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Report of the Secretary-General on the contribution of the International Seabed Authority to the United Nations Decade of Ocean Science for Sustainable Development

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. Marine scientific research plays a critical role in the responsible management of the oceans and their resources. It is also vital to scientific advancement and to the environmentally sustainable and commercially viable conduct of activities in the Area. It is first mentioned in the preamble of the United Nations Convention on the Law of the Sea, and an entire chapter (Part XIII) is devoted to the subject, which is also addressed with regard to the Area in Part XI (e.g., art. 143), and in the Agreement relating to the implementation of Part XI of the Convention.

2. Under article 143, paragraph 2, of the Convention, the Authority shall promote and encourage the conduct of marine scientific research in the Area and shall coordinate and disseminate the results of such research and analysis when available. The Authority may also carry out research in its own right.

3. Several initiatives are being undertaken by the Authority to discharge effectively its responsibilities, including in partnership with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO). All these initiatives are based on the mandate given to the Authority pursuant to the Convention and the Agreement. These initiatives are detailed in the strategic plan of the Authority for the period 2019–2023 as adopted by the Assembly in 2018 (ISBA/24/A/10, annex), which contains nine strategic directions with substantial implications for advancing marine scientific research in the deep sea. Accordingly, the members of the Authority, through strategic direction 4 (“Promote and encourage marine scientific research in the Area”), have established the vision of the Authority for the years to come in relation to the promotion and encouragement of marine scientific research in the Area. This vision

* ISBA/26/A/L.1.



is being implemented according to the high-level action plan for 2019–2023 adopted by the Assembly in July 2019 (ISBA/25/A/15). The action plan identifies 12 high-level actions and 14 associated outputs. Most have a direct relationship with the objectives of the United Nations Decade of Ocean Science for Sustainable Development and will significantly contribute to the four scientific objectives (see para. 11 below) of the Decade.

II. United Nations Decade of Ocean Science for Sustainable Development

Planning phase

4. At its seventy-second session, in 2017, the General Assembly proclaimed the United Nations Decade of Ocean Science for Sustainable Development from 2021 to 2030 (resolution 72/73). In its resolution, the Assembly called upon IOC-UNESCO to prepare an implementation plan for the United Nations Decade during the period 2018–2020 in “consultation with Member States, specialized agencies, funds, programmes and bodies of the United Nations, as well as other intergovernmental organizations, non-governmental organizations and relevant stakeholders”.

5. An initial global planning meeting for the United Nations Decade was held in Copenhagen from 13 to 15 May 2019, bringing together 240 participants from all sectors to brainstorm on how to achieve, by 2030, the key societal outcomes (see para. 9 below) during the United Nations Decade. To further support the planning of the Decade, a series of regional workshops have also been initiated. A plan to implement the United Nations Decade is being prepared in order to serve as a high-level framework to guide transformative actions by which ocean science can more effectively support the delivery of the Decade’s societal outcomes. A zero draft version of the plan was circulated to United Nations agencies and other relevant stakeholders for comments, which led to a revised version that will be submitted to Intergovernmental Oceanographic Commission member States for review in June and July 2020 prior to transmission to the General Assembly.

6. The General Assembly, in its resolution 72/73, also invited UN-Oceans and its participants to collaborate with IOC-UNESCO on the United Nations Decade. To that end, a UN-Oceans contact group for the United Nations Decade was established, in which the secretariat of the Authority participates.

7. Since the preliminary steps taken by IOC-UNESCO in 2017 to secure strategic partnerships to co-design the United Nations Decade, the Authority has been committed to contributing actively to all stages of development of the preparation phase and the implementation of the Decade. Ongoing dialogue and discussions have taken place between the Authority and IOC-UNESCO. Furthermore, the Authority also participated in the first global planning meeting, mentioned above, and provided comments in November 2019 on the draft science action plan for the United Nations Decade.¹

Vision, mission and outcomes

8. The aim of the United Nations Decade is to generate and use knowledge for the transformational action needed to achieve a healthy, safe, and resilient ocean for sustainable development by 2030 and beyond.

9. The following seven societal outcomes have been identified:

¹ ISBA/24/A/2, para.56; ISBA/25/A/2, para. 95.

- (a) A clean ocean where sources of pollution are identified, reduced or removed;
- (b) A healthy and resilient ocean where marine ecosystems are understood and managed;
- (c) A productive ocean supporting sustainable food supply and a sustainable ocean economy;
- (d) A predicted ocean where society understands and can respond to changing ocean conditions;
- (e) A safe ocean where life and livelihoods are protected from ocean-related hazards;
- (f) An accessible ocean with open and equitable access to data, information and technology and innovation;
- (g) An inspiring and engaging ocean where society understands and values the ocean in relation to human well-being and sustainable development.

