

# ACTION PLAN FOR MARINE SCIENTIFIC RESEARCH



in support of the  
United Nations Decade  
of Ocean Science  
for Sustainable Development



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United Nations Decade  
of Ocean Science  
for Sustainable Development



2021 United Nations Decade  
2030 of Ocean Science  
for Sustainable Development



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# FOREWORD





**Michael W. Lodge**  
Secretary-General, ISA

As the United Nations Decade of Ocean Science for Sustainable Development kicks off, it is my pleasure to introduce the Action Plan for Marine Scientific Research (MSR) developed by the International Seabed Authority (ISA) in support of the Decade.

In line with ISA's Strategic Plan and High-Level Action Plan for 2019-2023, the Action Plan identifies six strategic research priorities and specific outputs that will help accelerate marine scientific research in the Area, the deep seabed beyond national jurisdiction, which effectively covers more than 50% of the world oceans' seabed.

The Plan was endorsed by our 168 Members and is championed by Argentina, currently Chair of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO), which is coordinating the Decade of Ocean Science on behalf of the United Nations.

Our commitment to the United Nations Decade of Ocean Science comes directly from the specific and unique mandate given to ISA by the United Nations Convention on the Law of the Sea (UNCLOS) as it relates to marine scientific research in the Area.

First, UNCLOS requires ISA to promote and encourage marine scientific research in the Area for the benefit of humankind. Second, it requires ISA to coordinate and disseminate the results of such research. Third, it is also the responsibility of ISA to ensure that capacity-building programmes are developed to strengthen the research capabilities of developing States and technologically less developed States. These three pillars of our work are reflected in the Action Plan. Of course, the Action Plan has also been developed in line with the objectives identified for the United Nations Decade of Ocean Science and I also wish to thank our sister organization, IOC-UNESCO, for their inputs during the development process of this important document.

The Action Plan reflects the weight given by ISA and its Members to marine science and is a tribute to ISA's renewed commitment to contribute to generating the knowledge and build the capacities that the world needs to sustainably manage the ocean and its resources for the benefit of all humanity.



**Luis del Solar Dorrego**  
Permanent Representative of the Argentine Republic to ISA

Argentina has always attached great importance to all questions related to the oceans and the law of the sea. For this reason, global strategic initiatives to promote marine scientific research and the protection of the marine environment have the full support of our country.

Efforts in ocean matters cannot be done in national isolation and international forums such as the International Seabed Authority provide us with the opportunity to exchange knowledge and coordinate efforts to meet the objectives established at the international level to reach global sustainable development.

Argentina promotes within ISA's scope the adoption of measures aimed at preventing and repairing potential damage to the marine environment, promoting compliance with the principle of the common heritage of humankind applicable to resources in the Area, and compliance with the norms relating to know-how development and the transfer of technology to developing countries.

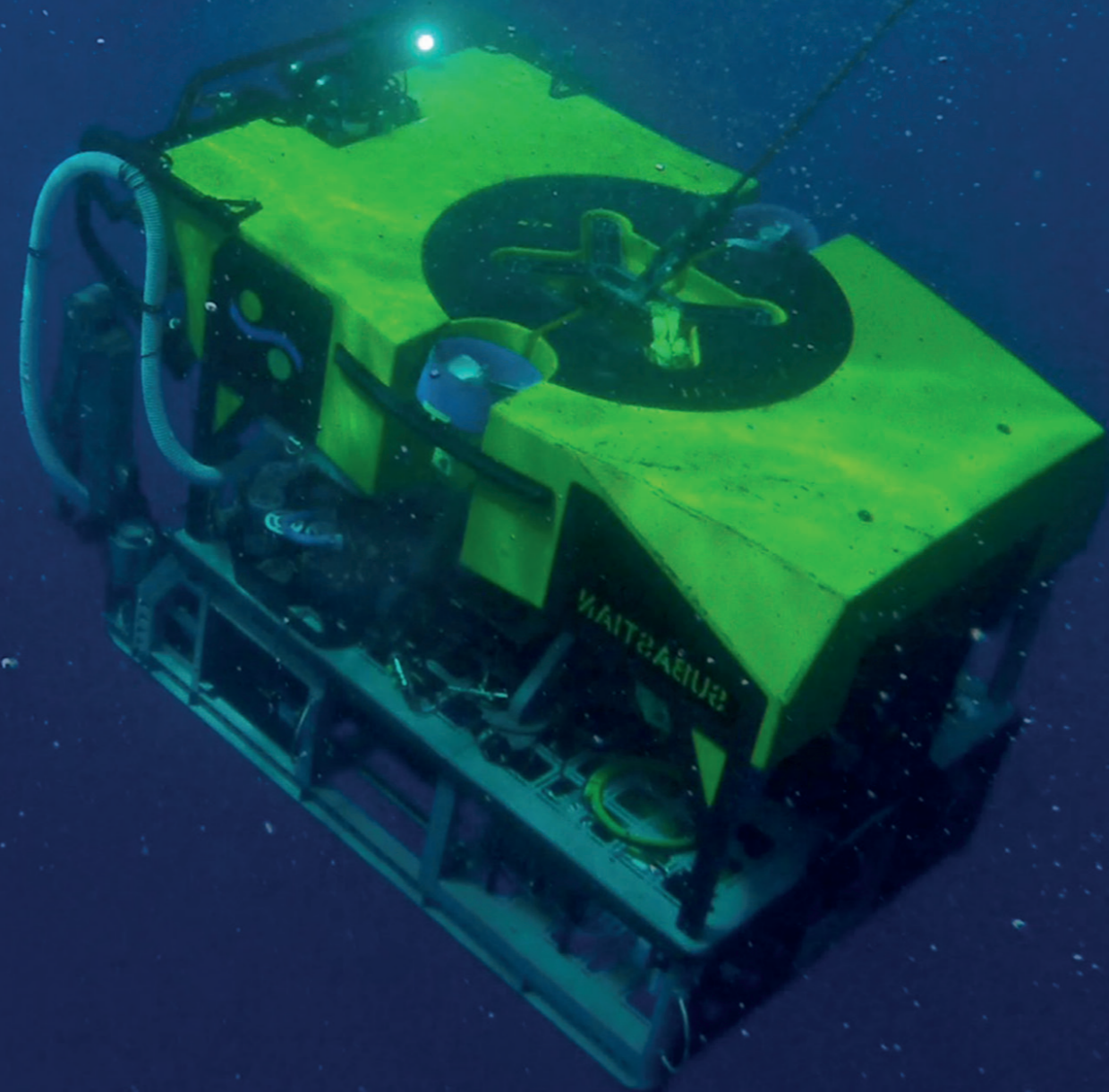
Argentina is proud to have been invited by ISA's Secretary-General in 2020 to act as Champion of ISA's Action Plan in support of the United Nations Decade of Ocean Science for Sustainable Development. Our country is committed to contribute and work together with ISA to promote the objectives of the Decade, especially those related to the promotion of marine scientific research in the Area, equitable access to its results, and the participation of developing States in the activities carried out there, always respecting the principle of the common heritage of humankind of its resources and the protection of the marine environment.

