



# REVIEW OF CAPACITY-BUILDING PROGRAMMES AND INITIATIVES IMPLEMENTED BY THE INTERNATIONAL SEABED AUTHORITY 1994-2019





# **REVIEW OF CAPACITY-BUILDING PROGRAMMES AND INITIATIVES IMPLEMENTED BY THE INTERNATIONAL SEABED AUTHORITY 1994-2019**

Report by the Secretariat



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## ACRONYMS & ABBREVIATIONS

<b>ADSR Project</b>	Africa Deep Seabed Resources Project
<b>AMDC</b>	African Minerals Development Centre
<b>AU</b>	African Union
<b>BGR</b>	Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany
<b>CMC</b>	China Minmetals Corporation
<b>COMRA</b>	China Ocean Mineral Resources Research and Development Association
<b>CTP</b>	Contractor Training Programme
<b>DORD</b>	Deep Ocean Resources Development Co., Ltd.
<b>EEG</b>	Eastern European Group
<b>EFMSR</b>	Endowment Fund for Marine Scientific Research
<b>EOSG</b>	Executive Office of the Secretary-General (ISA)
<b>EU</b>	European Union
<b>GRULAC</b>	Group of Latin America and the Caribbean
<b>GSR</b>	Global Sea Mineral Resources
<b>IFREMER</b>	Institut Français de Recherche pour l'Exploitation de la Mer
<b>IOM</b>	Interoceanmetal Joint Organization
<b>ISA</b>	International Seabed Authority
<b>JOGMEC</b>	Japan Oil, Gas and Metals National Corporation
<b>JTRC</b>	ISA-China Joint Training and Research Center
<b>KIOST</b>	Korea Institute of Ocean Science and Technology
<b>LDCs</b>	Least Developed Countries
<b>LLDCs</b>	Landlocked Developing Countries
<b>LTC</b>	Legal and Technical Commission (ISA)
<b>NORAD</b>	Norwegian Agency for Development Cooperation

<b>OEMMR</b>	Office of Environmental Management and Mineral Resources (ISA)
<b>OLA</b>	Office of the Legal Affairs (ISA)
<b>P-SIDS</b>	Pacific Small Island Developing States
<b>RPI</b>	Registered Pioneer Investor
<b>SG</b>	Secretary-General
<b>SPC</b>	Pacific Community
<b>SIDS</b>	Small Island Developing States
<b>TCB</b>	Training and capacity building
<b>TOML</b>	Tonga Offshore Mining Limited
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea
<b>UNDESA</b>	United Nations Department of Economic and Social Affairs
<b>UNDP</b>	United Nations Development Programme
<b>UN-OHRLS</b>	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
<b>UKSRL</b>	United Kingdom Seabed Resources Ltd.
<b>WEOG</b>	Western European and Others Group
<b>1994 Agreement</b>	Agreement relating to the Implementation of Part XI of UNCLOS

## FOREWORD

Training and capacity-building has been an integral feature of the activities of the International Seabed Authority (ISA) since the adoption of the United Nations Convention on the Law of the Sea (UNCLOS) in 1982. Even during the pioneer regime administered by the Preparatory Commission from 1983-1994, a heavy emphasis was placed on training of nationals of developing countries and personnel for the future Enterprise. With the entry into force of UNCLOS and the establishment of ISA in 1994 these activities increased and a much more rigorous approach was taken to the training obligations featured in UNCLOS and the ISA regulations. Thanks to the vigilance of the Legal and Technical Commission (LTC), and the willingness of contractors to provide good quality training opportunities, the ISA's Contractor Training Programme has become a major part of the ISA's capacity development portfolio.

At the same time, and in response to the demands of ISA members, especially developing member States, ISA continued to expand its capacity development activities, including through sensitization seminars and, more recently, through several voluntary commitments registered by ISA at the UN Ocean Conference on the implementation of Sustainable Development Goal 14 held in 2017 in New York.

Notwithstanding all these efforts, at no time in the past twenty-five years has there been a coordinated attempt to review the strengths and weaknesses of ISA's approach to capacity development. This report, which has been prepared to support a workshop on "Capacity development, resources and needs assessment" that was held in Kingston, Jamaica, from 10 to 12 February 2020, fills that gap and in doing so also responds to the need identified in ISA's High-Level Action Plan to "*undertake regular assessment of the effectiveness and relevance of capacity-building programmes and initiatives implemented by ISA*". The report is particularly timely in light of the evolving mandate of ISA and the need to respond to the goals and targets of the Agenda 2030.

I am grateful to the many individuals who have contributed to this report, both within and outside the Secretariat, and wish to particularly acknowledge the work of our experienced consultants, Dr Rahul Sharma, Retired Chief Scientist of the National Institute of Oceanography (India), and Mr Tearinaki Tanielu, Director of the Multilateral Affairs Division within the Ministry of Foreign Affairs and Immigration (Kiribati). I am equally grateful to the many members of ISA who responded to surveys and those who also provided more detailed comments which are reflected in the appendices. My gratitude also goes to the members of the Advisory Committee established to provide expert inputs and strategic advice to the Secretariat in the preparation of the workshop.

It is my pleasure to commend to you this review of capacity-building programmes and initiatives implemented by ISA. I am certain that, together with the outcomes of the workshop, it will provide a solid platform for further evolution of ISA's initiatives and actions in the field of capacity development for many years to come.



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

## ACKNOWLEDGMENT

This report was initially prepared by the ISA pursuant to High-Level Action 5.1.3 (“*Undertake regular assessment of the effectiveness and relevance of capacity-building programmes and initiatives implemented by ISA*”) in anticipation of the workshop on “Capacity development, resources and needs assessment” that was held in Kingston, Jamaica, from 10 to 12 February 2020.

To assist in this task, the Secretariat commissioned two studies that were undertaken by Mr Rahul Sharma, Retired Chief Scientist, National Institute of Oceanography (India), and Mr Tearinaki Tanielu, Director of the Multilateral Affairs Division within the Ministry of Foreign Affairs and Immigration (Kiribati). Comments on the draft report were sought from members of the Advisory Committee established by the Secretary-General of ISA in October 2019 to provide, as appropriate, expert inputs and strategic advice to the Secretariat in the preparation of the workshop. The list of the members of the Advisory Committee is in **annex 1**.

The initial version of this report has been reviewed on the basis of the discussions held during the workshop on “Capacity development, resources and needs assessment” as well as inputs and comments received during the

public consultation launched between April and June 2020. More specifically, the revised version contains the recommendations made by the participants to the workshop who were comprised of official representatives from Members of ISA, experts from international and regional organizations as well as observers of ISA and contractors. These recommendations and the summary of the discussions held at the workshop are outlined in the summary of the outcomes of the workshop adopted on 12 February 2020 (see **annex 2**). Comments from the subgroup on training of the LTC have also been received (see **annex 3**) as well as comments submitted by Cuba, Colombia, Norway, Peru and Philippines during the public consultation held between April and June 2020 (see **annexes 8, 9, 10, 11 and 12**).

The Secretariat wishes to express its appreciation to all who assisted in the preparation of the report, particularly members of ISA, contractors, research institutions and former trainees who filled up the surveys and participated in interviews.

Thanks are also due to Mr Tearinaki Tanielu, Mr Rahul Sharma, Mr Chapi Mwangi, Ms Kayon Wray, Mr Ryan Barbar, Mrs Charlotte Salpin, Ms Gwenaëlle Le Gurun and Mrs Michelle Bond.

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## EXECUTIVE SUMMARY

The entry into force of the United Nations Convention on the Law of the Sea (UNCLOS) created the enabling conditions for the operationalization of the regime of the international seabed area (the Area). A critical element of this regime lies in the establishment of a dedicated intergovernmental organization, the International Seabed Authority (ISA), mandated to regulate and manage access and use of deep seabed mineral resources whilst ensuring the protection of the marine environment. As part of this mandate, ISA is also entrusted with the responsibility to ensure the equitable sharing of benefits derived from the conduct of activities in the Area to all humanity. One important stream of benefits is the development of specific programmes aimed at strengthening the capacities of developing States and technologically less developed States.

For the most part, capacity-building and training programmes implemented by ISA have been an integral feature of the mandate of the ISA, as further defined under the 1994 Agreement relating to the Implementation of Part XI of UNCLOS (1994 Agreement) as well as the rules, regulations and procedures adopted by ISA. Since 2000, different programmes and initiatives have been developed and implemented by ISA

to strengthen the capacities of developing States and technologically less developed States. In general, most of them have been successful as they created the enabling conditions to build the capacities of many individuals.

However, and although the importance of undertaking an assessment of the capacity needs of ISA's members has been seen as core priority and accordingly, has been highlighted by previous reports commissioned by ISA, no initiative has been taken to do so. One of the main consequences of this is the fact that it is very difficult to provide a clear overview of the impact of these different programmes and activities.

It is to address this and to identify the necessary actions to strengthen and improve the action of ISA, in line with the Strategic Plan and the High-Level Action Plan, that the Secretariat has commissioned this review. The key findings of the assessment undertaken are detailed in this report and have served as the foundation for the discussions held at the workshop organized in Kingston, Jamaica, on "Capacity development, resources and needs assessment" from 10-12 February 2020.

# 1. INTRODUCTION

## 1. Background and context

1. The entry into force of the UNCLOS created the enabling conditions for the operationalization of the regime of the international seabed area (the Area). A critical element of this regime lies in the establishment of a dedicated intergovernmental organization, the ISA, mandated to regulate and manage access and use of deep seabed mineral resources whilst ensuring the protection of the marine environment. As part of this mandate, ISA is also entrusted with the responsibility to ensure the equitable sharing of benefits derived from the conduct of activities in the Area to all humanity. One important stream of benefits is the development of specific programmes aimed at strengthening the capacities of developing States and technologically less developed States<sup>1</sup>.

2. For the most part, capacity-building and training programmes implemented by ISA have been an integral feature of the mandate of ISA, as further defined under the 1994 Agreement relating to the Implementation of Part XI of UNCLOS (1994 Agreement) as well as the rules, regulations and procedures adopted by ISA. Since 2000, there have been three main programmes implemented by ISA to strengthen the capacities of developing States and technologically less developed States. These are the Contractor Training Programme (CTP), the Endowment Fund for Marine Scientific Research (EFMSR) in the Area and the Internship Programme.

3. In addition to these three programmes, a series of additional activities have been undertaken since 2017 to reinforce the action of ISA in building the capacities of its members. Most of these activities have so far been carried out in the context of the implementation of the Voluntary Commitments registered by ISA at

the 2017 UN Ocean Conference held in New York.

4. The efforts invested by ISA in the organization of 'sensitization' seminars are also of interest for this review and as such, will be covered in this report. However, only the aspects pertaining to the contribution of such seminars to capacity-building will be discussed.

5. Recently, ISA engaged in two new initiatives that also aim at building the capacity of its members. One related to the establishment of regional training centres<sup>2</sup> and another one related to the launching of the ISA Junior Professional Officer programme. Considering that none of these initiatives has effectively started, both of them have been excluded from the assessment undertaken in the context of this review.

## 2. Defining 'capacity-building' and 'capacity development'

6. Although often, the terms 'capacity-building' and 'capacity development' are used interchangeably, they have different connotations. It is therefore important to clarify the meaning of each concept.

7. 'Capacity-building' refers to a process that supports only the initial stages of building or creating capacities and alludes to an assumption that there are no existing capacities to start from (UNDP, 2008)<sup>3</sup>. In the context of the implementation of Part XI of UNCLOS, it is possible to consider that due to the novelty of the topics and matters of interest, all initiatives implemented by ISA over the years were indeed designed to build capacities in the field of law/governance, deep sea geology, environmental management, etc. However, after twenty-five years of existence and several years of activities in developing capacity-

<sup>1</sup> See UNCLOS, art.143(3)(b); art.144, 273 and 274.

<sup>2</sup> The first joint regional training centre ISA-China (JTRC) has been established in Qingdao through a Memorandum of Understanding signed by the Secretary-General of ISA in China, in October 2019.

<sup>3</sup> See UNDP, Capacity development – Practice Note, 2008, 30 p.

building programmes and initiatives in line with UNCLOS, the context has changed. Accordingly, it seems more relevant to use the term ‘capacity development’ to describe the activities that ISA should undertake. This concept is commonly defined as “*the process through which individual, organization and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time*” (UNDP, 2008). Such process is about creating and building capacities and their use, management and retention. This approach is based on the fact that there are some capacities that already exist. In other words, the concept of ‘capacity development’ uses the existing base of capacities as its starting point and then supports efforts to enhance and retain them. As UNDP describes it, this approach is a “*process of transformation from the inside, based on nationally determined priorities, policies and desired results. It encompasses areas where new capacities have to be introduced and hence, the building of new capacity is also supported*” (UNDP, 2008). Because building of individual skills and institutional strengthening may take time, capacity development needs to be seen as a long-term process.

### 3. Objectives and methodology

#### (i) Objectives

8. At its 24<sup>th</sup> session, the Assembly approved the Strategic Plan of ISA for the period 2019–2023<sup>4</sup> which includes nine strategic directions that aim at enabling ISA to realize its mission objectives. Two of these strategic directions relate specifically to capacity development. **Strategic direction 5** focuses on the role of ISA in ensuring that capacity-building measures are developed and implemented effectively and that they meet the needs of developing States, identified through transparent processes in

which such States are fully involved<sup>5</sup>. **Strategic direction 6** outlines the important mandate of ISA to ensure fully integrated participation by developing States in the activities undertaken in the Area, including landlocked developing countries (LLDCs) and geographically disadvantaged States, small island developing States (SIDS) and least developing Countries<sup>6</sup> (LDCs). In order for ISA to meet those strategic objectives, a High-Level Action Plan was adopted by the Assembly of ISA at its 25<sup>th</sup> Session<sup>7</sup>, which identifies the actions required and provides the linkage between ISA’s strategic objectives and the work of its various organs. The High-Level Action Plan sets the priorities for the period 2019–2023 for implementing the activities that have been identified.

9. The High-Level Action Plan has also been supplemented by performance indicators developed to assess the performance of ISA in implementing the strategic directions contained in the Strategic Plan for 2019–2023. One of these indicators that have been adopted by the Assembly of ISA in July 2019, focuses on the need to identify “*Specific capacity-building needs of developing States by developing States*” (Performance Indicator 5.1)<sup>8</sup>. This strategic objective needs to be approached together with the specific actions and outputs listed in the High-Level Action Plan, to be achieved by 2020 (see **annex 4**).

10. It should be noted that although the importance of undertaking an assessment of the capacity needs of ISA’s members is seen as core priority and has been highlighted by previous reports commissioned by ISA respectively in 2001 and 2013<sup>9</sup>, no initiative has been taken so far to do so. The main consequence of this gap lies in the absence of any clear indicators or baselines or targets assigned to each activity implemented by ISA to build the capacities of its members. Such

4 See ISBA/24/A/10, *Decision of the Assembly of the International Seabed Authority relating to the strategic plan of the Authority for the period 2019–2023*, 27 July 2018

5 See Performance indicator 5.1, ISBA/25/A/15, *Decision of the Assembly of the International Seabed Authority relating to the implementation of the strategic plan for the Authority for the period 2019–2023*, 24 July 2019.

6 See Performance indicator 6.1, ISBA/25/A/15.

7 See ISBA/25/A/15, *Decision of the Assembly of the International Seabed Authority relating to the implementation of the strategic plan for the Authority for the period 2019–2023*, 24 July 2019.

8 *Ibid.*

9 See DiÈNE (B), *Report on the training programme – Assessment, evaluation, future training programme*, 2001, 67 p.; SIMPSON (A.T), *Review of training and capacity-building obligations of exploration contractors with the International Seabed Authority*, 2013, 48 p.

constraint has recently been reiterated by the African Group in its submission on “Training programmes for developing countries” presented for consideration to the Assembly of ISA at its 25<sup>th</sup> Session<sup>10</sup>.