Ocean Decade Challenges

10. A set of 10 “Ocean Decade Challenges” has also been identified:

- (a) Challenge 1: Understand and map land and sea-based sources of pollutants and contaminants and their potential impacts on human health and ocean ecosystems, and develop solutions to mitigate or remove them;
- (b) Challenge 2: Understand the effects of multiple stressors on ocean ecosystems and develop solutions to protect, monitor, manage and restore ecosystems and their biodiversity under changing environmental conditions, including climate;
- (c) Challenge 3. Generate knowledge, support innovation and develop solutions to optimize the role of the ocean to contribute to sustainably feeding the world’s population under changing environmental and social conditions;
- (d) Challenge 4. Generate knowledge, support innovation and develop solutions to contribute to equitable and sustainable development of the ocean economy under changing environmental and social conditions;
- (e) Challenge 5. Enhance understanding of the ocean-climate nexus and use this understanding to generate solutions to mitigate, adapt and build resilience to the effects of climate change, and to improve services, including improved predictions and forecasts for weather, climate and the ocean;
- (f) Challenge 6. Expand multi-hazard warning systems for all biological, geophysical and weather- and climate-related ocean hazards, and mainstream community preparedness and resilience;
- (g) Challenge 7. Ensure a sustainable ocean observing system that delivers timely data and information accessible to all users on the state of the ocean across all ocean basins;
- (h) Challenge 8. Develop a comprehensive digital representation of the ocean, including a dynamic ocean map, through multi-stakeholder collaboration that provides free and open access to explore, discover and visualize past, current and future ocean conditions;
- (i) Challenge 9. Ensure comprehensive capacity development and equitable access to data, information, knowledge and technology across all aspects of ocean science and for all stakeholders, regardless of geography, gender, culture or age;

(j) Challenge 10. Ensure that the multiple values of the ocean for human well-being, culture and sustainable development are recognized and widely understood, and identify and overcome barriers to the behaviour change that is required for a step change in humanity's relationship with the ocean.

Scientific objectives

11. Four scientific objectives have been identified to guide the design and implementation of actions during the United Nations Decade. These objectives are as follows:

- (a) Increase capacity to generate, understand, manage and use ocean knowledge;
- (b) Identify and generate required ocean data, information and knowledge;
- (c) Build comprehensive understanding of the ocean and ocean governance systems;
- (d) Increase the use of ocean knowledge.

Governance and coordination framework

12. In its resolution [72/73](#), the General Assembly, invited the Secretary-General to inform it on the implementation of the United Nations Decade. It is envisaged that the governing bodies of IOC-UNESCO will provide oversight of the United Nations Decade. They will be supported in their task by a United Nations Decade Board that will comprise representatives of United Nations agencies and relevant experts. The Board will be responsible for the high-level and strategic oversight of the United Nations Decade through the implementation phase. The secretariat of the Board will be provided by a coordination unit located within the IOC-UNESCO secretariat. Some decentralized coordination structures will also be considered, such as the establishment of United Nations Decade collaborative centres to be hosted by one or more countries or an international organization engaged in Decade activities.

III. Action plan of the Authority in support of the United Nations Decade of Ocean Science for Sustainable Development

13. The Authority is committed to contributing to the implementation of the United Nations Decade, and the action plan has been developed in order to formalize and organize the contribution of the Authority in that regard. The action plan is built on the strategic directions, high-level actions and associated outputs adopted by the members of the Authority through the adoption of the strategic plan and the high-level action plan of the Authority for 2019–2023.

14. It is recognized that the content of the action plan will continue to evolve as new strategic research priorities are identified and endorsed by members of the Authority through the review process of the strategic plan and the high-level action plan. This will ensure that the work of the Authority continues to contribute to the implementation of the Convention and the Agreement, as well as the 2030 Agenda for Sustainable Development and the United Nations Decade.

15. Annex I to the present report contains the action plan, together with a consolidated list of expected outputs that will, once achieved, materialize the contribution of the Authority to the implementation of the United Nations Decade.

16. The Assembly is invited to consider, with a view to adoption, the action plan. A draft decision to this effect is provided in annex II.

Annex I

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

I. Introduction

1. Marine scientific research in the Area is to be carried out for peaceful purposes and for the benefit of mankind as a whole (United Nations Convention on the Law of the Sea, art. 143 (1)). All States have the right to conduct marine scientific research in the Area (*ibid.*, art. 256). Pursuant to article 143, paragraph 3, of the United Nations Convention on the Law of the Sea (the Convention), States parties shall promote international cooperation in marine scientific research in the Area by participating in international programmes and encouraging cooperation in marine scientific research by personnel of different countries and of the International Seabed Authority.

2. The Authority is required, under the Convention and the Agreement relating to the implementation of Part XI of the Convention, to promote and encourage the conduct of marine scientific research in the Area, as well as coordinate and disseminate the results of scientific research and analysis, when available (*ibid.*, art. 143 (2)). It may also carry out marine scientific research concerning the Area. As part of its responsibilities, the Authority also has the duty to encourage appropriate programmes to be designed and implemented for the benefit of developing States and technologically less developed States, with a view to (a) strengthening their research capabilities, (b) training their personnel in the techniques and applications of research and (c) fostering the employment of their qualified personnel in research in the Area (*ibid.*, art. 143 (3)).