We understand that the implementation ISA's Action Plan in support of the United Nations Decade of Ocean Science for Sustainable Development, which began on January 1st, 2021 will be a central opportunity, both at the national and international levels, to address the oceanic issues of all kinds, such as the ability to generate, manage, make available, and use ocean knowledge bearing in mind a gender perspective.

Argentina will participate with conviction in these global efforts and encourage all the countries Members of ISA to participate in this key global undertaking.



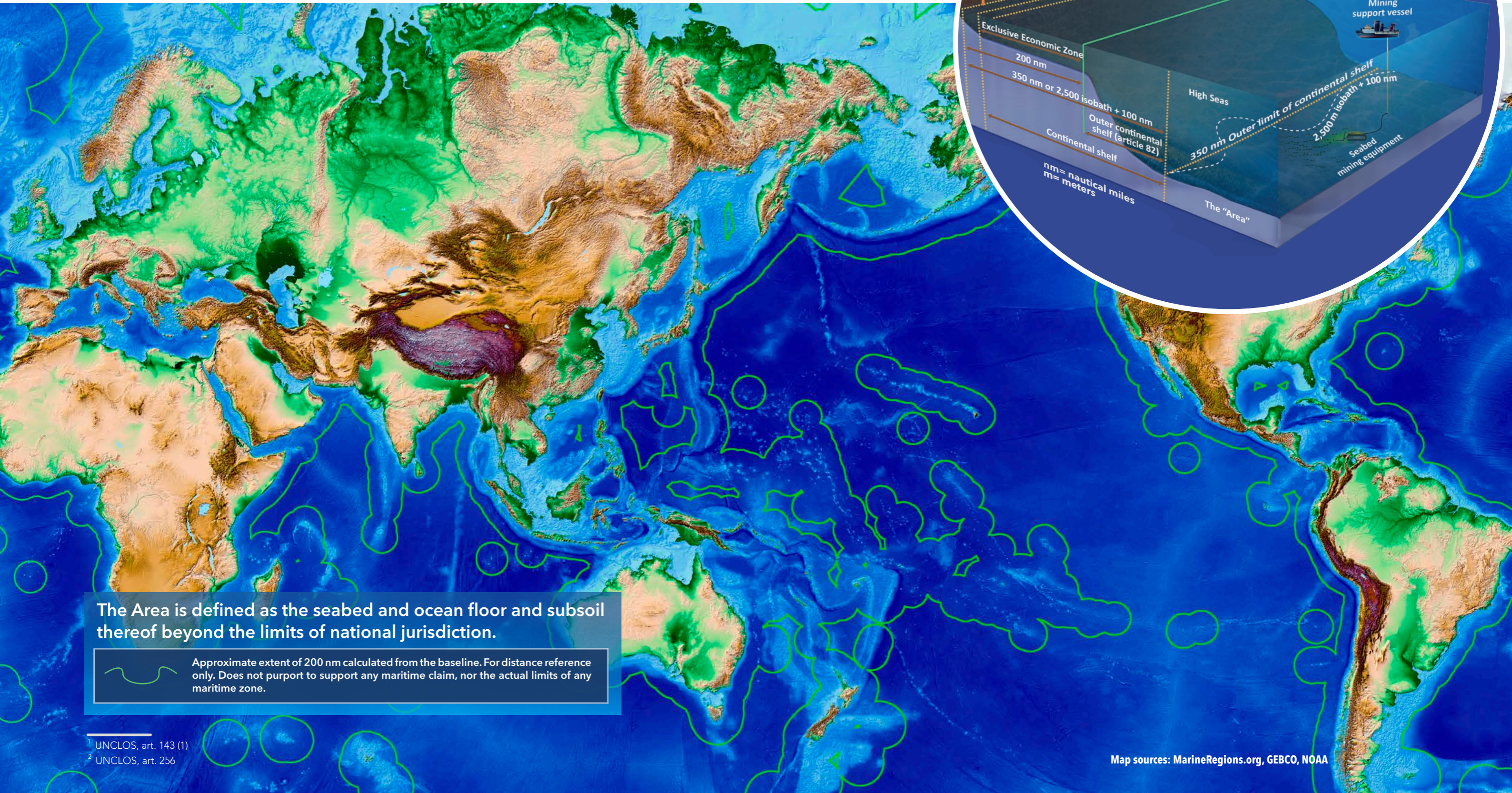
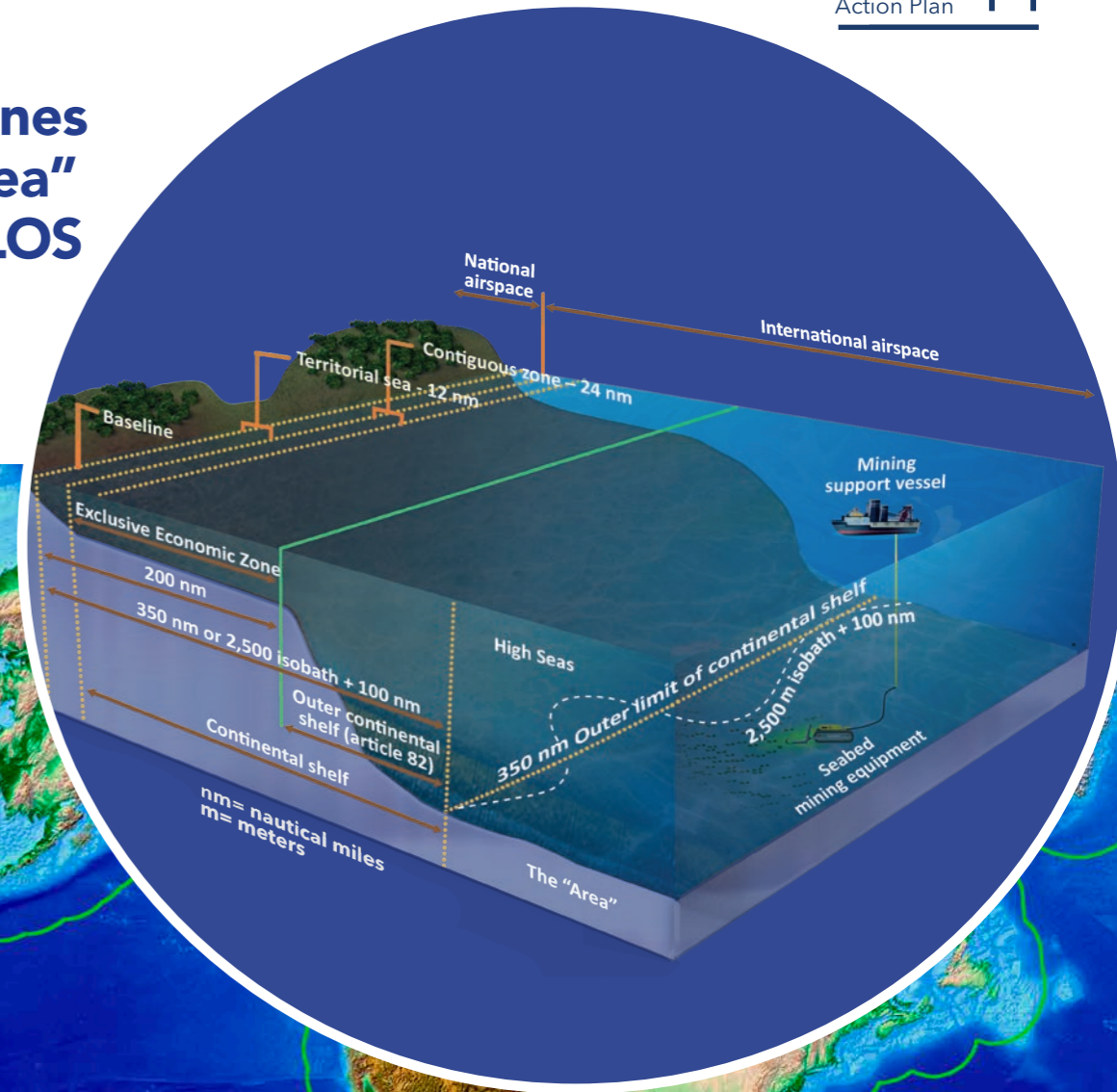
# INTRODUCTION