11. It is to address such constraint and to deliver against the actions assigned by the Strategic Plan and the High-Level Action Plan that the Secretariat has organized a workshop in Kingston, Jamaica, on “**Capacity development, resources and needs assessment**” from 10-12 February 2020. In anticipation of this workshop, the Secretary-General of ISA identified the need to review the effectiveness and impact of the current capacity-building initiatives and programmes implemented by ISA.

12. The present report presents the key findings of the assessment undertaken and provide some recommendations for consideration and discussion at the workshop organized in February 2020, which were then enriched by the outcomes of the workshop and the further inputs received.

## i. Methodology

13. The methodology followed to undertake this review is based on quantitative<sup>11</sup> and qualitative<sup>12</sup> indicators from both objective and subjective sources, depending on which data was available. Statistics have been generated by the Secretariat on the basis of reports submitted by contractors and data kept by the Secretariat on the successful applicants and trainees who have benefitted from the CTP, the EFMSR or the Internship Programme. When possible, information on geographic representation as well as gender parity has been examined. In order to gather the feedback from the main stakeholders involved in the delivery of the capacity-building activities assessed, the Secretariat has also designed some surveys. These surveys were specifically tailored to receive the comments from the ISA’s members, the contractors, the former trainees and interns as well as the research institutions (see **annex 5**) which benefitted from funding under the EFMSR.

### BOX 1

#### Types of indicators used for assessment

##### QUANTITATIVE INDICATORS

- Number of trainees
- Number of trainees from SIDS/LDCs/LLDCs
- Number of women amongst trainees
- Number of contributions/grants provided by donors

##### QUALITATIVE INDICATORS

- Surveys issued to member States, contractors, research institutions (EFMSR), former trainees
- Interviews

10 See ISBA/25/A/8, *Training programmes for developing countries: Submitted by the African Group item 9 of the provisional agenda of the Twenty-fifth session*, 1-26 July 2019.

11 Quantitative indicators are generally used to inform on whether the activities and actions planned have been undertaken as intended. Such indicators provide a good basis to monitor outputs but do not give an idea of the impact of such outputs. Quantitative indicators can be expressed in a number of ways, depending on the data involved and its use. They usually include numbers, decimals, ratios, fractions, percentages and monetary values.

12 Qualitative indicators are generally used to inform on change (outcomes) and whether the work carried out had led to the changes expected. Such indicators are defined as people’s judgments and perceptions about a subject. Qualitative indicators can’t be measured or reproduced in figures and most of the time are expressed as independent statements or as relative terms such as “good”, “better”, and “best”.

# PART I: Review of the three core capacity-building schemes implemented by ISA

## 1.1 THE CONTRACTOR TRAINING PROGRAMME

### A. General overview

#### (i) Background and context

14. The Contractor Training Programme (CTP) is rooted in the provisions of resolution II of UNCLOS which addresses the issue of technology transfer. Pursuant to resolution II, paragraph 12 (a) (ii), the Preparatory Commission established the training programme to be carried out in the context of Pioneer Investors' activities, for which draft principles, policies, guidelines and procedures were laid down<sup>13</sup>. The fundamental importance of international technical and scientific cooperation with regard to activities in the Area, including training of personnel of the Enterprise and nationals of developing States, is recognized in articles 144 and 148 of UNCLOS as read with Section 5 of the annex to the 1994 Agreement.

15. The legal obligations of contractors with regard to training are contained in article 15 of Annex III of UNCLOS. These obligations are elaborated in the Regulations adopted by ISA relating to prospecting and exploration. As an example, Regulation 27 of the Regulations on Prospecting and Exploration for Polymetallic Nodules<sup>14</sup> reads as follows:

*"Pursuant to article 15 of Annex III to the Convention, each contract shall include as a schedule a practical programme for the training of personnel of the Authority and developing States and drawn up by the contractor in cooperation with the Authority and the sponsoring State or States. Training programmes shall focus on training in the conduct of exploration and shall provide for full participation by such personnel in all activities covered by the contract. Such training programmes may be revised and developed from time to time as necessary by mutual agreement."*

16. The training programme is generally formulated following negotiations between ISA and the contractor, in accordance with the recommendations for guidance issued by the LTC and included as schedule 3 of the contract for exploration. Training programmes are designed and carried out for the benefit of the trainee, the nominating country and, more broadly, members of ISA, especially the developing countries. Members of ISA who may contribute to the development of the Enterprise should also benefit by having access to the same training opportunities.

17. The training programmes can be divided into four distinct periods: (i-a) 1994 to 1999, (i-b) 2000 to 2007, (i-c) 2008 to 2013 and (i-d) 2013 to 2019.

#### (i-a) Training programmes under the Pioneer Investor regime (1988-2001)

18. During the 1994-1999 period, the pioneer investor period, 27 nationals from 19 countries received training. Five of these were trained by Germany under a special arrangement. The training content included lectures, practical assignments and importantly, on-board training on a research vessel and was for a duration that ranged from 9 to 12 months. Only two of the participants were women<sup>15</sup>.

#### (i-b) Training programmes for the period 2000-2013

19. No contractor trainings were recorded for the period 2000-2007. With the exception of BGR of Germany which signed its contract in 2006, only the registered Pioneer Investors that had already fulfilled their training obligations, were carrying out activities in the Area at this time.

<sup>13</sup> See LOS/PCN/SCN.2/L.6/Rev.1, *Principles, Policies, Guidelines and Procedures for a Preparatory Commission Training Programme*, 1989.

<sup>14</sup> See ISBA/19/C/17, *Decision of the Council of the International Seabed Authority relating to amendments to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area and related matters*, 22 July 2013.

<sup>15</sup> See DiÈNE (B), 2001.

20. It is worth noting that in 2001, a report on *Efficiency of training programmes under the Pioneer Investors Regime* by Baidy Diène (a former LTC member) was commissioned by ISA with the view of evaluating the training programmes conducted by Pioneer Investors. Several recommendations were also provided which contributed to improve the delivery of CTPs.

21. The period 2008 to 2012 recorded ten individuals who received training under the CTP. Commencing in 2016 (post-registered pioneer investors era) all new contracts issued were required to have training programmes. These were developed through negotiations with the Secretariat of ISA.

22. In 2013, an external study was commissioned by ISA to undertake a review of the training and capacity building obligations of exploration Contractors. The study reviewed, amongst others, the implementation of the programme and provided short-term and medium to long-term recommendations. The study found that

*“regardless of the criteria applied in any historical review of training programmes conducted by Contractors, and before them by Pioneer Investors, the end result is that the number of trainees and their equitable geographical distribution are inadequate. The higher-level goals of promoting greater involvement by State Parties in the work of the Authority and greater capacity development within developing countries have fallen short of any reasonable expectation”. The study made a series of recommendations with a view of enabling ISA to improve the implementation of CTPs<sup>16</sup>.*

23. One of the important outcomes of the aforementioned report led to the development and adoption in 2013, of guidelines for contractor training programmes by the LTC<sup>17</sup> that highlight the need, obligations and implementation of such training programmes and cover the following components:

- (a) The process of reviewing and approving the proposed training programmes submitted by applicants for plans of work for exploration;
- (b) The content of the training programmes, including participation by sponsoring States;
- (c) The process of allocating training applicants to training opportunities;
- (d) Procedures for reporting on training activities; and
- (e) That each contractor must offer the training equivalent of at least 10 trainees for every 5-year period of its contract.

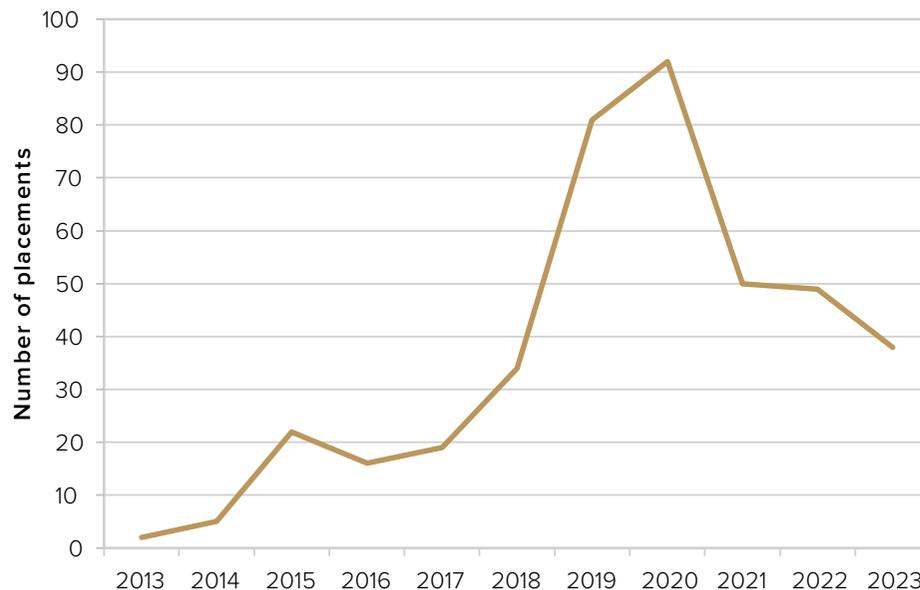
24. As a result, a significant increase of training opportunities occurred.

### **(i-c) Training programme post 2013**

25. A year-wise distribution of participants from 2013 to 2019 shows steady increase in number of participants from single to double digits per year with a minor reduction in a couple of years (see **figure 1**). In case of training programmes with duration of 2 years (e.g. Master’s programme), the starting year is taken as the year of training. The number of participants trained during 2019 is until July, hence the number is relatively lower than the previous years. During the registered Pioneer Investors’ regime between 1994 and 1999, only 22 participants from 17 countries were trained because each Pioneer Investor was mandated to train 2-3 participants only, whereas the contracts signed between ISA and contractors after 2013 require the contractor to train 10 participants from developing countries over a 5-year period (ISBA/19/LTC/14), a quantum jump in terms of training opportunities for developing countries. It is useful to note that as a result of the training carried out during the registered Pioneer Investors’ regime, the seven were exempt from the obligation to train 10 participants per 5 years. This exemption ceased to apply when they were granted 5-year extensions to their contracts in 2016/17.

<sup>16</sup> See *Ibid*, section 4.

<sup>17</sup> See ISBA/19/LTC/14, *Recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration*, 12 July 2013.

**FIGURE 1** Training provided in 2013 and projection to 2023

Source: ISA Secretariat, 2019

26. In 2019, a comprehensive training report providing information on training statistics since the inception of the programme was prepared by the Secretariat for the LTC. As stated in this report, based on existing contracts and extension agreements, it is anticipated that about 260 new training placements would be available to candidates from developing States between 2020 and 2023 (see **figure 1**), which is more than two and a half times the opportunities in the coming four years as compared to those between 2013 and 2019.

27. Considering that currently there are 30 contracts in force and that each contractor is expected to provide 10 training opportunities in 5 years, it would mean that there could be as many as 300 opportunities in the coming 5-year period (2020-2024), with an average of 60 training placements per year.

### **(ii) Administration and policy**

28. Currently the process undertaken by the ISA Secretariat to disseminate and advertise training programmes includes either a draft advertisement submitted to the contractor for review and approval, or in the case where the contractor submitted a draft advertisement, this is reviewed and subsequently posted on the website of ISA and shared through ISA's social

media channels. In parallel, notes verbales are sent to ISA members informing them of the same. In some cases, the opportunities have been sent directly to past applicants and to selected institutions. If the training coincides with the annual session of ISA, appropriate workshops, side events or conferences, printed information flyers are also distributed at these events.

29. All the contractors who have responded to the survey issued by the ISA Secretariat in the context of this review also indicated that the communication with the ISA Secretariat has been effective and without any specific issues.

30. The LTC would normally appoint a subgroup from its membership to carry out an initial review and appraisal of the applications and to report back to the full Commission. In this regard it has followed the practice adopted by the Preparatory Commission during the period 1985-1994, prior to the establishment of ISA. In selecting candidates, the LTC considers and applies the relevant regulations, as well as the principles, policies, guidelines and procedures applicable to the training programmes. Detailed consideration is given to all the applications received and selection is made based on academic qualifications, age, equitable geographic representation and language

skills, as well as professional experience, their motivation and how the training will benefit the nominating Government.

31. Almost all the contractors who have responded to the survey issued by the ISA Secretariat in the context of this review indicated that they were satisfied with the quality and performance of the selected participants. In a few cases, the training programme had to be modified to meet the candidate's background. Hence, it has been suggested that certain competence in language, skills and educational background required for the training be informed in advance to the prospective participants at the application stage. Similarly, sharing the information on the candidate's qualifications and experience with the contractor providing training during the planning stage has been identified as useful for the contractors in designing their programme accordingly.

32. In July 2014, during the 20<sup>th</sup> Annual Session of ISA, the LTC made the recommendation that in the event the selection of trainees is required at short notice, an alternative fast-track method should be used where candidates would be selected from a roster which should be kept regularly updated by the Secretariat<sup>18</sup> and the training sub-group would coordinate through virtual meetings. The roster is currently made up of 90 candidates and is comprised of candidates previously selected as 'Reserve' candidates for CTP.

33. The procedure followed for allocating candidates from the roster is as follows:

- The roster of candidates contained is preapproved by the LTC considering its regular update for future training opportunities, subject to negotiation with the candidates for their availability for a specific training opportunity;
- Upon receiving the training proposal at short notice, the Secretariat contacts the candidates on the roster to ascertain their availability for the specific training opportunities;

- The training subgroup (panel) of the LTC recommends candidates for training opportunities, based on the selection criteria and considerations approved by the LTC, and after consultations between the contractor and the Secretariat.
- The training sub-group should report on the selection of candidates to the LTC at its next session.

### (iii) Finance and resources

34. An important element of this review was to try to assess the resources allocated by the contractors to the CTP. Considering that such information is not generally reflected in the annual reports submitted by contractors (because it is not a requirement of the regulations), the Secretariat decided to seek for this information directly with the contractors. This was done through the survey issued in the context of this review. Fourteen contractors responded to the surveys (see **table 1**).

35. It is observed that the amounts communicated vary significantly. This could be explained by the difference in the nature of the types of training undertaken but more importantly, due to the fact that training costs are allocated for five-year periods. To facilitate comparison, the average cost per trainee is also shown.

36. It is observed that, based on the responses provided by the contractors to the survey, the contractors which have invested the most in the CTP are: COMRA, BGR, India, JOGMEC, TOML and UKSRL 1 (see **table 1**). As a percentage of the total exploration costs, the contractors who have spent the most on the CTP are: JOGMEC, DORD, TOML and IOM. However, when the average cost per trainee is considered, again another ranking emerges with BGR, CMC, JOGMEC, COMRA and India spending the most. Caution must nevertheless be taken when making these comparisons because the costs incurred per trainee can be influenced by national labour legislation e.g.

<sup>18</sup> See ISBA/20/LTC/13, *Recommendations on selection of candidates for the training programmes*, 15 July 2014.

**TABLE 1** Funds expended on CTP and percentage of expended funds against total costs of exploration operations (2013-2019)

Contractor and type of exploration contract	Total expended on CTP (USD)	Average expended per trainee (USD)	Percentage of total costs of Operations
IOM	Approx. 40,000	10,000	Approx 0.5-1.5% of yearly expenditures on exploration.
BGR (PMN)	Approx. 220,000	27,500	Approx. 0.5%
BGR (PMS)	Approx.475,000	47,500	Approx. 1.2%
COMRA (PMN, PMS & CFC)	820,000	20,000	About 1%.
CMC	Approx. 120,000	30,000	Not available
DORD (extension)	156,000	31,200	Approx. 4%.
GSR	94,500	9,450	Approx. 0.6%
Govt of India (PMS)	Approx. 100, 000	20,000	Approx. 1 %
JOGMEC	217,238	18,110	Approx. 7%.
Rep of Korea (PM, PMS & CFC)	Approx. 490,000	17,500	It takes less than 1% of the all exploration costs but increases up to around 2% for the last five-year period.
Ocean Mineral Singapore	-	-	-
NORI	-	-	-
TOML	134,500 <sup>19</sup>		Approx. 2.5%
UKSRL	260,300 <sup>20</sup>	130,150	Approx. 1.3%

Source: ISA Secretariat, 2019

insurance requirements, minimum stipends for trainees.