3. This action plan has been developed on the basis of the strategic directions, high-level actions and associated outputs adopted by the members of the Authority through the adoption of the strategic plan ([ISBA/24/A/10](#), annex) and the high-level action plan ([ISBA/25/A/15](#)) for 2019–2023.

II. Contribution of the Authority to the United Nations Decade of Ocean Science for Sustainable Development

4. The importance of the United Nations Decade is emphasized in the context of the strategic plan and the high-level action plan for the Authority for 2019–2023. Both documents recognize the commitment of the Authority to contribute to the achievement of relevant goals and targets of the 2030 Agenda for Sustainable Development, in particular Sustainable Development Goal 14 (“Conserve and sustainably use the oceans, seas and marine resources”).

5. High-level action 1.2.2 identifies the need to “cooperate with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization in the planning and implementation of the United Nations Decade of Ocean Science for Sustainable Development, in particular on matters relating to the conduct of marine scientific activities in the Area”. Strategic direction 4.3 further requires the Authority to “Strengthen and, as appropriate, establish strategic alliances and partnerships with relevant subregional, regional or global organizations, including the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization ... to share data and information in an open and transparent manner, avoid the duplication of efforts

and benefit from synergies, for example, by aligning with the United Nations Decade of Ocean Science for Sustainable Development”.

6. The Authority has long cooperated with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO), which was formalized through the signing of a memorandum of understanding between the two organizations in 2000, with a view to creating the enabling conditions to further strengthen the existing partnership to better meet the needs of their members.

7. It is in this context that the Authority, building on the existing frameworks and strategic directions endorsed by the Assembly in 2018 and 2019, has identified a series of specific outputs aimed at supporting the implementation of the United Nations Decade and the achievement of the scientific objectives and societal outcomes identified (see annex I.A).

1. Strategic research priorities

8. Pursuant to the role and responsibilities assigned to the Authority under the Convention and the Agreement in relation to the conduct of marine scientific research in the Area, and in line with the strategic directions, high-level actions and associated outputs contained in the strategic plan and the high-level action Plan of Authority for 2019–2023, particular emphasis will be placed on the following strategic research priorities:

(a) Strategic research priority 1: Advancing scientific knowledge and understanding of deep-sea ecosystems, including biodiversity and ecosystems functions, in the Area;

(b) Strategic research priority 2: Standardizing and innovating methodologies for deep-sea biodiversity assessment, including taxonomic identification and description, in the Area;

(c) Strategic research priority 3: Facilitating technology development for activities in the Area, including ocean observation and monitoring;

(d) Strategic research priority 4: Enhancing scientific knowledge and understanding of potential impacts of activities in the Area;

(e) Strategic research priority 5: Promoting dissemination, exchange and sharing of scientific data and deep-sea research outputs and increasing deep-sea literacy;

(f) Strategic research priority 6: Strengthening deep-sea scientific capacity of Authority members, in particular developing States.

2. Capacity-building/development and transfer of technology

9. Another unique feature of the mandate given to Authority under the Convention and the Agreement when it comes to promoting and encouraging marine scientific research in the Area lies in the obligation to contribute to the development of scientific and technical capacities of developing States members of the Authority. Pursuant to the Convention, all States parties are automatically members of the Authority and have the obligation to develop and carry out, including under the auspices of the Authority (United Nations Convention on the Law of the Sea, art. 143 (3)), dedicated training programmes and technical assistance and scientific cooperation programmes with regard to activities in the Area in marine science and technology and the protection of the marine environment (*ibid.*, art. 148; Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea,

annex, sect. 5 (1) (c)) for the “benefit of developing States” (United Nations Convention on the Law of the Sea, art. 143 (3)).

10. Another particular element of the legal regime for the Area is the obligation for contractors to draw up practical programmes for the training of personnel of the Authority and developing States, including the participation of such personnel in all activities in the Area that are covered under the contract (*ibid.*, annex III, art. 15). Furthermore, the Authority has progressively developed several other mechanisms aimed at operationalizing the requirements set out under international law, including, for example, the Endowment Fund for Marine Scientific Research in the Area and the internship programme. In 2018, the Authority launched the first edition of the Secretary-General’s Award for Excellence in Deep-Sea Research. Recent initiatives such as the Abyssal Initiative for Blue Growth project, implemented by the Authority and the Department of Economic and Social Affairs, and the Africa Deep Seabed Resources project, implemented by the Authority in partnership with the Africa Union and the Norwegian Agency for Development Cooperation, have also proved to be very successful in developing the capacities of developing States members of the Authority in the field of marine scientific research.

11. Since 2017, special emphasis has also been placed on the commitment made by the Authority at the United Nations conference to enhance the role of women from developing States in marine scientific research programmes in the Area. To date, such commitment has resulted in the training of 133 women from developing States.

12. It is envisaged that all these initiatives, as they progress and are reinforced, will contribute significantly to achieving the societal outcomes of the United Nations Decade. Such initiatives will also probably be more successful and will better reflect the societal objectives to be achieved if they also reflect the priority needs identified by the members of the Authority.