Marine scientific research in the Area is to be carried out for peaceful purposes and for the benefit of humankind as a whole.<sup>1</sup> All States have the right to conduct marine scientific research in the Area.<sup>2</sup> Pursuant to article 143 (3) of UNCLOS, 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 ISA.

## Maritime zones and the "Area" under UNCLOS

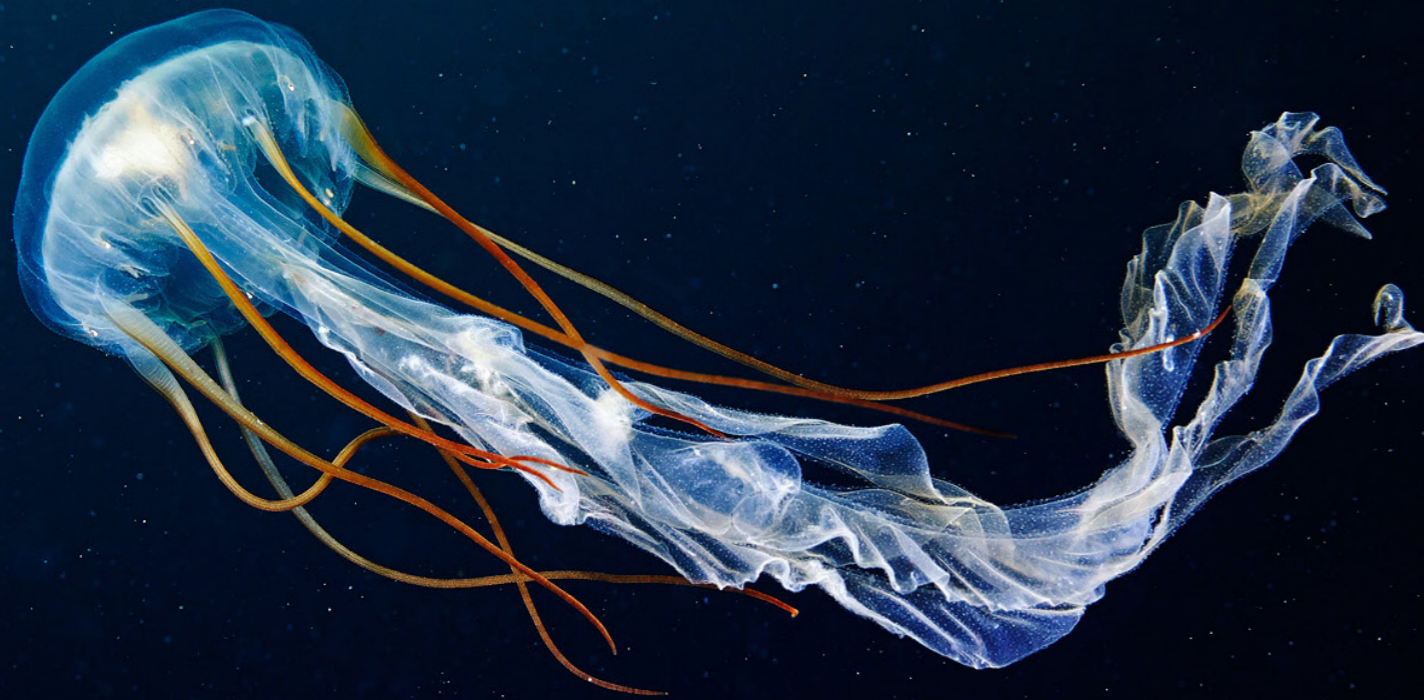


The Area is defined as the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction.

Approximate extent of 200 nm calculated from the baseline. For distance reference only. Does not purport to support any maritime claim, nor the actual limits of any maritime zone.