## B. Key observations

37. Although completion of training reports from individual contractors was not consistently provided, information collated by ISA on the training programmes for the period 2013 to

2019 provides useful indication. During this period, a total of 108 trainings were provided by 19 contractors for participants from 37 countries.

38. The trainings provided have covered a large variety of topics relating to exploration, environmental management and assessment of marine mineral resources (see **table 2**).

<sup>19</sup> This figure includes a number of trainings that were not part of the requirements set out by the exploration contracts.  
<sup>20</sup> GBP200,000

**TABLE 2** Topics under which trainings were offered by contractors

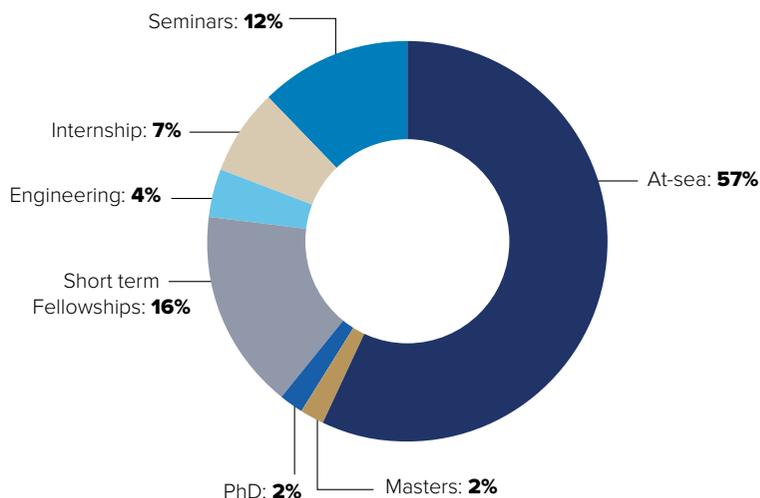
No.	Major subject	Topics
1.	Geology, deep-sea minerals	Deep-sea mineral resources (polymetallic nodules, ferromanganese crusts, hydrothermal sulphides)
2.	Geology, resource assessment	Assessment of distribution and abundance of deep-sea mineral resources
3.	Geological sampling and analysis	Nodule-sediment sampling and description
4.	Geology-Sediment analysis	Porewater, geochemical and geotechnical analysis of sediments
5.	Marine biology and impact assessment	Marine environmental studies, biodiversity and environmental impact assessment
6.	Techniques for surveying	Marine survey techniques
7.	Geophysical and oceanographic data collection / analysis	Acquisition, processing and interpretation of geoscientific and oceanographic data
8.	Laboratory techniques	Operation and use of laboratory analytical equipment
9.	Exploration and prospecting	Adaptive path planning for polymetallic nodule exploration
10.	Planning for mining operation	Informative path planning for nodule collector system

Source: ISA Secretariat, 2019

39. Over the period 2013-2019, various types of trainings were offered by contractors, the majority of which were onboard research vessels for at-sea training (62 placements, 57%); followed by on-land short-term training courses and

fellowships (17 placements, 16%); participation in seminars, workshops and conference (13 placements, 12%); engineering and internships (12 placements, 11%); Master's degree and Ph.D. programmes (2 placements each, 4%).

**FIGURE 2** Types of training provided across the period 2013-2019



Source: ISA Secretariat, 2019

40. The selected 108 candidates from 37 countries represented different regions. The majority of the 108 former trainees were from Africa or Asia-Pacific (35% each) or Latin America and the Caribbean (28%) (see **table 3**). The participation of candidates from countries of Eastern Europe (2%) has been very low. It has not been possible, in the context of this report, to identify the factors that could explain such unequal distribution.

41. Of the total participants, 15.74% (17 participants) were from SIDS<sup>21</sup> and 9.26% (10 participants) were from LDCs and/or LLDCs<sup>22</sup>.

42. In terms of gender distribution, of the 108 candidates who have benefitted from CTPs between 2013 and 2019, 49 were women (45%). It is worth noting that the proportion of women has been gradually increasing since the pioneer investors regime when only two women have benefitted from the trainings provided. They represented 25% of the trainees in 2014, 42% in 2017 and 50% in 2019 (see **figure 3**).

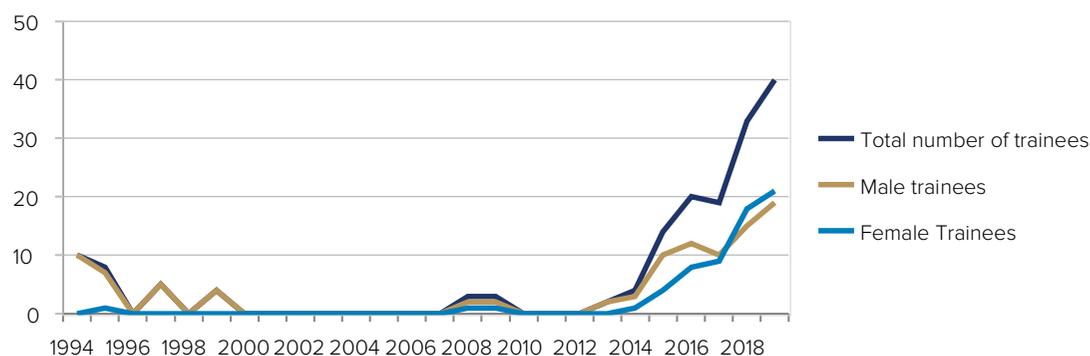
43. A majority of the former trainees of the CTP participants belong to the age group of 31-40 years old (48%) and 30 years old (46%) and the least from 41-50 years

**TABLE 3** Geographical representation of all CTP trainees (2013-2019)

Regional Groups	Number of trainees	Countries represented
African	38	Burkina Faso, Cameroon, D.R. Congo, Egypt, Gambia, Ghana, Kenya, Madagascar, Mauritius, Namibia, Nigeria, Somalia and South Africa
Asia and Pacific	37	Bangladesh, China, Cook Islands, Fiji, India, Indonesia, Kiribati, Myanmar, Papua New Guinea, Philippines, Singapore, Solomon Islands, Sri Lanka and Thailand
Eastern European	3	Georgia, Armenia and Belarus
Latin America and Caribbean	30	Argentina, Brazil, Cuba, Ecuador, Jamaica, Mexico and Trinidad and Tobago
<b>Total</b>	<b>108</b>	<b>37</b>

Source: ISA Secretariat, 2019

**FIGURE 3** CTP trainees from 1994-2019 by gender



Source: ISA Secretariat, 2019

21 Cook Islands, Cuba, Fiji, Jamaica, Kiribati, Papua New Guinea, Solomon Islands and Trinidad and Tobago.

22 Bangladesh, Burkina Faso, Gambia, Madagascar and Myanmar.

(6%). It can be expected that this distribution would be favorable for the organizations to which these participants belong, as they would have between 20-40 years of career ahead of them to use the skills developed during these trainings for developing new areas in their respective institutions and countries, thus having a long-term impact on their marine research programmes. However, such data is not available so as to ascertain the application of skills developed by the participants in their respective organizations over long time periods. A mechanism of continuous acquisition of information needs to be evolved in order to demonstrate whether such benefits have accrued over longer time periods.

**TABLE 4** Decadal age distribution of CTP trainees (2013-2019)

Age group	Percent distribution
21-30 years	46%
31-40 years	48%
41-50 years	6%

Source: ISA Secretariat, 2019

44. Contractors are typically required to submit training opportunities to ISA Secretariat at least 6 months before the commencement of training in order to allow sufficient time to advertise and select candidates, obtain permits and/or to offer position to a reserve candidate. To a query as to what specific challenges may prevent contractors from informing the Secretariat in this time frame, the following reasons were provided by different contractors: (1) short lead time to expeditions; (2) scheduling of offshore campaigns are not predictable 6 months in advance; and (3) changes in offshore campaign schedules. One contractor also raised the question of inconsistency of some institutions providing training as it relates specifically to the timeline of admission process and the one followed by ISA. It was suggested that further consideration should be given to ensure greater flexibility in applications process, for example outsourcing/delegation of candidate selection directly to independent training providers.

45. It also appears from the responses received from the contractors to the surveys issued by the Secretariat in preparation of this report, that some of the challenges that could explain why no more hands-on practical training opportunities were offered relate to the following elements: (1) funding for additional participants; (2) lack of experience of candidates; (3) limited space (berths) on research vessels and; (4) a limit to the number of trainees that can be on board due to safety regulations.

### C. Issues for consideration and recommendations

46. Contractor training programmes have provided different types of training in the form of at-sea training, short-term fellowships, internship, participation in seminars as well as enrolment in Masters and Ph.D. programmes. However, the relevance of these trainings and their long-term benefits and overall impact towards the individuals, their parent organizations and countries is unclear. Indeed, it has been impossible in the context of this assessment, to identify how such trainings have contributed to the objectives assigned to the CTP.

**Recommendation 1:** Contractors should ensure that the trainings provided are aligned with the priority needs of developing States, members of ISA, as identified by the developing States.

**Recommendation 2:** Clear indicators and targets should be developed by categories of training (law/ocean policy; environmental management; engineering, etc.) required to meet the needs identified by the developing States, members of ISA.

**Recommendation 3:** Clear indicators should be developed to assess the quality of the capacity development activities implemented under the CTP.

**Recommendation 4:** The LTC should take into account the list of priority needs identified by developing States and regularly updated by ISA, when making its recommendations.

**Recommendation 5:** A platform for exchange of information on participants' experiences

*and guidance to new participants could help improve the visibility of the training programmes offered by contractors.*

**Recommendation 6\*:** *Consideration should be given to expanding the CTP in the exploitation phase.*

\* Recommendation formulated on the basis of the discussions held at the ISA international workshop on "Capacity development, Resources and Needs Assessment", 10-12 February 2020, Kingston.

47. Detailed records of training were not always kept. As a result, a lot of information that could have helped in the assessment of the impact of the CTPs is missing. Progress has been made as a result of the Simpson report released in 2013 as its recommendations were adopted for the training programmes post 2013. However, more systematic and integrated information are required to ensure that any future assessment is comprehensive.

**Recommendation 7:** *Consideration could be given to establish a mechanism to assess the relevance of different capacity development opportunities provided under the CTPs.*

**Recommendation 8:** *Consideration could be given to establish a mechanism to ensure monitoring and assessment of the long-term benefits of training programmes provided under the CTP to the organizations and countries of the trainees.*

**Recommendation 9:** *Consideration could be given to ensure that training programmes provided under the CTPs address the specific needs of LDCs, LLDCs and SIDS.*

48. The UNCLOS also sets out legal obligation for contractors to provide training to the personnel of ISA<sup>23</sup>. As per the responses received from contractors to the survey issued by the ISA Secretariat in preparation of this report, no ISA staff has benefitted from such provision.

**Recommendation 10:** *Consideration could be given to extend the benefit of CTPs to personnel of ISA in order to give them more practical experience, especially participation in scientific cruises for environmental and resource-related research.*

49. Availability of three times the number of opportunities in the coming 4-5 years (as compared to that of last six years), would further enhance skill development among developing States. Developing long-term relationship between the participants and their parent organizations with the institutions offering training on behalf of contractors, could lead to joint/collaborative research projects between them, offering capacity-building opportunities for more personnel from developing States.

**Recommendation 11:** *Consideration could be given to encourage development of joint/collaborative programmes between parent institution of trainees and institutions providing training on behalf of contractors with a view of promoting sustained benefits from training programmes.*

50. The execution of the CTP has progressively improved over the years as the Secretariat has implemented the recommendations of the various reports. However, there are still several challenges faced. The highlighted challenges are:

- (1) Determining the "training equivalent of at least 10 trainees". The recommendations and guidelines on contractor training<sup>24</sup> stipulate such a number of training places. However, it does not define this equivalency and it is therefore difficult to determine for example how attending an international 3-day workshop compares to a 30-day at-sea training or to a 3-month internship.
- (2) Not enough applications from suitably qualified candidates – in some cases necessitating re-advertising. This has been the case for training lasting more than 6 months.

23 See UNCLOS, Annex III, article 15.

24 See ISBA/19/LTC/14, Recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration, 12 July 2013.

- (3) Training places lost due to rejected visa applications for trainees for the countries of training or of embarkation (at-sea training). Implementation of the 6-month lead time between the contractor notifying the Secretariat of the training opportunity and actual start of the opportunity, has in some cases allowed substituting a reserve candidate with the original candidate in which case the training place has not been lost. However, the reality is that several qualified candidates have failed to participate in the training due to being denied visas.
- (4) Selected candidates notifying the contractor late of their non-availability to participate – the contractor did not have sufficient time to select an alternate candidate.

51. The following suggestions were given by contractors relating to training programmes to ensure that they meet the capacity-building needs of developing States, provide long-term benefits to the trainee’s institution/State, and facilitate the implementation of the training obligations of contractors:

**Recommendation 12:** *The concept of accountability of trainees should be emphasized to ensure maximum involvement in training activities.*

**Recommendation 13:** *Consideration could be given to establish the necessary mechanisms within ISA to monitor career development of former trainees.*

**Recommendation 14:** *Consideration could be given to establish the necessary mechanisms within ISA to share feedback from trainees including experience and expectations of participants with a view of improving CTPs.*

**Recommendation 15:** *Consideration could be given to ensure that the necessary mechanisms are in place within ISA to inform the State of which the trainee has the nationality, of the completion of the training with a view to ensure that the skills acquired can benefit the national development objectives.*

## 1.2 THE ENDOWMENT FUND FOR MARINE SCIENTIFIC RESEARCH IN THE AREA

### A. General overview

#### (i) Background and context

52. The Endowment Fund for Marine Scientific Research (EFMSR) in the Area was established at the 12<sup>th</sup> Session of the Assembly, in July 2006, with the adoption of the resolution ISBA/12/A/11<sup>25</sup>. It became operational the subsequent year, after the adoption of the terms of reference, guidelines and procedures of the EFMSR<sup>26</sup>. Pursuant to article 143 paragraphs 2 and 3 of UNCLOS, the main objectives of the EFMSR is to enable ISA to promote and encourage the conduct of marine scientific research in the Area including through the development of programmes designed to benefit developing States and technically less developed States. Accordingly, the EFMSR has been established with the specific mandate to

*“promote and encourage the conduct of marine scientific research in the Area for the benefit of mankind as a whole, in particular by supporting the participation of qualified scientists and technical personnel from developing countries in marine scientific research programmes and offering them opportunities to participate in training, technical assistance and scientific cooperation programmes”<sup>27</sup>.*

#### (ii) Administration and policy

53. The ISA Secretariat acts as the secretariat of the EFMSR. All applications received are evaluated by an Advisory Panel appointed for a 3-year period, established pursuant to ISBA/13/A/6. The Advisory Panel makes recommendations to the Secretary-General who decides to provide financial assistance on the basis of such recommendations and subject to the availability of the funds.

54. The members of the Panel are appointed with due regard to equitable geographic representation. It is composed of permanent representatives to ISA, representatives of

25 See ISBA/12/A/11, *Resolution establishing an endowment fund for marine scientific research in the Area*, 16 August 2006.