3. Communications and stakeholder engagement

13. Transparency is an essential element of good governance and, therefore, a fundamental guiding principle for the Authority in the conduct of its activities. Accordingly, the Authority will continue to engage all stakeholders in the development and implementation of activities identified in this action plan that are necessary to meet the strategic directions and high-level actions identified in the strategic plan and the high-level action plan for 2019–2023.

4. Implementation, monitoring and review of the International Seabed Authority action plan

14. The secretariat of the Authority will continue to actively participate in the preparations and implementation of the United Nations Decade, through bilateral cooperation with IOC-UNESCO and through UN-Oceans.

15. The secretariat will also continue to report progress under the annual report presented by the Secretary-General to the Assembly of the Authority. The Secretary-General also provides information on the activities of the Authority to the meeting of the States parties to the Convention and makes an annual statement to the United Nations General Assembly under the agenda item “oceans and the law of the sea”.

16. The secretariat will develop appropriate mechanisms for monitoring and review to enable this action plan to stay aligned with the needs of Authority members, as well as the goals and targets of the 2030 Agenda and the scientific objectives of the United Nations Decade.

Appendix I

Relevant strategic directions and high-level actions and associated short-term and long-term scientific outputs of the International Seabed Authority in support of the United Nations Decade of Ocean Science for Sustainable Development

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
1.	Realize the role of the Authority in a global context			
1.2	Establish and strengthen strategic alliances and partnerships with relevant subregional, regional and global organizations with a view to more effective cooperation in the conservation and sustainable use of ocean resources, consistent with the United Nations Convention on the Law of the Sea and international law, including the pooling of resources and funding, where appropriate, in particular in connection with marine scientific research, to avoid the duplication of efforts and to benefit from synergies	1.2.2. Cooperate with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization in the planning and implementation of the United Nations Decade of Ocean Science for Sustainable Development, in particular on matters relating to the conduct of marine scientific activities in the Area	<ul style="list-style-type: none"> • Specific role and mandate of the Authority in relation to marine scientific research reflected in the implementation plan of the United Nations Decade • Contribution of the Authority to the implementation of the United Nations Decade monitored through implementation of the Authority's dedicated action plan • Authority collaborative centre on deep-sea research established 	<ul style="list-style-type: none"> • Importance & value of the Authority's contribution to the achievement of the United Nations Decade's scientific objectives and societal outcomes identified and addressed • Satisfactory delivery of joint and coordinated actions through Authority collaborative centre on deep-sea research undertaken
3.	Protect the marine environment			
3.3	Ensure public access to environmental information, including environmental information from contractors, and participation by stakeholders, as appropriate	3.3.1. Facilitate public access to non-confidential information	<ul style="list-style-type: none"> • User-friendly access pathways to and functionalities of Deep Data aligned with innovations in web-based technology 	<ul style="list-style-type: none"> • Deep Data fully operational as primary global database for geological and environmental data and information on the Area and effectively used by relevant stakeholders

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
3.4	Develop scientifically and statistically robust monitoring programmes and methodologies to assess the potential risk for activities in the Area to interfere with the ecological balance of the marine environment	3.4.1. Establish robust monitoring programmes and methodologies to assess the potential risks that activities in the Area interfere with the ecological balance of the marine environment	<ul style="list-style-type: none"> • Standard operating procedures for collection of environmental data related to activities in the Area developed • Analysis and synthesis of environmental data collected by contractors, scientific communities and other competent organizations in the Area undertaken to support the development of regional environmental management plan and the assessment of effects of activities in the Area 	<ul style="list-style-type: none"> • Assessment of the potential risks for activities in the Area significantly improved as a result of the establishment of scientifically and statistically robust monitoring programmes and methodologies • Standardized and coherent approaches in the collection and analysis of environmental data for the Area ensured
		3.4.2. Keep under review the adequacy of the monitoring programmes and methodologies	<ul style="list-style-type: none"> • Adequacy of monitoring programmes and methodologies ensured through compilation, analysis and systemic synthesis of historical and current baseline and monitoring data • Regional environmental assessments produced for selected regions of the Area and widely disseminated 	<ul style="list-style-type: none"> • Protection of the marine environment from potential risks of activities in the Area ensured as a result of strengthened monitoring programmes and methodologies established by the Authority • Understanding of status of the marine environment in the Area improved • Global long-term assessment on the state of mineral resources and the marine environment in the Area produced and