<sup>1</sup> UNCLOS, art. 143 (1)  
<sup>2</sup> UNCLOS, art. 256





**ISA mandate for MSR**

**Promote** the conduct of MSR in the Area

**Carry** MSR in the Area

**Disseminate** the results of the research when available

**Develop programmes** for the benefit of developing States and technologically less developed States:

- Research capabilities
- Training in techniques and applications of research
- Employment in research in the Area

Photo: Alexander Semenov

ISA is required, under UNCLOS and the 1994 Agreement relating to the implementation of Part XI of UNCLOS of 10 December 1982 (1994 Agreement), 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.<sup>3</sup> It may also carry out MSR concerning the Area. As part of its responsibilities, ISA 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:

- Strengthening their research capabilities
- Training their personnel in the techniques and applications of research
- Fostering the employment of their qualified personnel in research in the Area.<sup>4</sup>

This Action Plan has been developed on the basis of the strategic directions, high-level actions and associated outputs endorsed by the Members of ISA through the adoption of the **Strategic Plan** and the **High-Level Action Plan for the period 2019-2023**.



<sup>3</sup> UNCLOS, art. 143 (2)

<sup>4</sup> UNCLOS, art. 143 (3)



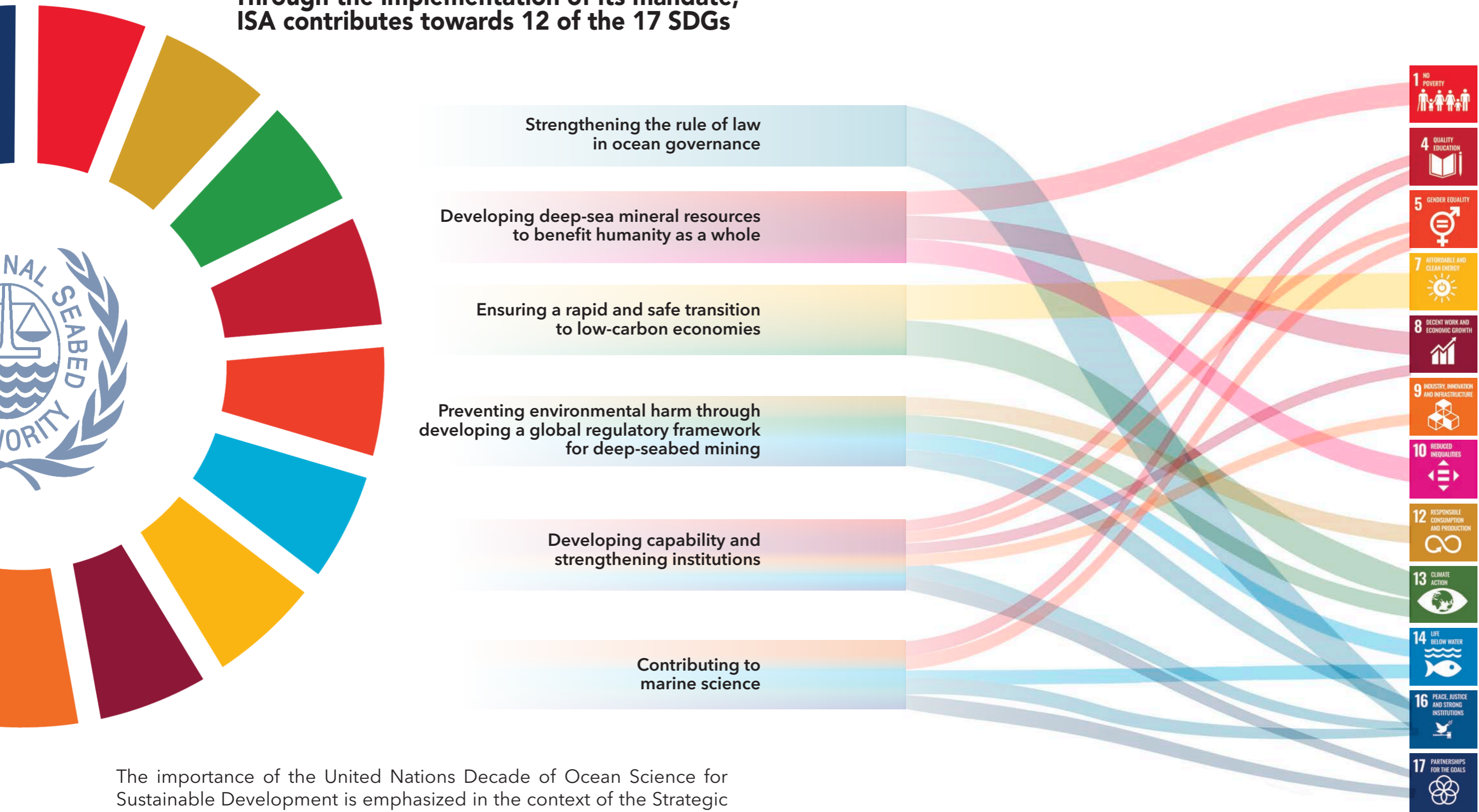


# CONTRIBUTION

of the International Seabed Authority  
to the UN Decade of Ocean Science  
for Sustainable Development



**Through the implementation of its mandate, ISA contributes towards 12 of the 17 SDGs**



The importance of the United Nations Decade of Ocean Science for Sustainable Development is emphasized in the context of the Strategic Plan and the High-Level Action Plan of ISA for the period 2019-2023. Both documents recognize the commitment of ISA 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).





Photo: The Metals Company

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 ISA 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”.

ISA has long cooperated with 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 and better meet the needs of their Members (see **Annex II**).

It is in this context that ISA, 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 of Ocean Science for Sustainable Development and the achievement of the scientific objectives and societal outcomes identified by it (see **Annex I**).