26 See ISBA/13/A/6, *Decision of the Assembly of the International Seabed Authority relating to the terms of reference, guidelines and procedures for the International Seabed Authority Endowment Fund*, 19 July 2007.

27 See ISBA/12/A/11, para.2.

## Box 2

## Members of the Advisory Panel of ISA for the EFMSR (2017-2020)

<b>Georgy Cherkashov</b> (reappointed)	Deputy Director Institute for Geology and Mineral Resources of the Ocean, Russian Federation
<b>Tian Qi</b>	Permanent Representative to the International Seabed Authority and Ambassador Extraordinary and Plenipotentiary of the People's Republic of China to Jamaica
<b>Josep María Bosch Bessa</b>	Permanent Representative to the International Seabed Authority and Ambassador Extraordinary and Plenipotentiary of Spain to Jamaica
<b>Inés Fors Fernández</b>	Permanent Representative to the International Seabed Authority and Ambassador Extraordinary and Plenipotentiary of the Republic of Cuba to Jamaica
<b>Janet Omoleegho Olisa</b>	Permanent Representative to the International Seabed Authority and Ambassador Extraordinary and Plenipotentiary of the Federal Republic of Nigeria to Jamaica
<b>Siosua Utoikamanu</b>	Economic policy and public financial management specialist, Tonga
<b>Alan Evans</b>	Marine Science Policy Adviser National Oceanography Centre, Southampton, United Kingdom

educational institutions or organizations of an international character as well as individuals closely associated with the work of ISA. In 2017, the Advisory Panel has been renewed and comprises seven members. The current members are listed in the annex ISBA/25/A/2 and in the **box 2** above.

55. An application for assistance from the EFMSR shall normally be submitted by a developing country that is a member of ISA. However, the possibility exists for the Secretary-General of ISA to accept an application from any other country if he/she is “*satisfied that the application will benefit scientists from developing countries*” (for example, if an institution in a developed country proposes to train scientists from developing countries)<sup>28</sup>.

56. On the basis of the applications submitted

by research institutions, a shortlist of eligible candidates and proposals is established by the Secretariat and submitted to the Advisory Panel for evaluation. The Advisory Panel is provided with a summary of each application and, where relevant, the qualifications of each candidate; the sponsorship, if any, by any Government or governmental agency or other institution or entity; a summary of the nature and objectives of the marine scientific research programme, scientific cooperation or technical assistance; and a statement of the expected benefits to the individual or developing country concerned.

### (iii) Finance and resources

57. The initial capital of the EFMSR consisted of the balance remaining as at 18<sup>th</sup> December 2006 from the application fees paid by the

<sup>28</sup> See ISBA/13/A/6, *Decision of the Assembly of the International Seabed Authority relating to the terms of reference, guidelines and procedures for the International Seabed Authority Endowment Fund*, 19 July 2007, annex, para.7.

Pioneer Investors, under resolution II of the Third United Nations Conference on the Law of the Sea to the Preparatory Commission for the International Seabed Authority and for the International Tribunal on the Law of the Sea, pursuant to paragraph 7 of the resolution II<sup>29</sup>. Contributions to the EFMSR can be made by ISA, its members, other States, relevant international organizations, academic, scientific and technical institutions, philanthropic organizations, corporations and private persons. The financial regulations of ISA apply to the EFMSR.

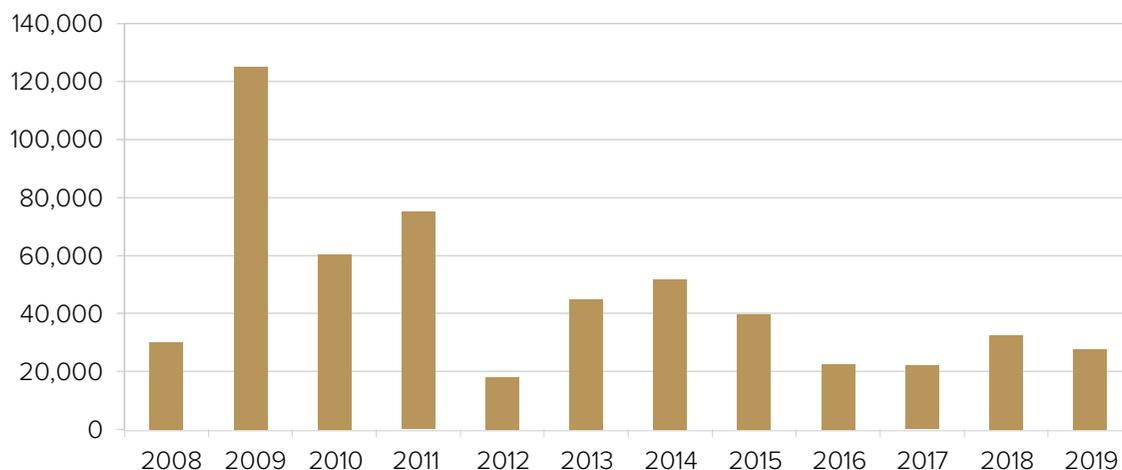
58. Under the terms and reference, guidelines and procedures of the EFMSR, it was agreed that only interest accrued from the EFMSR can be utilized<sup>30</sup>. Therefore, and for the purpose to illustrate the implications of this restriction, the usable component of a contribution of US \$20k (e.g.) would be roughly 1.09% or US \$218<sup>31</sup> (at current interest rates). Any balance of income not expended in any year is carried forward to the following year and remains available

for distribution for a period of two years. After that, any unexpended income is added to the capital of the EFMSR and is not available for distribution anymore<sup>32</sup>.

59. As at 30<sup>th</sup> December 2019, the balance of the EFMSR was US \$3,503,567. At the same date, it appears that a total amount of US \$582,617 had been disbursed from the interest accrued on the capital in the form of awards for projects (see **figure 4**).

60. From 2008-2019, 22 contributions by 9 member States and 1 contractor, were made to the EFMSR (see **table 5**). The main contributors have been Germany (\$276,719), Norway (\$250,000), Japan (\$100,000), the United Kingdom (\$75,053) and Mexico (\$37,500) (see **figure 5**). Other donors include Korea (\$30,000), Spain (\$25,514), China (\$20,000), Nigeria (\$10,000), Monaco (\$5, 251) and Tonga (\$1,000) (see **table 6**).

**FIGURE 4** Amount of EFMSR’s funding disbursed per year (US\$) (2008-2019)



Source: ISA Secretariat, 2019

29 See ISBA/12/A/11, para.3.

30 See ISBA/13/A/6, annex, para.3.

31 See SBA/12/A/11 para 4, invites members of the Authority, other States, relevant international organizations, academics, scientific technical institutions, philanthropic organizations and private persons to make contributions to the EFMSR.

32 See ISBA/12/A/11, para.6.

**TABLE 5 Contributions (US\$) made to the EFMSR per year (2008-2019)**

Date of contribution	Contributor	Amount contributed
2019	China	\$20,000
	Monaco	\$5,251
2018	IFREMER	\$5,000
2016	Mexico	\$7,500
2015	Mexico	\$7,500
	IFREMER	\$2,777
	Tonga	\$1,000
2014	United Kingdom	\$10,000
	Korea	\$30,000
	Mexico	\$7,500
2013	United Kingdom	\$10,000
	Mexico	\$5,000
2012	United Kingdom	\$20,000
	Mexico	\$5,000
2011	Nigeria	\$10,000
	Mexico	\$2,500
	Japan	\$100,000
2010	United Kingdom	\$15,253
2009	Germany	\$276,719 (Application plus interest as of 2009)
2008	Norway	\$250,000
	United Kingdom	\$29,800
	Mexico	\$2,500
	Spain	\$25,514

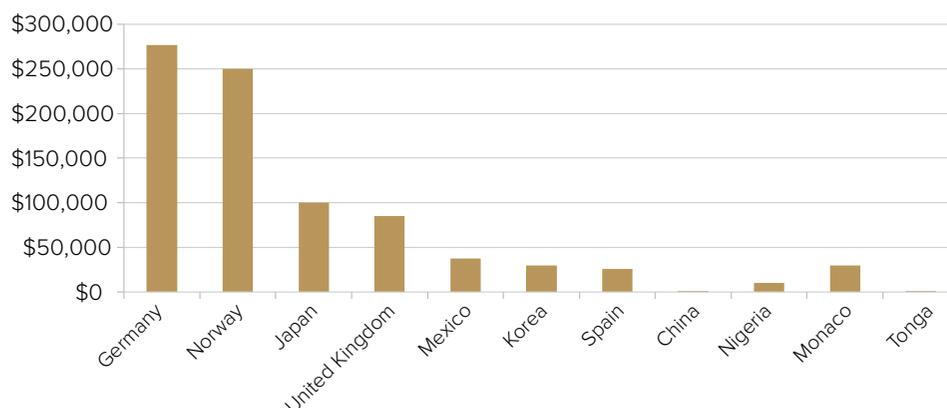
Source: ISA Secretariat, 2019

**TABLE 6 Total contributions (US\$) made to the EFMSR per donor (2008-2019)**

Donor country	amount (US\$)
China	\$20,000
Germany	\$276,719
Japan	\$100,000
Korea	\$30,000
Mexico	\$37,500
Monaco	\$7,500
Nigeria	\$10,000
Norway	\$250,000
Spain	\$25,514
Tonga	\$1,000
United Kingdom	\$85,053

Source: ISA Secretariat, 2019

**FIGURE 5** Total contributions by donors (US\$) to the EFMSR by order of importance (2008-2019)



Source: ISA Secretariat, 2019

61. Over the years, ISA has established a network of cooperating institutions which has provided a means to make arrangements with universities, scientific institutions, contractors and other entities for opportunities for scientists from developing countries to participate in marine scientific research activities. To date, members of the network include the National Oceanography Centre (United Kingdom); the National Institute of Ocean Technology (India); the Institut français de recherche pour l'exploitation de la mer (IFREMER); the Federal Institute for Geosciences and Natural Resources (Germany); the Natural History Museum (United Kingdom); Duke University (USA); and InterRidge. The contribution of these different entities vary.

62. Some like InterRidge or the National Institute of Ocean Technology have mainly contributed by organizing projects for which funding was provided under the EFMSR to

allow participation of selected individuals. One (IFREMER) has contributed financially to the EFMSR. Beyond these observations, not enough information exists to clearly assess the contribution of the other entities of the network to the objectives assigned to the EFMSR.

### B. Key observations

63. As of December 2019, 145 qualified personnel from 50 countries have benefitted from training, research and other activities carried out by various institutions that have been funded by the EFMSR. Most of the beneficiaries were from the Asia-Pacific region (39%) and from Africa (36%) when 16 % were from the Latin and Caribbean region. It should also be indicated that nationals from the Eastern European and Western European and Others Group also benefitted from the EFMSR (5% i.e. total of 7 trainees) (see **table 7** and **figure 6**). Approximately 39% of trainees were

**TABLE 7** Number of individuals who have benefitted from the EFMSR by regional group (2008-2019)

Regional Group	Number trainees under	Regional Group	Number trainees under
Asia- Pacific	56	GRULAC	24
African	52	Western European	3
Eastern European	4	Observer State	6

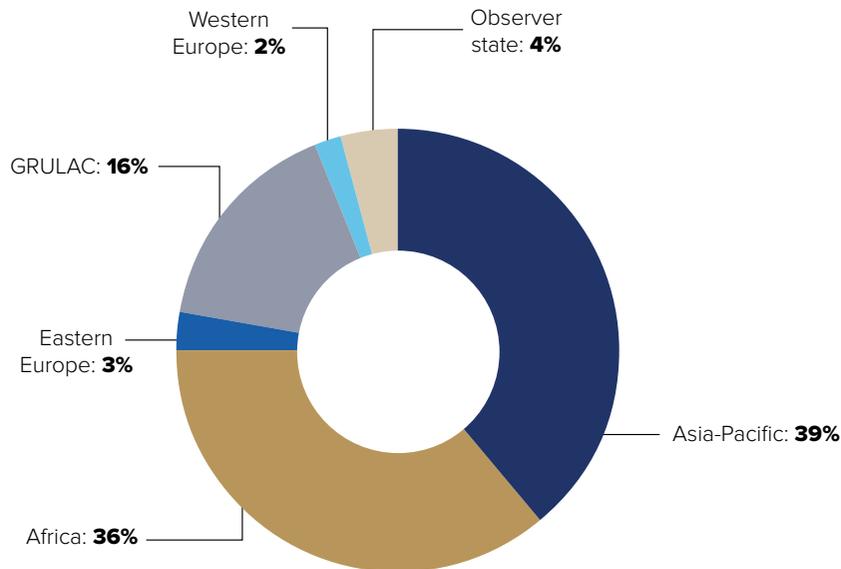
Source: ISA Secretariat, 2019

women (see **figure 7**). In terms of the matters covered, 52% of the projects funded focused on scientific matters with 48% relating to law of the sea issues.<sup>33</sup>

64. All together, 69% of the individuals who have benefitted from the EFMSR were from SIDS

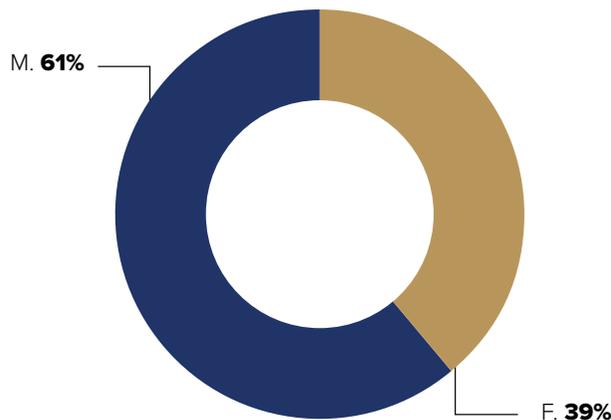
(Cook Islands, Fiji, Guyana, Jamaica, Federated States of Micronesia, Papua New Guinea, Suriname, Tonga and Trinidad and Tobago) and 31% were from LDCs (Angola, Bangladesh, Madagascar, Mauritania, Sierra Leone). No individuals from LLDCs has benefitted from the EFMSR.