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
3.5	Develop appropriate regulations, procedures, monitoring programmes and methodologies to prevent, reduce and control pollution and other hazards to the marine environment, as well as interference with the ecological balance of the marine environment, prevent damage to the flora and fauna of the marine environment and implement the relevant requirements relating to the protection of the marine environment as contained in part XII of the Convention	3.4.3. Encourage and facilitate strategic partnerships to support the work of the Authority in developing robust monitoring programmes and methodologies	<ul style="list-style-type: none"> • Global exchange and sharing platform on environmental monitoring established among contractors and relevant scientific communities 	<p>disseminated to the Authority stakeholders on regular basis.</p> <ul style="list-style-type: none"> • Environmental monitoring and management technology significantly improved as a result of the establishment of sustainable partnerships with all relevant stakeholders
		3.5.1. Monitor, through cooperation with contractors, sponsoring States and other stakeholders, pollution and hazards to the marine environment from seabed activities undertaken in the Area	<ul style="list-style-type: none"> • Monitoring of potential pollution and other hazards from seabed activities in the Area improved, including through predictive modelling and other scientific approaches 	<ul style="list-style-type: none"> • Global understanding of potential risks associated with seabed activities in the Area improved
		3.5.2. Keep under review regulations, procedures, monitoring programmes and methodologies to prevent, reduce and control pollution and other hazards to the marine environment, as well as interference with the ecological balance of the marine environment, to prevent damage to the flora and fauna of the marine environment	<ul style="list-style-type: none"> • Appropriate scientific criteria for the elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment from activities in the Area established • Standardized scientific tools and approaches for assessing rare or fragile ecosystems and the habitat of depleted, threatened or endangered 	<ul style="list-style-type: none"> • Scientific capabilities of the Authority to predict environmental changes and harmful effects from activities in the Area improved and fully operational, in partnership with contractors and scientific communities • International requirements relating to the protection of the marine environment from harmful effects of activities in the Area better implemented as a

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
			<p>species and other forms of marine life in the Area, identified and consolidated</p> <ul style="list-style-type: none"> • Environmental data and scientific knowledge processed to inform the implementation of management measures to prevent, reduce and control harmful effects from potential activities in the Area. 	<p>result of improved scientific information and knowledge, strengthened partnerships and cooperation</p>
		<p>3.5.3. Implement the relevant requirements relating to the protection of the marine environment as contained in part XII of the Convention</p>	<ul style="list-style-type: none"> • Assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies is enhanced as a result of cooperation in studies, programmes of scientific research and exchange of information and data concerning pollution of the marine environment from activities in the Area • Scientific and technical capacity of developing States for the purposes of prevention, reduction and control of pollution of the marine environment from activities in the Area or minimization of its effects enhanced 	<ul style="list-style-type: none"> • Pollution from activities in the Area minimized to the fullest possible extent • Rare or fragile ecosystems and the habitat of depleted, threatened or endangered species and other forms of marine life in the Area protected and preserved • Implementation of relevant provisions of Part XII of the Convention improved as a result of enhanced cooperation in studies, programmes of scientific research and exchange of information and data and strengthened scientific and technical capacities of developing States

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
		3.5.4. Encourage and facilitate strategic partnerships to support the work of the Authority in developing regulations, procedures, monitoring programmes and methodologies	<ul style="list-style-type: none"> • Strategic scientific partnership established with various stakeholders, including contractors, to support the development of regulations, procedures, monitoring programmes and methodologies 	<ul style="list-style-type: none"> • Strengthened scientific partnerships with various stakeholders, including contractors, result in improved implementation of environmental regulations, procedures, monitoring programmes and methodologies
4.	Promote and encourage marine scientific research in the Area			
4.1	Continue to promote and encourage the conduct of marine scientific research with respect to activities in the Area, with particular emphasis on research related to the environmental effects of activities in the Area	4.1.1. Actively promote and encourage the conduct of marine scientific research with respect to activities in the Area	<ul style="list-style-type: none"> • Marine scientific research programmes and activities in the Area increased • Partnership platform for promoting and encouraging the conduct of marine scientific research in the Area established in collaboration with IOC-UNESCO, other competent international organizations and relevant international scientific bodies 	<ul style="list-style-type: none"> • Global knowledge of marine biodiversity and resources assessment significantly improved as a result of increased marine scientific research in the Area
		4.1.2. Promote and encourage research related to the environmental effects of activities in the Area	<ul style="list-style-type: none"> • Global deep ocean observing programmes/initiatives facilitated by the Authority developed and operated in collaboration with all relevant stakeholders 	<ul style="list-style-type: none"> • Marine scientific research in the Area and the dissemination of its results are enhanced and sustainably financed to improve knowledge base on biodiversity, ecosystem functioning and resilience of deep-sea life to

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
4.2	Collect and disseminate the results of research and analysis, when available	4.1.3. Establish strategic alliances and partnerships with Governments, international organizations, contractors and other relevant stakeholders to advance research related to the environmental effects of activities in the Area	<ul style="list-style-type: none"> • Scientific research related to the environmental effects of activities in the Area improved as a result of increased strategic alliances and partnerships • Collaborative platforms created for generation and dissemination of scientific knowledge and sharing of scientific expertise on assessing environmental effects of activities in the Area, among contractors, scientific communities and other stakeholders 	<p>changing marine environment</p> <ul style="list-style-type: none"> • Global understanding and knowledge of the deep-sea environment significantly improved as a result of marine scientific research in the Area coordinated by the Authority
		4.2.1. Enhance the collection, compilation, analysis and synthesis of the results of research and analysis, when available, in particular from contractors, including through the Authority's database as the principal repository for data and information related to the deep seabed and associated water column	<ul style="list-style-type: none"> • Availability of research results and analysis significantly improved as a result of the development and use of innovative tools • Data management strategy for Deep Data effectively implemented 	<ul style="list-style-type: none"> • Innovative, cost-effective and practically applicable tools and methodologies (e.g., automated processing and deep learning) developed and applied for biodiversity assessment • Deep Data functional as primary global open access database on all related environmental data and information collected in the Area