# 1 Strategic Research Priorities

Pursuant to the role and responsibilities assigned to ISA under UNCLOS and the 1994 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 ISA for the period 2019-2023, particular emphasis will be placed on the following strategic research priorities:



1

Advancing scientific knowledge and understanding of deep-sea ecosystems, including biodiversity and ecosystems functions, in the Area



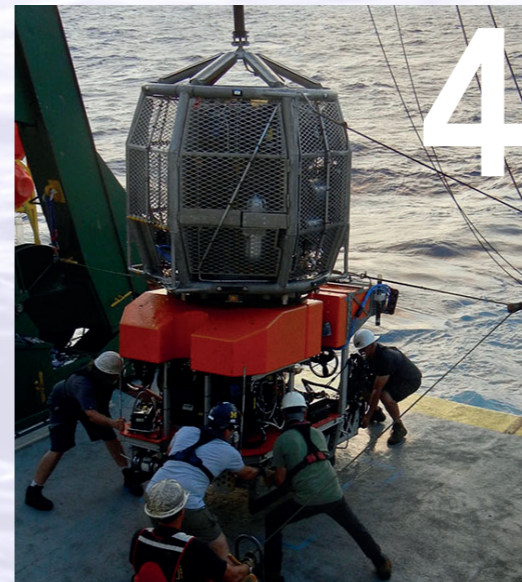
2

Standardizing and innovating methodologies for deep-sea biodiversity assessment, including taxonomic identification and description, in the Area



3

Facilitating technology development for activities in the Area, including ocean observation and monitoring



4

Enhancing scientific knowledge and understanding of potential impacts of activities in the Area



5

Promoting dissemination, exchange and sharing of scientific data and deep-sea research outputs and increasing deep-sea literacy



6

Strengthening deep-sea scientific capacity of ISA's Members, in particular developing States



## 2 Capacity-building/development and transfer of technology

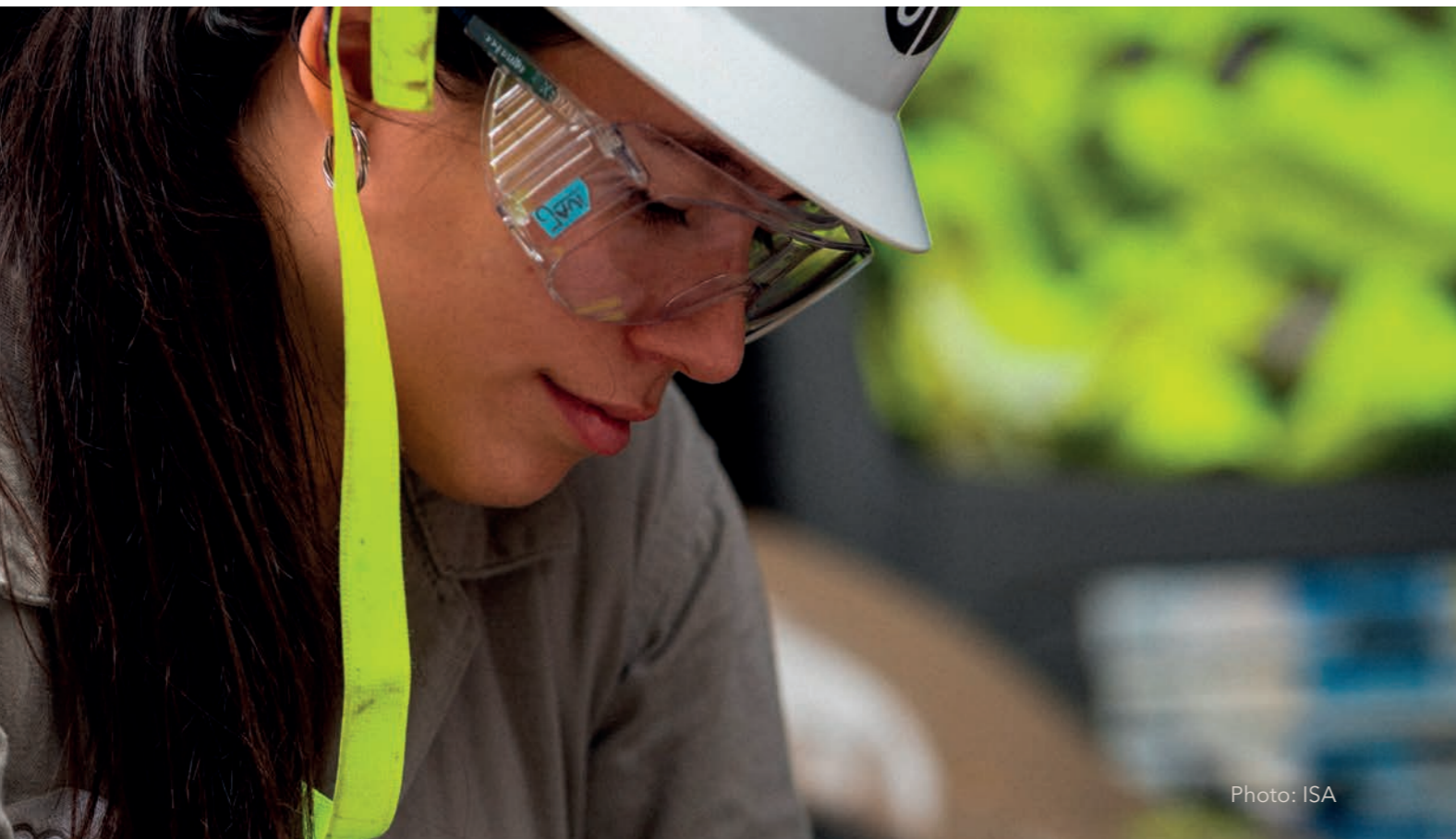


Photo: ISA

Another unique feature of the mandate given to ISA under UNCLOS and the 1994 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 ISA. Pursuant to UNCLOS, all States parties are automatically Members of ISA and have the obligation to develop and carry out, including under the auspices of ISA,<sup>5</sup> 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<sup>6</sup> for the “benefit of developing States”.<sup>7</sup>

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 ISA and developing States, including the participation of such personnel in all activities in the Area that are covered under their contract with ISA.<sup>8</sup>

<sup>5</sup> UNCLOS, art. 143 (3)

<sup>6</sup> UNCLOS, art. 148; 1994 Agreement, annex, sect. 5 (1) (c)

<sup>7</sup> UNCLOS, art. 143 (3)