**FIGURE 6** Percentage of participation from individuals who have benefitted from the EFMSR by regional group (2008-2019)



Source: ISA Secretariat, 2019

**FIGURE 7** Gender representation for individuals who have benefitted from the EFMSR (2008-2019)



Source: ISA Secretariat, 2019

<sup>33</sup> This raises a discrepancy with the point raised in the African Group submission to the ISA Assembly in 2019 (ISBA/15/A/8) that the majority of grantees received funding to attend training courses on law, not on science or technology. Reference to this is also made in <https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/documents/EN/BBNJ/2018/Stats/capblppt.pdf>

**TABLE 8** Overview of number and nationality of trainees by institutions which have benefitted from EFMSR's funding (2008-2019)

Institutions having benefitted from EFMSR	Number of countries	Number of trainees	Nationalities (37 countries in total as a whole group)	SIDS	LDCs	LLDCs	Other
InterRidge	6	14	Cameroon, China (x3), India (x7), Iran, Mauritius,, Papua New Guinea,	2	0	0	12
Rhodes Academy	30	45	Bangladesh, Bolivia, Brazil, Bulgaria, China (x5), Colombia, Cook Island, Egypt (x2), Federated States of Micronesia, Fiji (x2), Greece, Guyana, Indonesia (x4), Madagascar, Malaysia, Malta, Mauritania, Namibia (x2), Norway, Palau, Peru, Philippines (x4), Sierra Leone, Suriname (x2), Thailand, Tonga, Trinidad & Tobago, Tunisia, Vietnam (x3)	7	3	0	35
Duke University (SMS Conservation project)	1	1	Papua New Guinea	1	0	0	0
TAP-MAR I	3	3	Argentina, Nigeria, Sri Lanka	0	0	0	3
TAP-MAR II	4	4	Costa Rica, Egypt, Papua New Guinea, South Africa	2	0	0	2
INDEEP	14	40	Angola, Argentina, Brazil (x2),Chile (x2), Colombia, India, Kenya (x2), Madagascar, Mauritania, Mauritius, Namibia (x24), Russian Federation, South Africa, Trinidad & Tobago	2		0	38

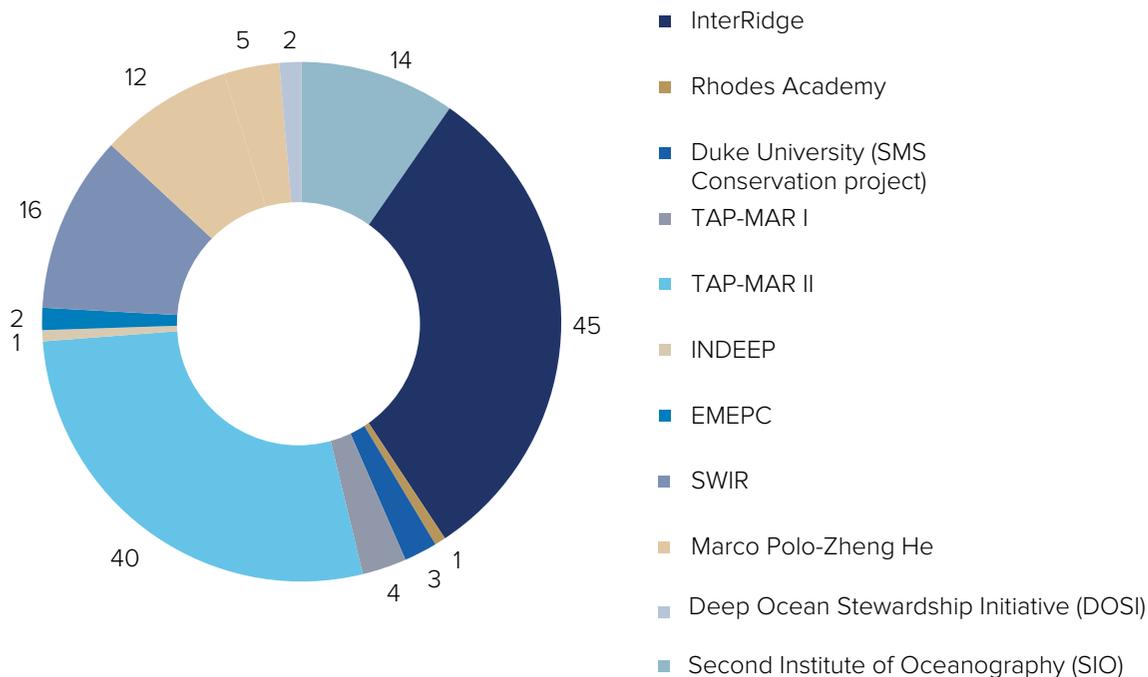
EMEPC	1	1	Thailand	0	0	0	0	1
SWIR	2	2	Nigeria, Jamaica	1	0	0	0	1
Marco Polo-Zheng He	9	16	Bangladesh (x2), Bangladesh, Cameroon, China (x5), Guyana, Nigeria, Russia (x2), Thailand, Turkey	1	0	0	0	15
Shanghai Jiao Tong University	10	12	Bolivia, Brazil, Cameroon, Ghana, India (x2), Kenya (x2), Malaysia, Pakistan, Thailand, Venezuela	0	0	0	0	12
Deep Ocean Stewardship Initiative (DOSI)	4	5	Argentina, Brazil, Mexico (x2), South Africa	0	0	0	0	5
Second Institute of Oceanography (SIO)	2	2	Mexico, Sri Lanka	0	0	0	0	2

Source: ISA Secretariat, 2019

65. In terms of the type of activities funded under the EFMSR, a significant number of them have focused on “law and ocean policy”. As such, almost half (48%)<sup>34</sup> of the individuals who have benefitted from the EFMSR have participated to an activity in connection of “law and ocean policy” (see **figure 8**). Also, most of the activities funded under the EFMSR were participation to workshops and symposiums and not practical hands-on training in science and technology. This seems to have been driven by two main factors. First, the scope and modality of the project proposals which were received by

the Advisory Panel, and which have been developed without consultation of ISA. Second, it also results from the absence of the list of priority capacity-building needs for developing States, members of ISA to guide the selection process<sup>35</sup>. In reviewing the meeting documents, it was noted that in 2017, the Advisory Panel, owing to resource constraints<sup>36</sup>, took a decision to impose a preference to recommend projects that offered hands-on experience as well as direct involvement of youth scientists in marine scientific research<sup>37</sup>.

**FIGURE 8** Number of trainees by institutions funded under the EFMSR (2008-2019)



Source: ISA Secretariat, 2019

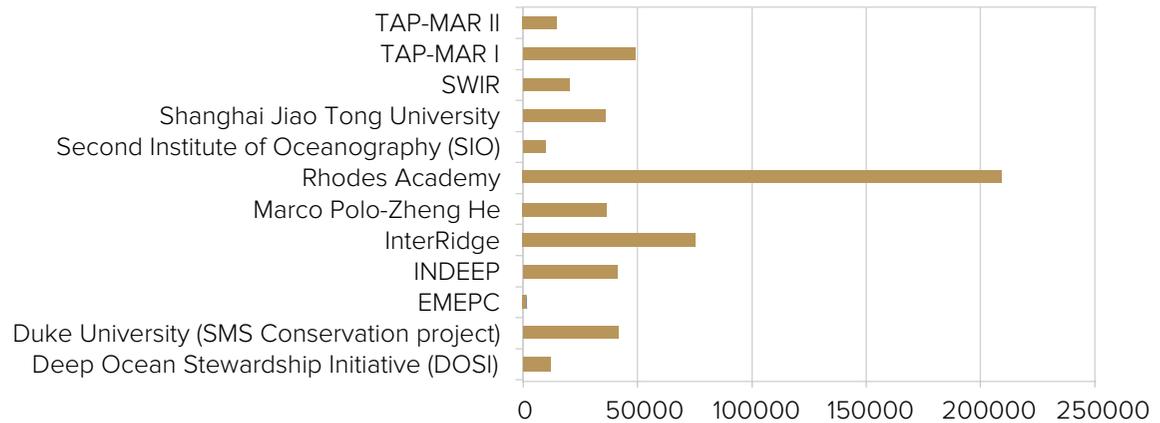
34 This includes trainees funded to attend the Rhodes Academy (45), the Marco Polo-Zheng Fe Academy (16) and the Shanghai Jiao Tong University (12).

35 This was also identified and raised by the African Group, relating to comments on the EFMSR in ISBA/25/A/8, *Training programmes for developing countries: Submitted by the African Group. item 9 of the provisional agenda of the Twenty-fifth session, 1-26 July 201*.

36 There was no contribution made in 2017, and the interest earned at the year was only \$24,415- hence the then Advisory Panel took a conservative approach and allocated only \$22,000 for projects in 2017 of the available disbursable funds.

37 Meeting minutes of the 15<sup>th</sup> meeting of the Advisory Panel, 15 March 2018.

**FIGURE 9** Total amount of funds (US\$) provided to the institutions under the EFMSR (2008-2019)



Source: ISA Secretariat, 2019

**Box 3** Case study 1: InterRidge’s postdoctoral fellowship programme

Dr. Suya Prakash, India  
 Year of Award: 2009  
 Amount: 30,000 USD

**InterRidge (IR)** is a non-profit organization concerned with promoting all aspects of ocean floor research (its study, use and protection) which can only be achieved by international cooperation. InterRidge Fellowships are designed to encourage international collaboration on any aspect of ridge-crest science by graduate students or postdoctoral researchers, fostering long-standing partnerships for their future careers. In 2008 a Ph.D. candidate from India, Dr Surya Prakash, was able to benefit from funding provided to InterRidge under the EFMSR. The aim of his study was to examine and analyze helium isotopes in water samples collected in a systematic survey of the Carlsberg Ridge in the Indian Ocean, to confirm the existence and source of a hydrothermal plume in the region. This research resulted in a number of published peer-reviewed articles on the subject matter. Pursuant to the objectives of the EFMSR, the training provided analytical techniques for estimation of dissolved helium isotopes in sea water, using a noble gas mass-spectrometer. Commentary shared by the trainee indicated that the technique and facilities were not available in India, and only in few laboratories in the world. This demonstrates the advanced level of specialty provided by these particular activities, but more broadly, from a programmatic perspective, it also illustrates the scope of the EFMSR to provide opportunities for multi-institutional scientific cooperation with well-established institutions in respective fields. Since then, Dr Prakash graduated in chemistry from Jiwaji University, Gwalior, India where he is still working.

Box 4

**Case study 2 – Collaborative research – Papua New Guinea and Duke University**

William Saleu, Papua New Guinea  
 Year of award: 2009  
 Amount granted: 41,456 USD

Funding from the EFMSR were allocated to a collaborative research between **Duke University** and a researcher from Papua New Guinea with the view of developing conservation strategies for seafloor massive sulphide ecosystems. The study focused on the genetic diversity of selected marine invertebrate taxa from the Manus Basin in the Bismarck Archipelago near Papua New Guinea, and covered the population structure and classification of species. The programme resulted in a collaborative-peer reviewed articles that helped to develop more knowledge and understanding of these ecosystems. The government of Papua New Guinea benefitted from this project in the form of informed decision-making processes to employ adequate conservation strategies. The trainee later worked in the sector as an Environment Advisor for Nautilus Minerals. Today, he runs a private consultancy firm which specializes in providing biological, environmental and technical advice to the government, industry and research groups operating in PNG and in the Pacific region.

**C. Issues for consideration and recommendations**

66. The first obvious critique of the EFMSR relates to the selection process of applicants. As of today, applicants are pre-selected by the institutions that approach ISA for funding. However, ISA is not consulted on the selection criteria applied by the institutions. Additionally, ISA is not consulted in the design of the capacity-building activity funded under the EFMSR and no systemic report is provided afterwards. It is therefore difficult to assess how such trainings have contributed to the objectives assigned to the EFMSR and to the needs of the developing States, members of ISA.

*Recommendation 16: ISA should facilitate the identification of the priority needs of developing States by developing States, that meet the objectives assigned to the EFMSR.*

*Recommendation 17: The selection criteria used by the institutions submitting proposals for funding under the EFMSR should be developed in consultation with ISA.*

*Recommendation 18: The ISA should be consulted in the design of the capacity development activities funded under the EFMSR.*

67. Another important element relates to the nature and type of training provided. Also, it is worth noting that most of the activities funded were training course. However, it has been impossible in the context of this report to identify how such trainings have contributed to the objectives assigned to the EFMSR.

*Recommendation 19: Clear indicators and targets should be developed by categories of training (law/ocean policy; environmental management; engineering, etc.) required to meet the needs identified by the developing States members of ISA.*

*Recommendation 20: Clear indicators should be developed to assess the quality of the capacity development activities funded under the EFMSR.*

*Recommendation 21: The Advisory Panel could take into account the list of priority needs identified by developing States and regularly updated by ISA, when making its recommendations.*

68. A closer attention paid to the list of institutions that have benefited from EFMSR funding shows that a handful of institutions, and

over 50% of grants disbursed<sup>38</sup> to date have been allocated mainly to three organizations being respectively, the Rhodes Academy, In-deep and InterRidge. It would therefore worth considering options that would enable research and academic institutions from different regions to benefit from funding from the EFMSR.

**Recommendation 22:** *Consideration should be given to ensure that proposals submitted for funding under the EFMSR reflects the capacity development needs identified by developing States with particular emphasis for the needs of LDCs, LLDCs and SIDS.*

**Recommendation 23:** *Consideration should be given to involve research/academic institutions from different regions in the pool of institutions submitting proposals for funding under the EFMSR.*

69. Although it is possible for the EFMSR to receive contributions from a large range of entities, so far, only member States of ISA and a contractor have done so<sup>39</sup>. Indeed, no contribution was received from international organizations, academic, scientific and technical institutions, philanthropic organizations and private persons.

**Recommendation 24:** *In line with the decision of the Assembly of ISA adopted at its 25<sup>th</sup> Session (ISBA/25/A/16), non-governmental organizations having observer status with ISA should indicate to the Secretariat how they intend to contribute to the capacity development programmes and activities implemented by ISA. Accordingly, some options should be explored between the Secretary-General and the observers to increase the resources (financial and/or in kind) available to the EFMSR.*

70. Another important limitation, which is closely related to the previous point, relates to the fact that only the interest accrued for the EFMSR can be utilized. Donors, who generally expect full utilization of project funds against clear objectives, are understandably reluctant to allocate funds to a capital fund,

especially when the capital is invested in a very conservative manner that produces very little income. Such restriction seems to act as an unnecessary constraint and an impediment to the objectives of the EFMSR. In fact, in financial terms, the value of the EFMSR has declined over the years owing to low interest rates and failure to reinvest gains.

**Recommendation 25:** *Consideration could be given to review the terms and reference of the EFMSR to allow the use of the capital of the EFMSR to support training and technical assistance activities.*

71. Findings also show that no real mechanisms and processes have been developed by ISA so far to keep track of the individuals who have benefitted from capacity-building activities funded under the EFMSR.

**Recommendation 26:** *Consideration could be given to expand the network of cooperating institutions to maximize funding opportunities to support training and technical assistance activities funded under the EFMSR.*

**Recommendation 27:** *A report should systematically be submitted to ISA by the trainee who has benefitted from a capacity development activity funded under the EFMSR and the research institution which has presented the proposal for funding.*

**Recommendation 28:** *For monitoring purposes, a reporting template should be developed by ISA and shared with trainees benefiting from a capacity development activity funded under the EFMSR and the research institution which has presented the proposal for funding.*

**Recommendation 29:** *Consideration should be given to establishing a network of former trainees who have benefitted from a capacity development activity funded under the EFMSR with a view of monitoring the impact of such training but also, to enable the Secretariat to use the expertise of former trainees when possible, to carry some consultancy work.*

38 Refer to <https://ran-s3.s3.amazonaws.com/isa.org/jm/s3fs-public/documents/EN/efund/2016/EFSum-by-project-7Mar16.pdf> and ISBA/25/A/2, *Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea*, 3 May 2019.

39 See ISBA/13/A/6, annex, para.5.

## 1.3 THE INTERNSHIP PROGRAMME

### A. General overview

#### (i) Background and context

72. The Internship Programme was initiated by ISA in 2014 with two main objectives. First, to provide a framework through which students and young government officials from diverse academic backgrounds gain exposure to the work and functions of the ISA. Second, to enable ISA to benefit from the assistance of qualified students and young government officials specialized in various skills within the scope of activities of the ISA. This programme not only provides opportunities for young students and professionals to engage in day to day work of an international organization, but also to contribute towards its activities.

73. Students applicants must, at the time of the application, be enrolled in a graduate school programme, or be enrolled in the final academic year of a first degree programme or have graduated with a university degree. Young government officials must have a university degree. All applicants to the ISA Internship Programme should normally not be more than 35 years of age.

#### (ii) Administration and policy

74. The programme does not consist of clearly defined internship positions. In fact, each office of the Secretariat defines the number and nature of internships it wishes to accommodate on a continuous basis, according to the needs identified. The selection and recruitment procedure are, consequently, on an ongoing basis. Each intern carries out his/her assignments under the supervision of a designated ISA staff member. The minimum duration of an internship is one month but this period can be extended up to a total period of four months.

75. Applicants for the internship are required to submit to the Secretariat a form providing general information on the education followed, the research undertaken and the employment

records<sup>40</sup>. Applications should be submitted at least one month before the intended period of internship. Upon receipt, the application is then forwarded to the Training Coordinator for evaluation and grading of the application.