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
		4.2.2. Ensure the dissemination of the results of research and analysis, when available, in a timely manner	<ul style="list-style-type: none"> • Available scientific research results and analysis related to activities in the Area systematically compiled and disseminated • Geospatial analysis functionalities of Deep Data enhanced to meet the diverse needs of stakeholders 	<ul style="list-style-type: none"> • Global decision-making processes better informed as a result of improved collection and dissemination of research results and analysis related to the environmental effects of activities in the Area • Global knowledge and understanding of the Area's environment and resources significantly advanced as a result of systematic dissemination of available research result and analysis by the Authority • Decision-making processes better informed and equipped to take the most appropriate measures for the sustainable development of resources and protection of marine environment from harmful effects of activities in the Area
4.3	Strengthen and, as appropriate, establish strategic alliances and partnerships with relevant subregional, regional and global organizations, including the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the International Atomic	4.3.1. Establish and enhance partnerships for improved sharing of data and information	<ul style="list-style-type: none"> • Increased number of partnerships established to improve sharing of data and information among multiple archival systems of ocean-related information, including physical, chemical, 	<ul style="list-style-type: none"> • Data set interoperability ensured for long-term continuous data-sharing with other international database holders and with a view to supporting coherent collection and

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
	<p>Energy Agency and the International Hydrographic Organization and collaborative programmes such as the European Union joint programming initiative on healthy and productive seas and oceans, to share data and information in an open and transparent manner, avoid the duplication of efforts and benefit from synergies, for example, by aligning with the United Nations Decade of Ocean Science for Sustainable Development, which will address knowledge gaps to be identified by the First Global Integrated Marine Assessment (World Ocean Assessment I)</p>	<p>4.3.2. Raise awareness of the Authority's database as the primary repository for data and information related to the deep seabed and associated water column, and its potential contribution to the advancement of global knowledge and understanding of the deep sea, including in the context of the United Nations Decade of Ocean Science for Sustainable Development</p> <p>4.3.3. Build up, enhance and expand the Authority's database and facilitate the production of data analysis and synthesis through partnerships with various scientific partners</p>	<p>biological and geological data and associated sampling metadata</p> <ul style="list-style-type: none"> • Global awareness of the nature and content of Deep Data increased, in particular its geospatial data management component • Development of information products and data-sharing functionalities enhanced in Deep Data • Standardized Deep Data reporting module developed and applied • Deep Data partnership with Ocean Biodiversity Information System/IOC-UNESCO on biodiversity data and with International Hydrographic Organization/Seabed 2030 on bathymetric data established 	<p>management of data sets at the global level</p> <ul style="list-style-type: none"> • Global knowledge and understanding of the Area's environment and resources significantly advanced as a result of increased access to and use of data and information, including geospatial data and information related to the deep seabed and associated water column, contained in Deep Data • Real-time or near real-time data analysis, synthesis and visualization tools and functionalities for Deep Data developed and operational in collaboration with contractors, competent international organizations and scientific communities • Data set interoperability ensured for long-term continuous data sharing with other international database holders and with a view to supporting coherent collection and

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
4.4	Be proactive in engaging with the international scientific community through workshops and sponsored publications and by promoting access to non-confidential information and data, in particular those data relating to the marine environment	4.4.1. Promote and strengthen partnerships with the international scientific community, including by involving it in workshops and technical publications	<ul style="list-style-type: none"> • Engagement with international scientific communities enhanced through new and fostered collaborative initiatives and programmes • Synthesis of scientific data and information on marine environment contained in Deep Data and assessment of critical data gaps undertaken through various collaborative activities with contractors and scientific communities 	<p>management of data sets at the global level</p> <ul style="list-style-type: none"> • Contribution of the Authority to enabling access to non-confidential information and data as a means to achieve the United Nations Decade's scientific objectives and expected outcomes fully recognized and materialized
		4.4.2. Promote and facilitate access to non-confidential information and data related to the marine environment	<ul style="list-style-type: none"> • User-friendly access pathways to and functionalities of Deep Data established • Increased access to and use of Deep Data by diverse stakeholders (including the Authority-China joint training and research centre), in collaboration with IOC/UNESCO and other scientific partners, facilitated through the offering of relevant training opportunities, in particular on biodiversity data using the Ocean 	<ul style="list-style-type: none"> • Deep Data functional as primary global open access database on all related environmental data and information collected in the Area • Global knowledge and understanding of marine environment of the Area enhanced as a result of improved access by stakeholders to non-confidential information and data contained in Deep Data