<sup>8</sup> UNCLOS, annex III, art. 15

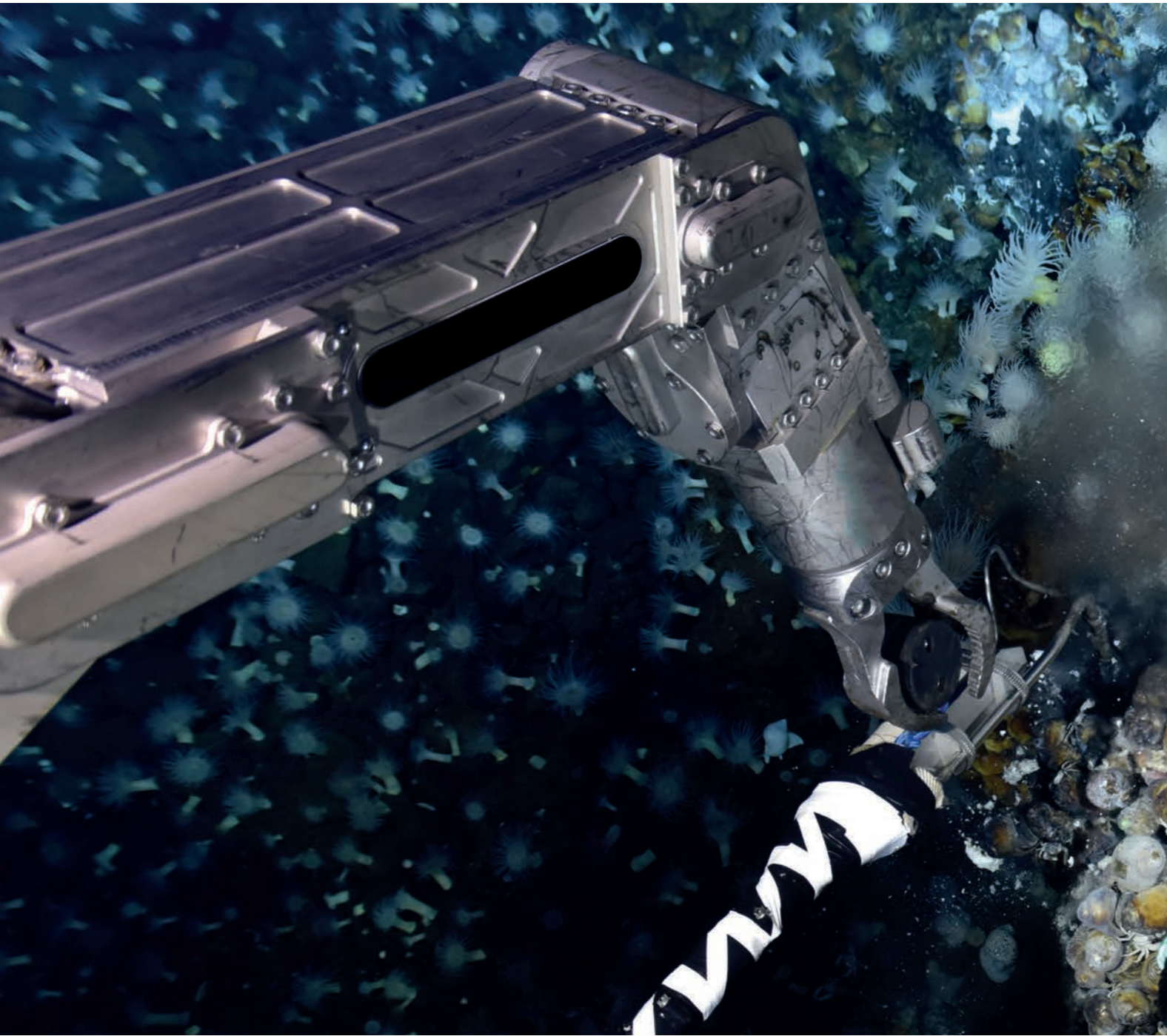
Furthermore, ISA has progressively developed several other mechanisms aimed at operationalizing the requirements set out under international law, including, for example, the Endowment Fund for Marine Scientific Research in the Area and the internship programme. In 2018, ISA launched the first edition 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 ISA and the Department of Economic and Social Affairs, and the Africa Deep Seabed Resources project, implemented by ISA in partnership with the African Union and the Norwegian Agency for Development Cooperation, have also proved to be very successful in strengthening the capacities of developing States Members of ISA in the field of marine scientific research.

Since 2017, special emphasis has also been placed on the commitment made by ISA at the United Nations Ocean Conference to enhancing 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.

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 of Ocean Science for Sustainable Development. Such initiatives will also 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 ISA.







### 3 Communications and stakeholder engagement

Transparency is an essential element of good governance and, therefore, a fundamental guiding principle for ISA in the conduct of its activities. Accordingly, ISA will continue to engage all stakeholders in the development and implementation of activities identified in the present 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 the period 2019-2023.

## 4 Implementation, monitoring and review of the Action Plan

The ISA Secretariat will continue to actively participate in the preparations and implementation of the United Nations Decade of Ocean Science for Sustainable Development, through bilateral cooperation with IOC-UNESCO and through UN-Oceans.

The Secretariat will also continue to report progress under the annual report presented by the Secretary-General to the ISA Assembly. The Secretary-General also provides information on the activities of ISA to the Meeting of States Parties to the United Nations Convention on the Law of the Sea and makes an annual statement to the United Nations General Assembly under the agenda item "Oceans and the law of the sea".

The Secretariat will develop appropriate mechanisms for monitoring and review to enable this Action Plan to stay aligned with the needs of ISA Members, as well as the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development and the scientific objectives of the United Nations Decade of Ocean Science for Sustainable Development.







**ANNEXES**



## Relevant strategic directions and high-level actions and associated short-term and long-term scientific outputs of ISA 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
<b>1</b>	<b>REALIZE THE ROLE OF ISA IN A GLOBAL CONTEXT</b>			
	<p>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</p>	<p>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</p>	<ul style="list-style-type: none"> <li>• Specific role and mandate of ISA in relation to marine scientific research reflected in the implementation plan of the United Nations Decade</li> <li>• Contribution of ISA to the implementation of the United Nations Decade monitored through implementation of ISA's dedicated Action Plan</li> <li>• Authority collaborative centre on deep-sea research established</li> </ul>	<ul style="list-style-type: none"> <li>• Importance &amp; value of ISA's contribution to the achievement of the United Nations Decade's scientific objectives and societal outcomes identified and addressed</li> <li>• Satisfactory delivery of joint and coordinated actions through the Authority's collaborative centre on deep-sea research undertaken</li> </ul>
<b>3</b>	<b>PROTECT THE MARINE ENVIRONMENT</b>			
	<p>3.3 Ensure public access to environmental information, including environmental information from contractors, and participation by stakeholders, as appropriate</p>	<p>3.3.1 Facilitate public access to non-confidential information</p>	<p>User-friendly access pathways to and functionalities of Deep Data aligned with innovations in web-based technology</p>	<p>Deep Data fully operational as primary global database for geological and environmental data and information on the Area and effectively used by relevant stakeholders</p>