76. Selection of interns is conducted by an ad hoc committee for that purpose, which is composed of three professional staff members of ISA. Once selected, student interns must commence the internship either prior to graduation or within one year of graduation from an academic programme. It is important to point out that qualified applicants who are not selected should normally be placed on a roster and may be notified as and when other internship opportunities in ISA are available.

77. In April 2019, the ISA undertook a reform of its general recruitment process, and joined the United Nations talent management portal, INSPIRA. Since then, all applications are advertised and submitted through INSPIRA.

#### (iii) Finance and resources

78. Interns are considered gratis personnel and are responsible for obtaining the necessary visa and arranging their travel to and from Kingston as well as accommodation. All costs and arrangements for travels, visas, accommodations and living expenses are the responsibility of the interns. In practice, two main categories of interns have been identified. Some have benefited from financial support provided either by their university or a research institution or from technical assistance by an intergovernmental organization. This was for example the case of interns sponsored by the Pacific Community (SPC) in the context of the implementation of the SPC-EU Deep Seabed Minerals project. Other interns have self-funded their participation.

79. Although no data was available to measure the effect of such constraint on the overall number of applications received, it seems possible to assume, based on feedback received from the Secretariat, that a significant number of interns, in particular those from LDCs, LLDCs and SIDS, have had to renounce

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40 As set out in Annex I of ISBA/ST/AI/2014/01, *ISA Internship Programme*, Secretary-General's Bulletin, 12 February 2014.

to participate in the Internship Programme because of their inability to access funding<sup>41</sup>.

80. In line with the efforts engaged by the Secretariat of ISA since 2017 to maximize opportunities for funding of its capacity development activities, the National Oceanography Centre of Southampton, (UK) made a donation of US \$10,000 to ISA in February 2019. This sum was intended to support the participation of up to two interns from developing countries in the work of ISA between 2019 and 2020. The internship positions will be in the Office of Environmental Management and Mineral Resources (OEMMR) of the ISA Secretariat where one intern will

support the work on ISA's database, "DeepData" and the second intern will support the review of environmental/biological data/information associated with the work currently undertaken for the development of regional environmental management plans. The positions are expected to be filled in the second quarter of 2020.

### B. Key observations

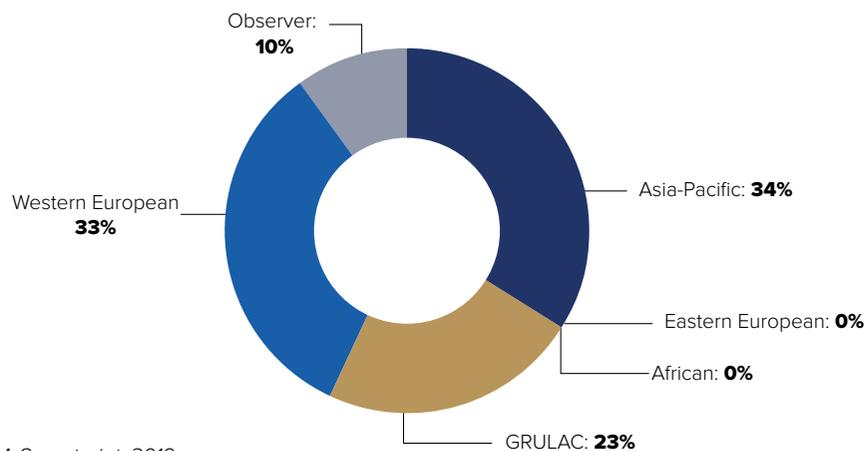
81. As of December 2019, a total of 30 university graduates or government officials<sup>42</sup> have participated in the Internship Programme. The vast majority of these interns were women (78%).

**TABLE 9** Participants to the Internship Programme by regional groups (2014-2019)

Regional Group	Number
Asia- Pacific	10
African	0
Eastern European	0
GRULAC	7
Western European	10
Observer	3
<b>TOTAL</b>	<b>30</b>

Source: ISA Secretariat, 2019

**FIGURE 10** Geographic representation of ISA interns by regional groups (2014-2019)



Source: ISA Secretariat, 2019

<sup>41</sup> It is worth noting that in some developing countries, in particular SIDS, LDCs and LLDCs, the remit of personal earnings does not provide the ability for 'self-funding'.

<sup>42</sup> from Australia, Belgium, Brazil, Chile, China, Colombia, the Cook Islands, Ecuador, Fiji, France, Germany, Italy, Jamaica, Japan, Norway, Papua New Guinea, Tonga, the United Kingdom and the United States.

82. A point of interest is to note that 32 % of the interns were from SIDS (Cook Islands, Jamaica, Papua New Guinea and Tonga). Also, 33% of interns were from Western Europe and 23% from the Latin American and Caribbean region. Three interns were from observer States. There have been no interns from Africa or from Eastern Europe nor from LDCs or LLDCs. It is assumed that this has to do with funding availability. More details would be required to draw critical observations and identify options to address assumed barriers pervading the participation of LDCs and LLDCs.

83. Most of the interns have been with the Office of the Legal Affairs (OLA) and OEMMR of the ISA Secretariat (see **table 10**).

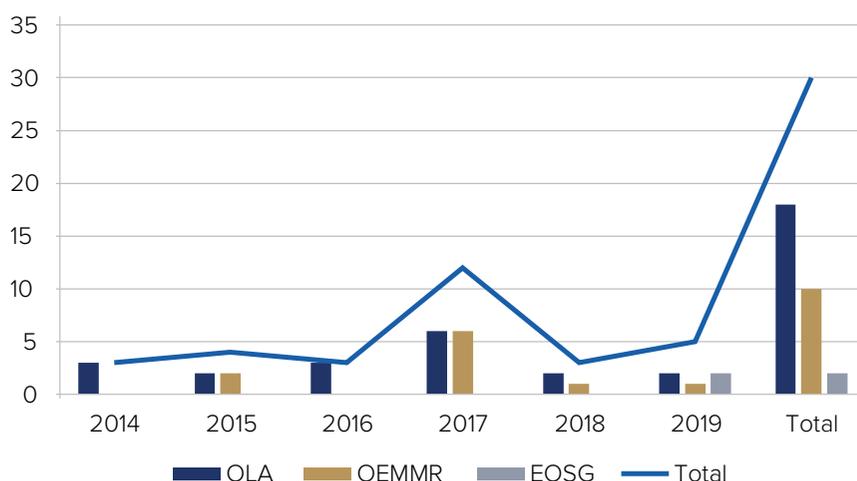
84. However, it has been impossible, in the context of the preparation of this report, to assess the impact of the Internship Programme against the objectives assigned to it. Indeed, not enough information has been found to assess how the internship have contributed to the development of the interns' career or reinforced the capacities of their governments. In fact, it has been impossible to determine how many of them are working for their governments today. The contribution of the Internship Programme on the work of ISA is also difficult to assess as no clear terms of reference or work plans have been developed before the onboarding of interns. Furthermore, it was not possible to find any report from former interns providing an assessment of their experience within the

**TABLE 10** Breakdown of trainees per office and year (2014-2019)

Year	OLA	OEMMR	EOSG	Total
2014	3	0	0	3
2015	2	2	0	4
2016	3	0	0	3
2017	6	6	0	12
2018	2	1	0	3
2019	2	1	2	5
Total	18	10	2	30

Source: ISA Secretariat, 2019

**FIGURE 10** Geographic representation of ISA interns by regional groups (2014-2019)



Source: ISA Secretariat, 2019

Secretariat. Similarly, it was impossible to find any reports or assessments made by any supervisors.

85. The survey designed by the Secretariat in the context of this review to receive feedback from former interns are not providing any additional elements. In fact, only three responded.

### C. Issues for consideration and recommendations

86. The low level of awareness of the Internship Programme amongst academic institutions and government agencies could be addressed by increasing the value attached to it, in particular by increasing its effectiveness towards the objectives assigned to it. However, it has been observed that as a general practice, no clear terms of reference has been developed by the different offices involved to guide the participation of interns in the day-to-day work of the Secretariat.

**Recommendation 30:** *ISA should facilitate the identification of the priority needs of the developing States by the developing States in order to ensure that the objectives assigned to the Internship Programme can meet these needs.*

**Recommendation 31:** *A recruitment planning of interns highlighting the specific tasks to be carried out and the required skills should be prepared by the Secretariat on an annual basis and regularly adjusted depending on the needs of the relevant offices, in light of their respective work plans.*

87. From an organizational perspective, feedback received from ISA staff members show that the ISA Secretariat has faced some difficulties in reaching out to institutions, universities or government agencies to draw awareness about its Internship Programme. This has resulted in a low number of applications from suitably qualified candidates which in some cases, has necessitated re-advertising.

**Recommendation 32:** *Using focal points of ISA members, establish a network of academic institutions and diplomatic academies that could be used by the Secretariat to inform on internship opportunities and alternative platforms.*

**Recommendation 33:** *Consideration could also be given to develop, in cooperation with other institutions of the Nippon Foundation Fellowship Programme, a specific module/programme.*

88. Another critical issue pertaining to the Internship Programme relates to the fact that all costs associated with the participation of interns have to be covered by the participants themselves. Such issue is a matter of concern as it represents an impediment to the participation of candidates from developing States and constitute a reputational risk considering that the issue of unpaid internship in intergovernmental organizations has been raised by international media and international association of interns (UN, 2018)<sup>43</sup>.

**Recommendation 34:** *Consideration could be given by ISA to explore options to secure financial contributions from ISA members, observers and contractors to ensure that all interns from developing States, and in particular those from LDCs, LLDCs and SIDS, are provided with the minimum lifespans (flight tickets, meals, local transportation, accommodation, etc.).*

**Recommendation 35:** *In line with the decision of the Assembly of ISA adopted at its 25<sup>th</sup> Session (ISBA/25/A/16), non-governmental organizations having observer status with ISA should indicate to the Secretariat how they intend to contribute to the capacity development programmes and activities implemented by ISA. Accordingly, some options should be explored between the Secretary-General and the observers to increase the support (financial and/or in kind) available to interns.*

89. The lack of monitoring and tracking of former interns presents an impediment for ISA to assess the impact of the Internship Programme

<sup>43</sup> UN, *Review of Internship Programmes in the United Nations system*, Joint Inspection Unit, JIU/REP/2018/1, 2018, 62 p.

against its objectives. This is an important issue that requires a dedicated answer. For instance, without the ability to monitor the number of trainees who are still working for their

countries in the relevant sectors, it is difficult to meaningfully assess the impact of ISA capacity-building programmes.

**Recommendation 36:** *Clear indicators and targets should be developed to assess the impact of the Internship Programme against the objectives assigned to it.*

**Recommendation 37:** *Clear indicators should be developed to assess the quality of the internship and the supervision provided.*

**Recommendation 38:** *A report should systematically be submitted to ISA by the intern and the institution or government agency which has supported the application.*

**Recommendation 39:** *For monitoring purposes, a reporting template should be developed by ISA and shared with interns and the government agency/academic institution which has supported the application.*

**Recommendation 40:** *Consideration should be given to establishing a network of former interns with a view of monitoring the impact of such training but also, to enable the Secretariat to use the expertise of former interns when possible, to carry some consultancy work.*

## PART II: Review of other initiatives implemented by ISA that contribute to develop capacities of its members

### 2.1 ISA'S VOLUNTARY COMMITMENTS TO SUPPORT THE IMPLEMENTATION OF AGENDA 2030

90. Since 2017, emphasis has been placed on shifting the way ISA works towards a more programmatic approach<sup>44</sup> particularly with the view of meeting the needs of developing States, members of ISA, to ensure that they could all fully participate in the work of the Organization and the implementation of the regime for the Area. This new approach coincided with the registration at the UN Ocean Conference held in 2017, in New York, of seven Voluntary Commitments to support the implementation of the goals and targets of the Agenda 2030 and in particular, the Sustainable Development Goal 14. Four of these commitments present one or more capacity development components.

#### A. The Abyssal Initiative for Blue Growth (Abyssal Initiative) project

##### (i) Background and context

91. The ISA and the Department of Economic and Social Affairs of the United Nations Secretariat (UNDESA) registered, at the 2017 UN Ocean Conference, a joint Voluntary Commitment entitled “The Abyssal Initiative for Blue Growth” ([#OceanAction16538](#)). In so doing they pledged to “*strengthen the knowledge and capacity of*

*small island developing States, in particular Pacific SIDS, to operate legal and regulatory frameworks for deep sea mining in line with the legal regime set out by Part XI of UNCLOS and the 2030 Agenda*”.

92. This Voluntary Commitment has led to the development of the Abyssal Initiative project which is implemented by ISA in partnership with UNDESA and SPC. Building on the success of the SPC-EU Deep Seabed Mineral project<sup>45</sup>, the objectives of the Abyssal Initiative project are twofold. First, ensuring that the P-SIDS Sponsoring States are in a position to comply with their national and international obligations as seabed activities progress. Second, that the necessary governance structures and mechanisms required are in place in order to achieve these objectives in an effective manner.

##### (ii) Implementation

93. A critical aspect of this project, which echoes the requirement contained in the ISA Strategic Plan for 2019-2023 (Strategic Direction 5.1), was to ensure that the capacity-building needs of the participating countries (Cook Islands, Kiribati, Nauru and Tonga) were clearly identified (priority No. 1) and that such essential step be done by the beneficiary countries themselves (priority No. 2). It is in such a perspective that a regional workshop was organized by ISA and UNDESA in the Kingdom of Tonga in February 2019. Representatives of nine different Pacific

<sup>44</sup> For more than twenty years, a growing number of multilateral development organizations and international agencies have been using programmatic approaches to more effectively support developing States in targeted development areas, including capacity-building (GEF, *Adding value and promoting higher impact through the GEF's programmatic approach*, 64 p.). This approach is based on the recognition that project-based activities provide recipient countries with very little leverage to influence sector-wide transformations, while a programmatic approach is more likely to deliver synergistic results that benefit all. It also enables targeted States to achieve their own development objectives via the assistance provided while ensuring that they keep ownership of the outcomes.

<sup>45</sup> Implemented by SPC, in collaboration with the EU, between 2011 and 2016, the SPC-EU Deep Sea Minerals Project was designed to help Pacific Island countries to improve the governance and management of their deep-sea minerals resources through improved legal frameworks and increased technical capacity. One of the key result areas of the SPC-EU DSM project aimed at assisting the 15 participating countries to build their capacities in marine minerals, policy development, fiscal and taxation regimes and environmental monitoring. More information is available here: <https://dsm.gsd.spc.int/>

island countries as well as representatives from international (ISA, UNDESA, Commonwealth Secretariat) and regional organizations (SPC, Pacific Islands Forum Secretariat, Pacific Island Development Forum), civil society and non-governmental organizations (PIANGO, Council of Churches), the private sector (Deep Green, Tonga offshore Mining Limited) and representatives of the Legal and Technical Commission of ISA were in attendance. The workshop resulted in the identification of critical capacity-building needs that should be addressed for P-SIDS sponsoring activities in the Area to be able to fulfil their responsibilities under UNCLOS. These capacity-building needs have been regrouped in four categories:

- a) operationalization of the legal and policy frameworks relating to the role and responsibilities of P-SIDS Sponsoring States;
- b) increasing capacity of P-SIDS Sponsoring States to participate in marine scientific research programmes in the Area and access the results of the research;
- c) environmental management and monitoring of exploration activities undertaken in the Area by P-SIDS Sponsoring States; and
- d) benefit-sharing.

94. Based on this preliminary assessment, two capacity-building workshops have been organized in August 2019. The first one was held in Yaren, Nauru, from 7 to 8 August 2019 and the second one, in Tarawa, Kiribati, from 12 to 13 August 2019. Both were specifically designed to address the needs identified by P-SIDS sponsoring States to meet their obligations under international law and, hence, to increase the participation in marine scientific research programmes and exploration activities in the Area with a view of ensuring that they comply with international law obligations and achieve their Blue Economy objectives. Accordingly, the workshop held in Nauru was entirely dedicated to the questions pertaining to the obligations and responsibilities of sponsoring States while the one held in Kiribati was focused on the question pertaining to marine scientific research and access to the results of such research.