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
4.5	Compile summaries of the status of environmental baseline data and develop a process to assess the environmental implications of activities in the Area (Convention, art. 165 (2) (d))	4.5.1. Compile summaries of the status of environmental baseline data	<p data-bbox="1251 220 1535 277">Biodiversity Information System</p> <ul data-bbox="1251 306 1535 526" style="list-style-type: none"> • Regional environmental assessment report and data report produced in relation to the development of regional environmental management plans 	<ul data-bbox="1577 306 1898 667" style="list-style-type: none"> • Global knowledge and understanding of potential environmental impacts of activities in the Area improved • Global outlook on the state of mineral resources and the marine environment in the Area produced and regularly updated
		4.5.2. Develop processes to assess the environmental implications of activities in the Area and disseminate and publish, as appropriate, the results of any such assessment	<ul data-bbox="1230 695 1545 914" style="list-style-type: none"> • Predictive modelling and other scientific approaches undertaken to assess the potential impacts of pollution and other hazards from activities in the Area 	<ul data-bbox="1577 695 1898 914" style="list-style-type: none"> • Scientific knowledge basis that enables the Authority to fully implement its mandate for addressing environmental impacts of activities in the Area
5.	Build capacity for developing States			
5.1	Ensure that all capacity-building programmes and measures and their delivery are meaningful, tangible, efficient, effective and targeted at the needs of developing States, as identified by developing States	5.1.1. Assist developing States, in particular geographically disadvantaged States, small island developing States, least developed countries and landlocked developing countries, in identifying their needs	<ul data-bbox="1230 992 1545 1396" style="list-style-type: none"> • Priority needs of developing States members of the Authority, in particular for geographically disadvantaged States, small island developing states, least developing States and landlocked developing countries, in relation to marine scientific research in the Area identified 	<ul data-bbox="1577 992 1898 1179" style="list-style-type: none"> • Capacities of developing States members of the Authority, in relation to marine scientific research in the Area, significantly improved

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
		5.1.2. Adjust capacity-building programmes as necessary to meet the needs of developing States	<ul style="list-style-type: none"> Capacity-building/development programmes in relation to marine scientific research in the Area systematically adjusted to meet the needs identified by developing States members of the Authority 	<ul style="list-style-type: none"> Contribution of the Authority's capacity-building/development programmes to meet the needs of developing States members of the Authority in relation to marine scientific research in the Area, established
		5.1.3. Undertake regular assessments of the effectiveness and relevance of capacity-building programmes and initiatives implemented by the Authority	<ul style="list-style-type: none"> Effectiveness and relevance of the Authority capacity-building programmes and initiatives in relation to marine scientific research in the Area systematically assessed 	
5.2	Seek and maximize funding opportunities for the Endowment Fund for Marine Scientific Research in the Area and its beneficiaries, together with participation in global financing mechanisms	5.2.1. Promote and strengthen partnerships with Governments, international organizations and the private sector to maximize funding opportunities and in-kind contributions for the Endowment Fund for Marine Scientific Research in the Area and its beneficiaries	<ul style="list-style-type: none"> Partnerships for improved funding opportunities and in-kind contributions of the Endowment Fund for Marine Scientific Research in the Area established and fostered Funding opportunities and in-kind contributions for the Endowment Fund for Marine Scientific Research in the Area increased 	<ul style="list-style-type: none"> Number of beneficiaries of the Endowment Fund for Marine Scientific Research in the Area from developing States members of the Authority increased.
		5.2.2. Participate in global financing mechanisms to foster funding opportunities for the Endowment Fund for Marine Scientific Research in the Area and its beneficiaries	<ul style="list-style-type: none"> Relevant mechanisms established to foster funding for the Endowment Fund for Marine Scientific Research in the Area 	<ul style="list-style-type: none"> Sustainable funding schemes established and result in enhanced capacity development programmes and

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
5.3	Enable capacity-building measures to be mainstreamed into relevant initiatives	5.3.1. Promote, prioritize and implement capacity-building measures in all projects and activities, as far as practicable, implemented by the Authority, alone and in partnership, with an emphasis on the needs identified by developing States	<ul style="list-style-type: none"> • All scientific research programmes and activities implemented by the Authority designed with due consideration for capacity-building/development priorities identified by developing States 	<p>initiatives for deep-sea research</p> <ul style="list-style-type: none"> • Contribution of the Authority to global efforts to develop capacities of developing States in deep-sea research established
5.4	Build on the achievements of contractor training programmes and assess their long-term impact on capacity-building	5.4.1. Undertake regular assessments of contractors' training programmes and their long-term impact on capacity-building	<ul style="list-style-type: none"> • Impact of contractors' training programmes in building/developing capacities of developing States members of the Authority regularly assessed 	<ul style="list-style-type: none"> • Capacities of developing States members of the Authority, in relation to marine scientific research in the Area, significantly improved as a result of responsiveness of contractors' training programmes to the needs identified
		5.4.2. Facilitate the adjustment of contractor training programmes to meet the needs of developing States		
6.	Ensure fully integrated participation by developing States			
6.3	In cooperation with States parties, initiate and promote measures providing opportunities to personnel from developing States for training in marine science and technology and for their full participation in activities in the Area (Convention, art. 144 (2) (b))	6.3.1. Identify training opportunities for personnel from developing States in marine science and technology	<ul style="list-style-type: none"> • Training opportunities in marine science and technology increased for personnel of developing States members of the Authority 	<ul style="list-style-type: none"> • Capacities of developing States members of the Authority, in relation to marine science and technology, significantly improved

