivity, temperature and depth measurements.

32. The secretariat has continued to undertake various initiatives to raise awareness of the Authority's mandates and activities carried out under the Convention and the 1994 Agreement, with particular emphasis on its contribution to the 2030 Agenda for Sustainable Development. Different educational tools have been developed and launched in 2023 to teach children between the ages of 4 and 12 about deep-sea research and the protection of the marine environment. Of note was the launch in March 2023, in six official languages of the Authority, of the Wakatoon digital colouring book,¹⁹ and an activity book conceived with the Centre for Language and Culture in Kingston aimed at children between the ages of 3 and 6, entitled "Life under water: preschool companion".²⁰

¹⁸ See www.isa.org/jm/area-2030/.

¹⁹ See www.isa.org/jm/isa-wakatoon/.

²⁰ See www.isa.org/jm/news/isa-launches-activity-book-for-children-3-to-6-years-old-to-promote-deep-sea-literacy-and-sensitization-to-conservation-and-sustainable-use-of-the-ocean-and-its-resources-2/.

F. Strategic research priority 6: strengthening deep-sea scientific capacity of Authority members, in particular developing States

33. Part of the mandate assigned to the Authority to promote and encourage marine scientific research in the Area is the responsibility to support the development of scientific and technical capacities of developing States. This is done through dedicated training programmes and activities that establish a nexus between the action plan and the capacity development strategy adopted in 2022 (ISBA/27/A/5).

34. Continued progress has been made to advance women's empowerment and leadership in deep-sea research, in particular to support women scientists from the least developed countries, landlocked developing countries and small island developing States through the Women in Deep-Sea Research project. Since its launch, over 100 women have benefited from various training initiatives as part of the project, including the contractors' training programme. A pilot mentoring programme will be launched in June 2023, through which world-renowned scientists have agreed to serve as mentors for 10 young female researchers from developing States to assist in elevating their professional development over the course of a 12-month programme.

35. In order to complement those capacity-building efforts, a International Seabed Authority-Institut français de recherche pour l'exploitation de la mer (Ifremer) postdoctoral fellowship was launched in September 2022 to support the work of an expert to conduct an analysis of benthic foraminifera from samples collected in the Clarion-Clipperton Zone and to support research to advance automated image identification. The research will continue for one more year, and the results will be presented at events of the Sustainable Seabed Knowledge Initiative and other international scientific conferences. Three manuscripts are being prepared for submission to scientific peer-reviewed journals, including the description of new species.

36. One of the main efforts of the Authority to build scientific research capacity in developing States is the completion of the programme to deploy national experts implemented under the Africa Deep Seabed Resources project. The project, implemented in cooperation with the African Union and the Norwegian Agency for Development Cooperation, has enabled mid-career African experts to advance some of the Authority's core activities using the DeepData database. Between 2018 and 2022, 10 African experts carried out research within the secretariat. The themes ranged from fundamental topics, such as the characterization of the distribution of water masses, to applied research, for example the assessment of the geothermal energy in the Area, as well as technological advancement such as the development of an inspection tool to support the supervision of deep seabed mining activities.

37. In addition, an internship programme funded by the National Oceanography Centre of the United Kingdom of Great Britain and Northern Ireland took place during the reporting period. A junior woman scientist joined the secretariat for four months to add images to the image library for species recognition and catalogue those images. More than 30,000 image records were catalogued, but their use and sharing are currently limited by the lack of associated metadata. A second intern worked to enhance the quality of the biodiversity data relating to the Indian Ocean in preparation for the workshop on the regional environmental management plan, as well as the data available from the Mid-Atlantic Ridge and Northwest Pacific regions, adding a total of 18,520 biological records to DeepData and the Ocean Biodiversity Information System.

38. Following the signature of the memorandum of understanding (ISBA/26/C/16) with the Indian Ocean Rim Association in March 2022, the secretariat engaged in a joint project for strengthening deep-sea science and technology in the Indian Ocean

region to build and develop institutional, organizational and individual capacities of members of both organizations, in particularly least developed countries and small island developing States.

39. The secretariat and the Technology Bank for the Least Developed Countries developed a joint project framework with a view to implementing joint activities to develop the capacities of the least developed countries in support of the sustainable development of emerging sectors of the blue economy. The project framework is informed by the Doha Programme of Action for the Least Developed Countries for the decade 2022-2031. Pilot projects will be developed in Nepal and the United Republic of Tanzania. In May 2023, the secretariat and the Technology Bank co-organized an online side event on leveraging the power of ocean science, technology and innovation to support the 2030 Agenda during the eighth multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals. It underscored the role of marine science in achieving the 2030 Agenda and supported the broader dissemination of technology and innovation, especially to the most vulnerable countries.

40. The second training workshop of the Authority and the China Joint Training and Research Centre will be held in October 2023 and will target the participation of developing countries (especially least developed countries, landlocked developing countries and small island developing States). The participants will be invited to enrol for a two week in-person training in Qingdao, Shandong Province consisting of thematic and operational lectures linked to the mandates of the Authority, as well as field trips.

III. Engagement and resource mobilization

41. The secretariat has been actively engaging with the scientific community, industries and policymakers to promote scientific research activities in the context of the action plan. It delivered more than 30 presentations at various international forums during the reporting period.

42. There has been increased momentum in efforts to advance marine scientific research. Diverse members of the Authority have committed or expressed interest in committing extrabudgetary contributions to further promote scientific research, especially to reinforce the science-policy interface.

43. In November 2022, the Authority and the Ministry of Oceans and Fisheries of the Republic of Korea signed a letter of cooperation to further strengthen their collaboration on advancing deep-sea research, scientific capacity and the sustainable development of seabed minerals, reaffirming the active engagement and support of the Republic of Korea in promoting marine scientific research in the Area. Additional partnerships to support the implementation of the action plan were established during the reporting period with the secretariat of the Convention on Biological Diversity, the National Research Council of Italy, the National Maritime Foundation in India, Ifremer, the Indian Ocean Rim Association and the Technology Bank for the Least Developed Countries

44. Following the establishment in 2022 of the International Seabed Authority Partnership Fund²¹ with contributions from China, France, Germany, Greece, Japan, Mexico, Monaco, Nigeria, Norway, Republic of Korea, Spain, Tonga and the United Kingdom, other multiannual research initiatives will be developed, in line with the Fund's terms of reference. The first call for proposals will be launched before the end

²¹ [ISBA/27/A/10](#).

of 2023. The secretariat will continue to engage with potential donors with respect to the further development of activities and the sustainability of their outcomes. This multi-donor trust fund will provide an excellent pathway for preparing the Authority to facilitate the new era of marine scientific research under the United Nations Decade of Ocean Science for Sustainable Development.

IV. Recommendations

45. **The Assembly is invited to:**

- (a) **Take note of the information provided in the present report;**
 - (b) **Request the Secretary-General to continue his efforts to mobilize the necessary resources for the implementation and upscaling of the strategic research priorities under the action plan for marine scientific research;**
 - (c) **Encourage all members of the Authority, other States, relevant international organizations, academic, scientific and technical institutions, philanthropic organizations, corporations and private persons to contribute to the implementation of the action plan for marine scientific research.**
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