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
	<p>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</p>	<p>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</p>	<ul style="list-style-type: none"> <li>• Standard operating procedures for collection of environmental data related to activities in the Area developed</li> <li>• 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 plans and the assessment of effects of activities in the Area</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Standardized and coherent approaches in the collection and analysis of environmental data for the Area ensured</li> </ul>
<p>3.4.2 Keep under review the adequacy of the monitoring programmes and methodologies</p>		<ul style="list-style-type: none"> <li>• Adequacy of monitoring programmes and methodologies ensured through compilation, analysis and systemic synthesis of historical and current baseline and monitoring data</li> <li>• Regional environmental assessments produced for selected regions of the Area and widely disseminated</li> </ul>	<ul style="list-style-type: none"> <li>• 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 ISA</li> <li>• Understanding of status of the marine environment in the Area improved</li> <li>• Global long-term assessment on the state of mineral resources and the marine environment in the Area produced and disseminated to ISA stakeholders on a regular basis</li> </ul>	
<p>3.4.3 Encourage and facilitate strategic partnerships to support the work of ISA in developing robust monitoring programmes and methodologies</p>		<p>Global exchange and sharing platform on environmental monitoring established among contractors and relevant scientific communities</p>	<p>Environmental monitoring and management technology significantly improved as a result of the establishment of sustainable partnerships with all relevant stakeholders</p>	



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
	<p>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</p>	<p>3.5.4 Encourage and facilitate strategic partnerships to support the work of ISA in developing regulations, procedures, monitoring programmes and methodologies</p>	<p>Strategic scientific partnership established with various stakeholders, including contractors, to support the development of regulations, procedures, monitoring programmes and methodologies</p>	<p>Strengthened scientific partnerships with various stakeholders, including contractors, result in improved implementation of environmental regulations, procedures, monitoring programmes and methodologies</p>
<b>4</b>	<b>PROMOTE AND ENCOURAGE MARINE SCIENTIFIC RESEARCH IN THE AREA</b>			
	<p>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</p>	<p>4.1.1 Actively promote and encourage the conduct of marine scientific research with respect to activities in the Area</p>	<ul style="list-style-type: none"> <li>• Marine scientific research programmes and activities in the Area increased</li> <li>• 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</li> </ul>	<p>Global knowledge of marine biodiversity and resources assessment significantly improved as a result of increased marine scientific research in the Area</p>
		<p>4.1.2 Promote and encourage research related to the environmental effects of activities in the Area</p>	<p>Global deep ocean observing programmes/ initiatives facilitated by ISA developed and operated in collaboration with all relevant stakeholders</p>	<p>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 changing marine environment</p>
		<p>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</p>	<ul style="list-style-type: none"> <li>• Scientific research related to the environmental effects of activities in the Area improved as a result of increased strategic alliances and partnerships</li> <li>• 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</li> </ul>	<p>Global understanding and knowledge of the deep-sea environment significantly improved as a result of marine scientific research in the Area coordinated by ISA</p>



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	<p>4.2.1 Enhance the collection, analysis and synthesis of the results of research and analysis, when available, in particular from contractors, including through ISA's database as the principal repository for data and information related to the deep seabed and associated water column</p>	<ul style="list-style-type: none"> <li>• Availability of research results and analysis significantly improved as a result of the development and use of innovative tools</li> <li>• Data management strategy for Deep Data effectively implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Innovative, cost-effective and practically applicable tools and methodologies (e.g., automated processing and deep learning) developed and applied for biodiversity assessment</li> <li>• Deep Data functional as primary global open access database on all related environmental data and information collected in the Area</li> </ul>
		<p>4.2.2 Ensure the dissemination of the results of research and analysis, when available, in a timely manner</p>	<ul style="list-style-type: none"> <li>• Available scientific research results and analysis related to activities in the Area systematically compiled and disseminated</li> <li>• Geospatial analysis functionalities of Deep Data enhanced to meet the diverse needs of stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Global decision-making processes dissemination of research results and analysis related to the environmental effects of activities in the Area</li> </ul> <p>Global knowledge and understanding of the Area's environment and resources</p> <ul style="list-style-type: none"> <li>• significantly advanced as a result of systematic dissemination of available research result and analysis by ISA</li> </ul> <p>Decision-making processes better informed and equipped to take the most</p> <ul style="list-style-type: none"> <li>• appropriate measures for the sustainable development of resources and protection of marine environment from harmful effects of activities in the Area</li> </ul>
	<p>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 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>4.3.1 Establish and enhance partnerships for improved sharing of data and information</p>	<p>Increased number of partnerships established to improve sharing of data and information among multiple archival systems of ocean-related information, including physical, chemical, biological and geological data and associated sampling metadata</p>	<p>Data set interoperability ensured for long-term continuous data-sharing with other international database holders and with a view to supporting coherent collection and management of data sets at the global level</p>



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
		<p>4.3.2 Raise awareness of ISA’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>Global awareness of the nature and content of Deep Data increased, in particular its geospatial data management component</p>	<p>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</p>
		<p>4.3.3 Build up, enhance and expand ISA’s database and facilitate the production of data analysis and synthesis through partnerships with various scientific partners</p>	<ul style="list-style-type: none"> <li>• Development of information products and data-sharing functionalities enhanced in Deep Data</li> <li>• Standardized Deep Data reporting module developed and applied</li> <li>• Deep Data partnership with Ocean Biodiversity Information System/IOC-UNESCO on biodiversity data and with International Hydrographic Organization/Seabed 2030 on bathymetric data established</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Data set interoperability ensured for long-term continuous data sharing with other international database holders and with a view to supporting coherent collection and management of data sets at the global level</li> </ul>
	<p>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</p>	<p>4.4.1 Promote and strengthen partnerships with the international scientific community, including by involving it in workshops and technical publications</p>	<ul style="list-style-type: none"> <li>• Engagement with international scientific communities enhanced through new and fostered collaborative initiatives and programmes</li> <li>• 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</li> </ul>	<p>Contribution of ISA 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</p>
	<p>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))</p>	<p>4.5.1 Compile summaries of the status of environmental baseline data</p>	<ul style="list-style-type: none"> <li>• Regional environmental assessment report and data report produced in relation to the development of regional environmental management plans</li> </ul>	<ul style="list-style-type: none"> <li>• Global knowledge and understanding of potential environmental impacts of activities in the Area improved</li> <li>• Global outlook on the state of mineral resources and the marine environment in the Area produced and regularly updated</li> </ul>