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
		6.3.2. Actively promote partnerships with Governments, contractors and international organizations to maintain and develop training opportunities for personnel from developing States	<ul style="list-style-type: none"> • Sustainable partnerships established with Governments, contractors and international organizations in support of the Authority programmatic approach for capacity development in marine scientific research 	
		6.3.3. Identify and develop measures to strengthen the role of women in deep seabed-related activities and, in particular, deep seabed research	<ul style="list-style-type: none"> • Challenges in the participation and leadership of women in deep-sea research in the Area and corrective measures identified 	<ul style="list-style-type: none"> • Participation and leadership of women in activities in the Area improved • Participation of women in marine scientific research programmes and activities undertaken in the Area significantly improved as a result of measures and training put in place by the Authority
6.4	Carry out a detailed resource assessment of the reserved areas that are available to the Enterprise and developing States	6.4.1. Update the resource assessment of the reserved areas as new data and information become available		<ul style="list-style-type: none"> • Global outlook on the state of mineral resources and the marine environment in the Area in place
9.	Commit to transparency			
9.2	Ensure access to non-confidential information	9.2.1. Promote and enhance the availability of, and access to, non-confidential information and, in particular, consider a wider dissemination of information, analysis and decisions relating to the work of the Authority,	<ul style="list-style-type: none"> • Availability of and access to non-confidential information ensured • Increased access to and use of Deep Data by diverse stakeholders (including the Authority- 	<ul style="list-style-type: none"> • Global knowledge and understanding of the Area and the work of the Authority enhanced as a result of improved availability of and access to scientific and

No.	Strategic direction	High-level action	Short-term outputs	Long-term outputs
9.4	Build a stakeholder communications and consultation strategy and platform that facilitates open, meaningful and constructive dialogue, including on stakeholder expectations	9.4.1. Promote the adoption of a communications and stakeholder engagement strategy	<p>China joint training and research centre), in collaboration with IOC/UNESCO and other scientific partners, facilitated through the offering of relevant training opportunities, in particular on biodiversity data using the Ocean Biodiversity Information System</p> <ul style="list-style-type: none"> • Deep Data user groups established and operational for providing regular feedback and ensuring up-to-date, user-friendly maintenance of Deep Data • Process for engagement of relevant stakeholders in marine scientific research programmes and activities facilitated by the Authority in the Area established 	<p>environmental non-confidential information</p> <ul style="list-style-type: none"> • General awareness and understanding of the Authority's specific role and mandate in relation to marine scientific research in the Area improved • Systematic and coordinated participation of the Authority in communications activities implemented for the United Nations Decade

<i>No.</i>	<i>Strategic direction</i>	<i>High-level action</i>	<i>Short-term outputs</i>	<i>Long-term outputs</i>
		9.4.2. Actively engage relevant stakeholders in the work of the Authority, as appropriate	<ul style="list-style-type: none"> • Participation of stakeholders in design and/or implementation of marine scientific research programmes and activities implemented by the Authority improved 	<ul style="list-style-type: none"> • Contribution of the Authority's activities and programmes recognized as having significant value to achieve scientific objectives and societal outcomes of the United Nations Decade

Annex II

Draft decision of the Assembly relating to action plan of the Authority in support of the United Nations Decade of Ocean Science for Sustainable Development

The Assembly of the International Seabed Authority,

Recalling its decision to adopt the strategic plan and the high-level action plan of the Authority for the period 2019–2023,²

Recalling also that, at its seventy-second session, in 2017, the General Assembly proclaimed the United Nations Decade of Ocean Science for Sustainable Development from 2021 to 2030,³

Acknowledging the important and fruitful partnership established between the Authority and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization that has been formalized by the signing of a memorandum of understanding,⁴

Emphasizing that the vision of the Authority for the promotion and encouragement of marine scientific research in the Area is established in compliance with the United Nations Convention on the Law of the Sea of 10 December 1982 and the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea in the strategic plan and the high-level action plan of the Authority for the period 2019–2023,⁵

Considering that nine strategic directions of the strategic plan of the Authority have substantial implications for advancing marine scientific research in the Area and that the high-level action plan identifies 12 high-level actions and 14 associated outputs, all of which have direct relevance to the objectives of the United Nations Decade of Ocean Science for Sustainable Development,

Considering also that the content of the action plan will continue to evolve as new strategic research priorities are identified and endorsed by the members of the Authority, including through the review process of the strategic plan and the high-level action plan of the Authority for the period 2019–2023,

Adopts the action plan in support of the United Nations Decade of Ocean Science for Sustainable Development, as contained in the annex to the present decision.

² [ISBA/24/A/10](#) and [ISBA/25/A/15](#).

³ Resolution [72/73](#).

⁴ Signed in May 2000; see [ISBA/6/A/9](#), para 13.

⁵ See [ISBA/24/A/10](#), para. 29, and [ISBA/25/A/15](#), paras. 18–21.