95. Two more workshops will be held in 2020. One is scheduled to take place in Cook Islands with the view of addressing the needs identified

to develop capacities of P-SIDS' experts in the field of environmental management and monitoring. Another one will be held in Tonga to build the capacities of P-SIDS experts on all the issues associated with benefit sharing.

96. In addition to these workshops, a toolkit will specifically be developed to guide developing States which are, or desire, sponsoring activities in the Area. The main objective will be, through a tailored publication reflecting the specific constraints of such States, to provide essential information and guidance on the international law obligations they have to abide by.

### **(iii) Finances and resources**

97. The Abyssal Initiative project has received a grant of US\$190,438 from UN-DESA. Additional extra-budgetary contributions, in the form of in-kind contributions, were received and have proven to be essential. This was notably the case of the contributions received from SPC, ComSec, Singapore, GSR, Marawa, Nori and TOML which so far have taken the form of the coverage of the costs induced by the participation of their own representatives and experts.

### **(iv) Key observations**

98. Although it would be necessary to wait the completion of the Abyssal Initiative project to be in a position to assess its impacts, particularly as it relates to its capacity-building components, some preliminary elements could be raised.

99. First, the approach followed and through which targeted countries have been able to identify their priority needs, has proven to be essential in the design of the trainings provided by the project. Second, the fact that the project has followed a two-tier approach based on a regional consultation workshop open to all Pacific island countries (tier 1) and targeted trainings centred on the needs identified by P-SIDS sponsoring States, has been very successful (tier 2).

100. This has enabled States with common interests and different levels of engagement in the deep-seabed minerals industry, to exchange on the challenges faced and the benefits gained. It has also clearly contributed to

strengthen cooperation and dialogue between P-SIDS sponsoring States. Additionally, the exchanges established with SIDS also engaged in sponsorship of activities in the Area from other regions, such as Singapore, have added a significant value to the discussions and capacity-building modules designed.

## **B. The Africa Deep Seabed Resources (ADSR) project**

### **(i) Background and context**

101. At the 2017 UN Ocean Conference, ISA in cooperation with the African Minerals Development Centre (AMDC) of the UN Economic Commission for Africa (since transferred to the African Union), registered a joint Voluntary Commitment to foster international and regional cooperation in support of the sustainable development of Africa's Blue Economy ([#OceanAction16374](#)). The ADSR project then received the support of the Norwegian Agency for Development Cooperation (NORAD) which pledged \$500,000.

### **(ii) Implementation**

102. The ADSR project is implemented by ISA in partnership with the African Union and NORAD. All activities are undertaken in close cooperation with State Parties to UNCLOS, relevant international and regional organizations, the scientific community and academia.

103. A key component of the ADSR project lies in the organization of five workshops, one in each African region. The ADSR project started with the organization of a workshop in October 2018, in Abidjan, Côte d'Ivoire, which brought together representatives of more than 15 francophone African countries (Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea, Mali, Niger, Senegal and Togo) as well as international and regional organizations, the scientific community and academia.

104. The official launching of the ADSR project occurred at a high-level side event organized by

ISA in partnership with AMDC on the side-lines of the Sustainable Blue Economy Conference, held in Nairobi in November 2018. A few months later, in May 2019, a second workshop was organized in partnership with the Government of South Africa and the African Union in Pretoria. In both workshops, particular emphasis has been placed to facilitate the discussion between government representatives and experts with a view to identifying the key capacity-building priorities of the participating countries. The Pretoria workshop provided the opportunity for 40 government representatives from Angola, Botswana, Eswatini, Lesotho, Liberia, Malawi, South Africa and Zambia to attend and participate. Representatives of ISA, including members of the LTC, also attended, as well as those of the African Union (AU), the Office of Legal Affairs of the Division for Ocean Affairs and the Law of the Sea of the United Nations Secretariat (DOALOS) and Norway. Also, several experts from Africa were also in attendance. This second workshop was also the opportunity to invite a former trainee of ISA under the contractor training programme provided by the Korea Institute of Ocean Science and Technology (KIOST), now taxonomist in South Africa, Mrs Safiyya Sedick, who provided participants with an overview of the benefits gained from her experience.

105. Another essential key deliverable of the ADSR project relates to the deployment of ten national experts, including five women, from African States within the Secretariat of ISA in the course of 2020. The main objective of such secondments is two-fold. First, build on existing capacity-building initiatives to provide national experts with technical skills on deep-seabed related matters. Second, enable the ISA Secretariat to benefit from the contribution of such experts with a view of advancing specific tasks identified in partnership with the LTC. In relation to the potential areas of work for selected candidates, the Geology and Technical Group of the LTC (GTG-LTC) identified:

- a) the need to support OEMMR:
  - a. in undertaking the assessment of geological data owned by ISA;
  - b. in identifying gaps in data needed for ISA to monitor the development of the resources of the Area.

- b) the need to work with the ISA Secretariat and the data management group of the LTC to organize the geological data on the ISA database; and
- c) foster cooperation with local university (geoscience) with a view to increase awareness on the work of ISA.

106. The Secretary-General also identified the need to open this secondment opportunity to candidates with experience in Ocean/Blue Economy Policy formulation and implementation.

107. Of more than 50 applications received, the following experts have been selected:

Name	Field of expertise	Country of nationality	Period of deployment withing ISA
Mrs Judith A. OWUSU	Geology	Ghana	19 January - 21 March 2020
Mrs Tini GUITOBA	Ocean Policy	Togo	19 January - 21 March 2020
Mrs Lucy NJUE	Geology	Kenya	16 March - 15 May 2020*
Mr Michel SJIMGOU DJOMENI	Ocean Policy	Cameroon	16 March - 15 May 2020*
Mr Beenesh Anand MOTAH	Ocean Policy	Mauritius	16 March - 15 May 2020*
Mr Gerald MWILA	Geology	Zambia	16 March -15 May 2020*
Mr Samuel POPOOLA	Geology	Nigeria	4 August - 2 October 2020*
Mr Abner NGHOONGOLOKA	Geology	Namibia	4 August - 2 October 2020*
Mrs Coumba GAYE	Ocean Policy	Senegal	7 September - 6 November 2020*
Mr Godwin DIMIKE	Ocean Policy	Nigeria	7 September – 6 November 2020*

\* postponed due to COVID-19

### (iii) Finances and resources

108. The ADSR project has received a grant of US\$500,000 from NORAD and US\$25,000 from the African Development Bank. Additional extra-budgetary contributions, in the form of in-kind contributions, were also received. This was notably the case of the contributions received from the United Kingdom of Great Britain and Northern Ireland, GSR and the Mandela University which have taken the form of the coverage of the costs induced by the participation of their own representatives and experts.

### (iv) Key observations

109. Participants indicated that such workshops so far have provided a unique forum for all

participants to discuss and exchange around the fundamental questions and issues associated with the implementation of the legal regime set out by UNCLOS for the conduct of exploration and exploitation on continental shelves and in the Area. According to the participants, this was also perceived as a key opportunity for government representatives to identify key capacity-building needs at both national and regional levels, and potential recommendations to increase participation of African States in activities undertaken in the Area with a view to ensure that such activities could contribute effectively to support Africa’s Blue Economy. Four more workshops are scheduled to take place in 2020 (Mauritius, Morocco, Ethiopia and Senegal).

## C. Enhancing the role of women in marine scientific research

### (i) Background and context

110. Science, technology and innovation are fundamental to address the global challenges such as poverty eradication, economic and social development and the protection of the environment. They are also critical for the achievement of the Goals and targets of the 2030 Agenda for Sustainable Development and to ensure that developing countries fully benefit from the potentialities of the Blue Economy. The vital role of women in contributing to such global objectives has been well established and repeatedly reaffirmed by Governments and key United Nations conferences and meetings. The linkages with this and the empowerment of women have also been successively reaffirmed through a series of normative and policy commitments, including in the Convention on the elimination of all forms of discrimination against women (1979), the UNGA Resolution A/RES/68/220 (*Science, technology and innovation for development – 2013*) and A/RES/70/212 (*International Day of Women and Girls in Science – 2015*), the Beijing Declaration and Platform for Action adopted at the Fourth World Conference on Women (1995), the Tunis Agenda for the Information Society (2005) adopted at the World Summit on the Information Society, the Dakar Framework for Action (2000) adopted at the World Education Forum, the agreed conclusions of the Commission on the Status of Women at its 55<sup>th</sup> session (2011) including on access and participation of women and girls in education, training and science and technology, and more recently, the 2030 Agenda for Sustainable Development (2015) adopted through the UNGA Resolution A/RES/70/1.

111. However, numerous initiatives have been adopted and implemented at global, regional and national levels to reach and ensure the opening up of new opportunities for women in non-traditional as well as emerging sectors such as science, technology, engineering, mathematics and the Blue Economy, the participation of women in vulnerable countries

(LDCs, LLDCs and SIDS) in these sectors remains low and therefore more efforts are needed to enhance their participation. The limited participation may be attributed to limited resources, lack of awareness, as well as limited access to the sea, in the case of the LLDCs.

112. This is particularly true in the field of deep-sea marine scientific research. However today, women who wish to engage in marine scientific research face real and substantial challenges that are specific to their gender. The ISA, cognizant of the real benefits to development progress by fully including women in marine science, is firmly committed to increasing their participation through capacity-building opportunities, and in so doing to effectively contribute to the enhancement of the scientific and technological capabilities of developing States, and in particular those of LDCs, LLDCs and SIDS.

113. Cognizant of these challenges, ISA is committed to contribute to enhance the role of women or meeting the goals of the 2030 Agenda for Sustainable Development, and how gender equality and empowerment of all women and girls strengthens capacity in technical areas of knowledge, such as deep-sea scientific research. It is in this context that ISA officially announced at the 2017 UN Ocean Conference, its Voluntary Commitment to increase their active participation through targeted capacity-building initiatives ([#OceanAction15467](#)).

### (i) Implementation

114. This Voluntary Commitment has been officially launched in partnership with UN-OHRLS at a high-level side event organized at the 62<sup>nd</sup> Commission on the status of women (2018) and entitled “*Enhancing the role of women in marine deep sea scientific research to achieve the goals and targets of the 2030 Agenda for sustainable development by the vulnerable countries*”.

115. Further initiatives are now under consideration in partnership with the Intergovernmental Oceanographic Commission of UNESCO and the World Maritime University.

**(ii) Finances and resources**

116. As of today, no specific resources have been identified to support the implementation of this Voluntary Commitment.

**D. Secretary-General's Award for excellence in deep-sea research****(i) Background and context**

117. As ISA is mandated by UNCLOS to promote and encourage the conduct of marine scientific research in the Area and coordinate and disseminate the results of such research, the Secretary-General decided in 2017, to launch the Secretary-General's Award for Excellence in Deep-Sea Research. This award is intended to recognize and encourage the achievements of young researchers from developing countries who have made outstanding contributions to the advancement of scientific knowledge of the deep-sea environment or to the development of environmentally sustainable regulatory frameworks.

**(ii) Implementation and resources**

118. The Secretary-General's Award for Excellence in Deep-Sea Research was launched

in November 2017, following the publication of guidelines for the award<sup>46</sup>. In February 2019, the Government of Monaco informed the Secretary-General of its decision to support the Award with a grant of \$15,000 that will be used to award a prize to the 2018 and 2019 awardees, cover the cost of the tickets for the attendance of the 2019 awardee, as well as the publication fees of her/his research in a relevant scientific (open-access) journal.

119. Nominations and applications must be supported by two sponsors and should include a letter from the nominator summarizing the research and outlining the national or international significance of the work submitted, the curriculum vitae of the candidate and any publication derived from the research undertaken.

120. The selection of the awardee is by the Secretary-General of ISA on the basis of the recommendations made by an Advisory Committee of internationally recognized experts in the field of deep-sea science, social sciences and humanities with experience in the law of the sea, international law or management of marine resources. The current members of the Advisory Committee, have been appointed by the Secretary-General of ISA for a period of 3 years (see **table 11**).

**TABLE 11****Members of the Advisory Committee for the ISA SG's Award for Excellence in Deep-Sea Research**

<b>David Billett</b>	Director, Deep Seas Environmental Solutions Ltd
<b>Biliana Cicin-Sain</b>	Professor/Director/President, Global Ocean Forum
<b>Lawrence Folajimi Awosika</b>	Vice Chairman of the Commission on the Limits of the Continental Shelf (CLCS)
<b>Annick de Marffy-Mantuano</b>	President of the Scientific Board of the Economic Law of the Sea Institute (INDEMER, Monaco)
<b>Chunhui Tao</b>	Researcher/Deputy Director of China Deep-sea Exploration Tech and Geoscience R&D Centre, Second Institute of Oceanography

Source: ISA Secretariat, 2019

<sup>46</sup> See ISBA/ST/SGB/2017/6, *Secretary-General's Award for Excellence in Deep Sea Research*, Secretary-General's Bulletin, 7 August 2017.

121. Two editions have already been held respectively in 2018 and 2019. In 2018, the prize has been awarded to Dr Diva Amon, a deep-sea biologist from Trinidad and Tobago. In 2019, the prize has been awarded to Dr Mauricio Shimabukuro from Brazil, for his extensive work on the ecology of the South Atlantic and deep-sea exploration experience.

## 2.2 SENSITIZATION SEMINARS

122. Starting in 2007, ISA organized a series of national and regional sensitization seminars on the work it carries out in compliance with the mandate assigned to it by UNCLOS. To date, 13 such seminars have been organized in Manado, Indonesia (2007), Rio de Janeiro, Brazil (2008), Abuja, Nigeria (2009), Madrid, Spain (2010), Kingston, Jamaica (2011), Mexico City, Mexico (2013), United Nations Headquarters, New York (2010, 2012, 2014), Pretoria, South Africa (2015), Santiago, Chile (2015), Kampala, Uganda (2017) and in Naypyidaw, Myanmar (2019). These are shown in **table 12**.

123. Typically, such seminars include presentations by experts from ISA (staff members, members of the Legal and Technical Commission and Finance Committee) on the type of minerals to be found in the Area, resource evaluation, the protection and preservation of the marine environment from activities in the Area, and the process and status of the legal regimes established for recovery of seabed minerals, as well as presentations on relevant regional issues with respect to the law of the sea. Where possible, seminars also include presentations from DOALOS, ITLOS and the Commission on the Limits of the Continental Shelf, as well as relevant regional organizations, academic and research institutions. One critical, but often overlooked function of sensitization seminars organized on a regional basis is to raise awareness of UNCLOS and to encourage universal participation through increased ratifications.

124. In general, the objectives of these seminars are similar. First, drawing awareness on the role and responsibilities of ISA. Second, to build the capacity of selected participants by providing a platform where individuals with common

interest and concerns meet with seabed related experts and exchange information. In some cases, concrete outcomes have been produced, e.g. in the case of the seminars in Brazil (2008) and Abuja (2010) which led to increased collaboration on understanding the mineral resources of the South Atlantic Ocean, including a proposal for a single geographic information system to identify areas of occurrence of mineral resources with economic value for the Equatorial and South Atlantic Ocean. Uganda (2017) led to the development of the ADSR Project (see para. 75 to 83 above). During the seminar held in Myanmar (2019) proposals were made for enhanced cooperation through ASEAN and BIMSTEC.