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
		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	Predictive modelling and other scientific approaches undertaken to assess the potential impacts of pollution and other hazards from activities in the Area	Scientific knowledge basis that enables ISA to fully implement its mandate for addressing environmental impacts of activities in the Area
<b>5</b>	<b>BUILD CAPACITY FOR DEVELOPING STATES</b>			
	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	Priority needs of developing States Members of ISA, 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	Capacities of developing States Members of ISA, in relation to marine scientific research in the Area, significantly improved
5.1.2 Adjust capacity-building programmes as necessary to meet the needs of developing States		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 ISA	Contribution of ISA's capacity-building/development programmes to meet the needs of developing States Members of ISA 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 ISA		Effectiveness and relevance of ISA 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"> <li>Partnerships for improved funding opportunities and in-kind contributions of the Endowment Fund for Marine Scientific Research in the Area established and fostered</li> <li>Funding opportunities and in-kind contributions for the Endowment Fund for Marine Scientific Research in the Area increased</li> </ul>	Number of beneficiaries of the Endowment Fund for Marine Scientific Research in the Area from developing States Members of ISA increased



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
		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	Relevant mechanisms established to foster funding for the Endowment Fund for Marine Scientific Research in the Area	Sustainable funding schemes established and result in enhanced capacity development programmes and initiatives for deep-sea research
	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 ISA, alone and in partnership, with an emphasis on the needs identified by developing States	All scientific research programmes and activities implemented by ISA designed with due consideration for capacity-building/development priorities identified by developing States	Contribution of ISA 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	Impact of contractors' training programmes in building/developing capacities of developing States Members of ISA regularly assessed	Capacities of developing States Members of ISA, 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		
<b>6</b>	<b>ENSURE FULLY INTEGRATED PARTICIPATION BY DEVELOPING STATES</b>			
	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	Training opportunities in marine science and technology increased for personnel of developing States Members of ISA	Capacities of developing States Members of ISA, in relation to marine science and technology, significantly improved
		6.3.2 Actively promote partnerships with Governments, contractors and international organizations to maintain and develop training opportunities for personnel from developing States	Sustainable partnerships established with Governments, contractors and international organizations in support of ISA programmatic approach for capacity development in marine scientific research	



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
		6.3.3 Identify and develop measures to strengthen the role of women in deep seabed-related activities and, in particular, deep seabed research	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"> <li>• Participation and leadership of women in activities in the Area improved</li> <li>• 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 ISA</li> <li>• Global outlook on the state of mineral resources and the marine environment in the Area in place</li> </ul>
	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		
<b>9</b>	<b>COMMIT TO TRANSPARENCY</b>			
	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 ISA, especially through ISA's database	<ul style="list-style-type: none"> <li>• Availability of and access to non-confidential information ensured</li> <li>• Increased access to and use of Deep Data by diverse stakeholders (including ISA-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</li> <li>• Deep Data user groups established and operational for providing regular feedback and ensuring up-to-date, user-friendly maintenance of Deep Data</li> </ul>	Global knowledge and understanding of the Area and the work of ISA enhanced as a result of improved availability of and access to scientific and environmental non-confidential information



No.	Strategic Direction	High-level action	Short-term outputs	Long-term outputs
	<p>9.4 Build a stakeholder communications and consultation strategy and platform that facilitates open, meaningful and constructive dialogue, including on stakeholder expectations</p>	<p>9.4.1 Promote the adoption of a communications and stakeholder engagement strategy</p>	<p>Process for engagement of relevant stakeholders in marine scientific research programmes and activities facilitated by ISA in the Area established</p>	<ul style="list-style-type: none"> <li>• General awareness and understanding of ISA’s specific role and mandate in relation to marine scientific research in the Area improved</li> <li>• Systematic and coordinated participation of ISA in communications activities implemented for the United Nations Decade</li> </ul>
		<p>9.4.2 Actively engage relevant stakeholders in the work of ISA, as appropriate</p>	<p>Participation of stakeholders in design and/or implementation of marine scientific research programmes and activities implemented by ISA improved</p>	<p>Contribution of ISA’s activities and programmes recognized as having significant value to achieve scientific objectives and societal outcomes of the United Nations Decade</p>



## Memorandum of Understanding between the Intergovernmental Oceanographic Commission of UNESCO and ISA (2000)

The purpose of this Memorandum of Understanding is to specify the scope of cooperation between the Intergovernmental Oceanographic Commission of UNESCO (hereinafter referred to as "the IOC") and the International Seabed Authority (hereinafter referred to as "ISA") in promoting the development and conduct of marine scientific research in the international seabed area and in publication and dissemination of research and analysis results for the mutual benefit of Member States and in the light of the relevant provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 (hereinafter referred to as "the Convention", notably articles 143, 163 (13), and 169, as well as Section 1(5)(h) of the Agreement relating to the Implementation of Part XI of the Convention adopted on 28 July 1994 by the United Nations General Assembly, Resolution 48/263 "the Agreement").



Intergovernmental  
Oceanographic  
Commission

## The IOC and ISA agree:

- 1 To consult, where appropriate and practical, on issues of mutual interest in the field of marine scientific research, related services and capacity building with a view to promoting or enhancing a better understanding of activities in the international seabed area;
- 2 To work in close co-operation, where appropriate and practical, in the field of ocean services, particularly in the collection of environmental data and information. For that purpose, the World Data Centres of the IOC/IODE Programme may assist ISA to identify the existing gaps, to retrieve appropriate data and to develop a database to be used for analysis and synthesis;
- 3 To invite each other's representatives to attend and participate in the meetings of their respective governing bodies as observers in accordance with the rules of procedures of such bodies;
- 4 To exchange data and information as appropriate on matters of mutual interest;
- 5 To conduct, where appropriate, co-operative studies and seminars;
- 6 That this Memorandum of Understanding is without prejudice to agreements concluded by either party with other organizations and programmes;
- 7 That the co-operation between the two organizations referred to herein is subject to the requirement of confidentiality of data and information imposed upon ISA by the Convention in respect of data and information submitted to it by applicants and contractors for exploration of resources of the international seabed area;
- 8 That this Memorandum of Understanding will come into effect upon its signature by the Executive Secretary of IOC and the Secretary-General of the International Seabed Authority. It may be terminated by any of the parties by giving to the other a written notice six months prior to the proposed date of termination.

**IN WITNESS WHEREOF the undersigned have signed the present Memorandum of Understanding in duplicate.**

**Patricio BERNAL**  
Executive Secretary  
International Oceanographic Commission

**Satya N. NANDAN**  
Secretary-General  
International Seabed Authority





**International Seabed Authority**

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