



DEEP DIVE

International Seabed Authority's
e-learning programme

2026



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

deepdive.isa.org.jm

An international and interactive e-learning programme

As an intergovernmental organization with the unique mandate given by the United Nations Convention on the Law of the Sea (UNCLOS) to regulate and manage deep-seabed activities for the benefit of humankind in the Area, the International Seabed Authority (ISA) has a global network of diplomatic representatives, policymakers, world-class researchers and experts who provide participants of the Deep Dive e-learning programme with exceptional and never-before-offered insight into the world of deep-seabed regulation, exploration and exploitation.

Deep Dive has been conceived to equip participants with specialized knowledge of the Area and provide insight into deep-seabed activities for optimal career success. It has been designed to catalyse worldwide international expertise in deep-seabed-related matters to produce a new generation of leaders and multitalented professionals who will contribute to the effective implementation of UNCLOS, the 1994 Agreement and, ultimately, the achievement of the 2030 Agenda for Sustainable Development at all levels.

The programme's interdisciplinary approach will provide participants with the analytical, scientific and technical skills needed to apply creative solutions to issues relevant to activities in the Area.

Programme overview

Building on the exclusive body of expertise and practical experience of deep-seabed leaders, the Deep Dive e-learning programme is indispensable for those with established careers, those with aspirations in the emerging field of deep-sea-related research disciplines and those working in the context of the sustainable development of the ocean and its resources.

Deep Dive is the first and only e-learning experience exclusively devised by an intergovernmental institution to address all elements of the legal regime set out in Part XI of UNCLOS, the 1994 Agreement and the ISA rules, regulations and procedures covering technical and scientific aspects of deep-sea mining. Facilitated e-learning allows maximum flexibility with individual learning activities that participants can complete at their own pace, regardless of location.

The innovative modules and lessons, organized in three progressive learning pathways, or "Dives," have been designed to increase awareness of the legal regime for activities in the Area and familiarize the participants with the governance structure, existing mechanisms and the way they contribute to the effective implementation of the legal regime for the Area and its resources.

Structure

The Deep Dive programme is structured around five modules, each carrying mandatory lessons and electives:



Module 1

UNCLOS and the governance of the Area

Covers foundational legal frameworks, ISA structure, Mining Code, sponsoring states, and equitable benefit-sharing. Key lessons include introductions by Professor Rüdiger Wolfrum and Sir Michael Wood. Electives explore LDCs/SIDS, submarine cables, Article 82, and dispute settlement.



Module 2

Marine Mineral Resources

Examines minerals, metals, exploration status, and economic perspectives with experts like Professor Pedro Madureira and Dr. Sven Petersen. Electives detail geology of nodules, sulphides, crusts, and revenue potentials.



Module 3

Marine Scientific Research (MSR)

Introduces MSR legal regimes, deep-sea habitats, technologies, and data sharing, led by Dr Samantha Smith. Electives address ISA's UN Decade Action Plan, biology of deposits, and regional studies like Clarion-Clipperton Zone.



Module 4

Marine Environment Protection

Focuses on legal obligations, precautionary approaches, baseline studies, risk assessments, and Regional Environmental Management Plans, guided by Professor Yoshihisa Shirayama. Electives cover meio/megafauna, monitoring, and mitigation strategies.



Module 5

Technology and Innovation

Details prospecting, exploration/extraction tools for nodules, sulphides, and crusts, led by Mr Leonhard Weixler. Electives include monitoring, logistics, vessel management, testing frameworks, and seabed mapping toward Area 2030 goals.

Deep Dive Modules

Module 1 - UNCLOS and the governance of the Area

Module 1 covers the legal regime governing activities in the Area under UNCLOS and the 1994 Agreement. The module consists of seven mandatory and four elective lessons. All lessons are delivered by internationally renowned experts.



Module 1 experts




Michael W. Lodge
Lead expert


Aldo Chircop


Dale Squires


Eden Charles


Elie Jamarache


James Harrison


Mariana Durney


Michael Wood


Michelle Walker


Rüdiger Wolfrum


Tara Davenport


Ulrich Schwarz-Schampera


Warwick Gullett


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Module 2 - Marine mineral resources of the Area

Module 2 discusses the marine mineral resources of the Area, with a focus on the social and scientific aspects of activities in the Area. The module consists of six mandatory and four elective lessons.



Module 2 experts




Pedro Madureira
Lead expert


Dale Squires


Harald Brekke
(In memoriam)


Joshua Tuhumwire


Georgy Cherkashov


John Parianos


Kira Mizell


Saleem Ali


Sven Peterson


Thomas Kuhn


Ulrich Schwarz-Schampera


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Deep Dive Modules

Module 3 - Marine scientific research in the Area

Module 3 is dedicated to marine scientific research in the Area. This module focuses on the legal regime of the Area, the impact of research on the technology used and data-collection. The module consists of six mandatory and four elective lessons.



Module 3 experts




Samantha Smith
Lead expert


Annemiek Vink


Elie Jarmache


Ellen Pape


Luciana Genio


Malcolm Clark


Noemie Wouters


Samuel Popoola


Tomohiko Fukushima


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Module 4 - Protection of the marine environment from activities carried out in the Area

Module 4 covering the protection of the marine environment focuses on the obligation to protect the marine environment by ISA and other actors involved in activities in the Area. The module consists of eight mandatory and four elective lessons.



Module 4 experts




Yoshihisa Shirayama
Lead expert


Ann Vanreusel


Atsuko Kanehara


Daniel Jones


Katsunori Fujikura


Kirsty McQuaid


Lea Kolmos Weis


Luciana Genio


Malcolm Clark


Tomohiko Fukushima


Wanfei Qui


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Deep Dive Modules

Module 5 - Technology development and innovation in relation to the sustainable development of mineral resources of the Area

Module 5 covers technology development. This module looks at the various tools and technologies for the exploration and exploitation of mineral resources of the Area. The module consists of eight mandatory and four elective lessons.



Admissions and fees

Admission to the programme is on a rolling, year-round basis. The Dives start in January, May and September each year.

Deep dive is offered at no cost to applicants. Applicants from developing countries will be given priority consideration for participation in the programme.

Learning support

The ISA Secretariat is aware that students may have questions about their selected programme of study and will assist participants from their enrolment until the completion of the selected dive (s).

Upcoming cohorts

January - March 2026
May - July 2026
September - November 2026

Entrance requirements

Applicants should meet the following general entrance requirements:

- Education

Dive 1	Dive 2	Dive 3
A bachelor's degree in a relevant discipline or 1 – 2 years of relevant experience in lieu of a bachelor's degree.	A bachelor's degree in a relevant discipline or 3 - 4 years of relevant experience in lieu of a bachelor's degree.	A bachelor's degree in a relevant discipline or five or more years of relevant experience in lieu of a bachelor's degree.

- Language: students whose first language of education is not English are required to present evidence of English proficiency as tested by IELTS (Band 6.0 or above), TOEFL (80+ Internet test or 550+ paper-based scores) or CPE (CPE/C2) are accepted;
- Completed motivation statement outlining how the programme will further the applicant's career and/or personal development.

How to apply

All interested applicants are invited to register through the ISA online portal, deepdive.isa.org.jm/sign-up, and submit their applications together with the necessary supporting documents in accordance with the established deadlines.