125. One of the primary problems associated with sensitization seminars is that there has never been core funding for these seminars, which have been organized therefore on an ad hoc basis and using ad hoc extra-budgetary donations or budget savings. They have not therefore been organized in a programmatic way, but in response to interest from a host country, which is expected to provide a venue and local facilities. In many cases, interest has been expressed in organising such a seminar, but it has not been possible to organize owing to budgetary constraints. For the same reasons, as well as lack of a programmatic approach within the ISA, it has not generally been possible to publish outcomes of sensitization seminars in a coordinated manner, which means that much information of value may be lost.

126. It has been difficult, therefore, to attribute value in an objective way to the sensitization seminars, although it is clear that these are very much appreciated by host countries and in some cases have led directly to concrete and country-driven outcomes. Nevertheless, a major concern is that it is neither practical or feasible for the ISA Secretariat to continue to support sensitization seminars on an ad hoc basis without specific budgetary provision and in a more systematic and outcomes-oriented way. To continue with the status quo is not consistent with a more programmatic approach to capacity development in line with the Strategic Plan of the ISA.

**TABLE 12** Sensitization seminars organized by ISA from 2007 to 2019

Date	Location	Region	Title
2007	Manado (Indonesia)	Asia	Seminar on minerals and other resources found in the Area
2008	Rio de Janeiro (Brazil)	GRULAC	Sensitization Seminar on the 1982 United Nations Convention on the Law of the Sea, the work of the Authority and marine mineral resources of the south and Equatorial Atlantic Ocean
2009	Abuja (Nigeria)	Africa	Exploration and exploitation of deep seabed mineral resources in The Area: Challenges for Africa and opportunities for collaborative research in the South Atlantic Ocean
2010	Madrid (Spain)	WEOG	Exploration and exploitation of deep seabed mineral resources in The Area
2010	UN, New York	All	Sensitization Seminar on the work of the International Seabed Authority and current issues relating to deep seabed mining
2011	Kingston (Jamaica)	GRULAC	Prospecting, exploration and exploitation of deep seabed mineral resources in The Area: Challenges for the Caribbean and opportunities for collaboration
2012	UN, New York	All	Sensitization Seminar on the work of the International Seabed Authority and current issues relating to deep seabed mining
2013	Mexico City (Mexico)	GRULAC	Sensitization Seminar on the work of the International Seabed Authority and current issues relating to deep seabed mining.
2014	UN, New York	All	Sensitization Seminar on the work of the International Seabed Authority and current issues relating to deep seabed mining
2015	Tshwane (South Africa)	Africa	Sensitization Seminar, 17-19 March 2015
2015	Santiago (Chile)	GRULAC	Sensitization Seminar, 5-6 November 2015
2017	Kampala (Uganda)	Africa	Workshop: Marine Mineral Resources of Africa
2019	Nyapydaw (Myanmar)	Asia	ASEAN & BIMSTEC workshop on deep seabed resources and the Blue Economy

Source: ISA Secretariat, 2019

**Recommendation 41:** Consideration could be given to progress further the programmatic approach for the sensitization seminars which should be organized on a regional basis, to include both States Parties and non-Parties, wherever possible in partnership with relevant regional organizations.

**Recommendation 42:** Consideration could be given to ensure that the ISA core budget includes provision for at least one seminar during each biennium, with additional funds mobilized through partnerships and extrabudgetary contributions.

**Recommendation 43:** Emphasis could be placed to ensure that sensitization seminars utilize available regional expertise including national and regional institutions as well as former ISA trainees and interns.

**Recommendation 44:** *In designing a programmatic approach to sensitization seminars, efforts could be made to identify priority regions and groups, e.g. by working in collaboration with competent international and regional organizations such as UN-OHRLLS.*

**Recommendation 45:** *Special consideration could be given to ensure that ISA raise the awareness of LLDCs to the benefits of UNCLOS, as the largest group of non-parties to the Convention.*

### 2.3 ESTABLISHMENT OF NATIONAL AND REGIONAL MARINE SCIENTIFIC AND TECHNOLOGICAL CENTRES

127. Pursuant to UNCLOS, States, directly or through competent international organizations and ISA, have the duty to promote and facilitate the establishment and strengthening of national marine scientific and technological research centres in order to stimulate and advance the conduct of marine scientific research by developing States and to enhance their national capabilities to utilize and preserve their marine resources for their economic benefit<sup>47</sup>. Such national centres should provide for advanced training facilities and necessary equipment, skills and know-how as well as technical experts to the States which may need and request such assistance<sup>48</sup>.

128. The UNCLOS also envisages the establishment of regional marine scientific and technological centres, particularly in developing States. This provision is attached to the duty for States, in coordination with the competent international organizations, ISA and national marine scientific and technological research institutions, to promote such initiatives. The main objective is to “*stimulate and advance the conduct of marine scientific research by developing States and foster the transfer of marine technology*”<sup>49</sup>. The functions of such regional centres shall include, inter alia: (a) training and educational programmes at all levels on various aspects of marine scientific and technological research, particularly marine biology, including conservation

and management of living resources, oceanography, hydrography, engineering, geological exploration of the seabed, mining and desalination technologies; (b) management studies; (c) study programmes related to the protection and preservation of the marine environment and the prevention, reduction and control of pollution; (d) organization of regional conferences, seminars and symposia; (e) acquisition and processing of marine scientific and technological data and information; (f) prompt dissemination of results of marine scientific and technological research in readily available publications; (g) publicizing national policies with regard to the transfer of marine technology and systematic comparative study of those policies; (h) compilation and systematization of information on the marketing of technology and on contracts and other arrangements concerning patents; and (i) technical cooperation with other States of the region<sup>50</sup>.

129. In October 2019, ISA and the Ministry of Natural Resources (State Oceanic Administration) of China signed a memorandum of understanding for the establishment of a joint training and research centre (JTRC) with a view to enhancing capacity in deep-sea scientific research in developing States, and promoting international cooperation on issues relating to the deep-sea<sup>51</sup>.

130. The main functions of the joint training and research centre will include the following:

- (a) Provision of training programmes in marine science and technology, as well as in techniques for marine scientific

47 See UNCLOS, art.275.

48 See UNCLOS, art.275 (2).

49 See UNCLOS, art.276 (f).

50 See UNCLOS, art.277.

51 See ISBA/25/A/4, *Draft memorandum of understanding between the International Seabed Authority and the Ministry of Natural Resources (State Oceanic Administration) of China concerning the establishment of a joint training and research centre.*

research, that are designed to facilitate the full participation of developing States in activities in the Area, including, where appropriate, training programmes to be provided by contractors under exploration or exploitation contracts with ISA;

- (b) Conduct of collaborative research programmes related to the latest developments and trends concerning activities in the Area;
- (c) Organization of conferences, seminars, workshops and symposiums relating to marine scientific research in the Area and activities in the Area;
- (d) Prompt dissemination of the results of marine scientific and technological research in easily accessible publications;
- (e) Technical cooperation with other States, especially developing countries.

131. The JTRC is anticipated to commence its activities in 2020 and may be considered as a potential model in this regard. The need for regional centres has also been identified in national and regional sensitization seminars convened by ISA.

**Recommendation 46\*:** *Consideration should be given by ISA to form strategic partnerships with existing national and regional institutions to create platforms to strengthen international cooperation for capacity-building/development and transfer of marine science technology instead of establishing new regional centres in each region.*

**Recommendation 47\*:** *Consideration should be given by ISA to explore opportunities to ensure sustainable funding for the functioning of regional centres including by exploring necessary arrangements for co-funding with respective regional institutions.*

**Recommendation 48\*:** *Consideration should be given to establish an online training platform that would enable the sharing of information and the outcomes of marine scientific research cruises or programmes.*

**Recommendation 49\*:** *Consideration should be given to establish an ISA audio-visual library through which it will be possible to sensitize on the role and function of ISA as well as critical issues under discussion by the Council and the Assembly.*

\* Recommendations formulated on the basis of the discussions held at the ISA international workshop on "Capacity development, Resources and Needs Assessment", 10-12 February 2020, Kingston.

## PART III: Overall assessment of the capacity-building programmes and initiatives implemented by ISA: where to from here?

132. Capacity development must be understood as a long-term, complex change process that is strongly dependent on a specific context. In the case of ISA, this context is clearly outlined in Part XI of UNCLOS and the 1994 Agreement relating to the Implementation of Part XI of UNCLOS (1994 Agreement) as well as the rules, regulations and procedures adopted by ISA<sup>52</sup>. Particularly relevant are the provisions in article 143 that require States Parties to promote international cooperation in MSR in the Area by ensuring that programmes are developed through ISA for the benefit of ‘developing States and technologically less developed States’ with a view to strengthening their research capabilities, training their personnel and the personnel of the ISA in the techniques and applications of research and fostering the employment of qualified personnel in research in the Area. Furthermore, article 144, as implemented through the 1994 Agreement, requires ISA to take measures to acquire technology and scientific knowledge relating to activities in the Area and promote and encourage the transfer to developing States of such technology and scientific knowledge so that all States Parties benefit therefrom. Under the 1994 Agreement, this is to be achieved particularly by developing training, technical assistance and scientific cooperation programmes in marine science and technology and the protection and preservation of the marine environment.

### 3.1 SETTING OBJECTIVES AND MEASURING IMPACTS

133. Against this background and context, for ISA to adjust its programmes and activities to meet effectively the needs of its members, it is necessary first to reach a consensus on the objectives and desired impacts of capacity development activities. These should also be aligned with indicators set out in SDG14. Without this, it will be impossible to identify the necessary indicators, outcomes and targets against which any progress would be monitored. Capacity development measures should always be approached at three levels, namely: organizational, national and individual and with consideration for their interdependences. This is reflected in the approach taken by the ISA Secretariat since 2017 and which is now embedded in the ISA Strategic Plan for 2019–2023<sup>53</sup>.

#### (i) What impact?

134. The impact of capacity development activities depends on the benefits generated by their delivery. In the context of the implementation of Part XI of UNCLOS, this impact has not been clearly identified yet. Nevertheless, it seems possible to assume that the benefits would be institutional, economical, social and environmental.

52 See UNCLOS Art 143 (2-3); Art 144; Art 148; Annex III, Art 15, 1994 Agreement, Annex, Sec 5.

53 See particularly Strategic Directions 5 and 6.

TABLE 13

**Overview of potential benefits associated to the delivery of capacity development activities by ISA**

Benefits	Benefits categories			
	Institutional	Economical	Social	Environmental
Increased participation of developing States in the work of ISA and in activities undertaken in the Area	YES	YES	YES	YES
Enhanced awareness and understanding of opportunities and risks associated with the development of the deep-seabed mining industry in support of national Blue Economy initiatives	YES	YES	YES	YES
Increased skills and additional competences amongst developing States and in particular SIDS, LDCs and LLDCs	YES	YES	YES	YES
Improved management practice of seabed activities	YES			YES
Increased stock of knowledge for humankind	YES	YES	YES	YES
Improved social wellbeing of individuals who have benefitted from capacity development activities implemented by ISA through increased economic and employment opportunities	YES	YES	YES	
Development of contacts and networks	YES	YES	YES	
Increased protection and conservation of marine biodiversity	YES	YES	YES	YES

Source: ISA Secretariat, 2019

135. In terms of impacts, all benefits identified should be assessed against the objectives identified for all relevant levels: organizational, national and individual. At the organizational level, such objectives are clearly contained in the Strategic Plan for ISA for 2019-2023 and can be assessed through the key performance indicators adopted by the Assembly at its 25<sup>th</sup> session<sup>54</sup>. It is envisaged that at the national level, objectives could be aligned with those listed in national development plans. Therefore, national participation is key to ensure successful identification and assessment of priority needs and implementation of capacity development activities. The individual level relates to

transformational changes induced by capacity-building/development activities that empower individuals and enable them to reach their own aspirations.

### (ii) Capacity assessment methodology

136. Developing a capacity assessment methodology would also be a critical phase to provide a systematic and objective approach to assess the capacity assets and needs of client States. In all cases, special consideration will need to be given to the needs of specific groups of States identified in UNCLOS or associated General Assembly resolutions, including LDCs,

<sup>54</sup> See ISBA/25/A/15, Annex I.

LLDCs and SIDS. Particular consideration should also be given to the needs identified by those developing States sponsoring activities in the Area or which intend in the future to sponsor activities in the Area.

**Recommendation 50\*:** *Consideration should be given by ISA to form strategic partnerships with existing national and regional institutions to create platforms to strengthen international cooperation for capacity-building/development and transfer of marine science technology instead of establishing new regional centres in each region.*

**Recommendation 51\*:** *Consideration should be given by ISA to explore opportunities to ensure sustainable funding for the functioning of regional centres including by exploring necessary arrangements for co-funding with respective regional institutions.*

**Recommendation 52\*:** *Consideration should be given to establish online training platform that would enable the sharing of information and the outcomes of marine scientific research cruises or programmes.*

**Recommendation 53\*:** *Consideration should be given to establish an ISA audio-visual library through which it will be possible to sensitize on the role and function of ISA as well as critical issues under discussion by the Council and the Assembly.*

\* Recommendations formulated on the basis of the discussions held at the ISA international workshop on "Capacity development, Resources and Needs Assessment", 10-12 February 2020, Kingston.

## 3.2 ADVANCING ISA'S PROGRAMMATIC APPROACH TO CAPACITY DEVELOPMENT

### (i) National ownership and leadership

137. National participation is key to ensure successful identification and assessment of priority needs and implementation of capacity development activities. It is also essential that clear links with national development priorities be established.

### (ii) Fostering strategic partnerships to enhance the impact of capacity development programmes and initiatives

138. In addition to requiring that all capacity building programmes and their delivery are meaningful, tangible, efficient, effective and targeted at the needs of developing States, as identified by developing States, the Strategic Plan also emphasizes the need for ISA to take a more programmatic approach towards the obligations enshrined in UNCLOS and the 1994 Agreement. One way of doing this is to foster strategic partnerships to enhance the impact of capacity development programmes and initiatives, as implied by the UNCLOS articles 143 and 273 requirements for States Parties to cooperate actively with competent international organizations and ISA to encourage and facilitate the transfer to developing States, their nationals and the Enterprise of skills and marine technology with regard to activities in the Area<sup>55</sup>.

139. One way to achieve these objectives could be the establishment of regional centres, which is already foreseen in UNCLOS, articles 276 and 277. Under article 276, one of the key objectives of such centres is to stimulate and advance the conduct of marine scientific research by developing States and foster the transfer of marine technology (see para.101 to 105 above).

140. Further discussion of a programmatic approach to implementation of article 276 of UNCLOS could be useful. In particular, it may be considered how regional centres could be established in collaboration with existing academic, scientific or technical organizations having already the expertise and facilities for providing training in the fields of marine scientific research, exploration of offshore mineral resources and environmental management, as well as legal and policy assistance. It may also be considered how regional centres could best be located so as to have proximity or accessibility to developing States, including

<sup>55</sup> Article 273 of UNCLOS reads: "States shall cooperate actively with competent international organizations and the Authority to encourage and facilitate the transfer to developing States, their nationals and the Enterprise of skills and marine technology with regard to activities in the Area".

LDCs and LLDCs as well as SIDs. An important impact of regional centres would be to increase ISA's active presence and capacity-building amongst regional stakeholders in a way that is accessible, cost effective and iterative for its member States.

**(iii) Strengthening the capacity of ISA to deliver against its strategic directions**

141. Discussion of ISA's future approach to capacity development is not complete without consideration of the resources available to the Secretariat to implement such programmes. Mobilizing resources for implementing capacity development responses is essential to ensure their sustainability. As noted throughout this report, there is no specific budget allocation to capacity development and such efforts as have been made to date have been the result of mobilizing resources through extra-budgetary contributions (for example, the ADSR project, the Abyssal Initiative project). While further consideration could be given to establish a dedicated programme supported by a specific budget (see recommendations in respect of sensitization seminars), attention should also be given to developing an ongoing resource mobilization strategy.

142. A further issue highlighted in the report is that, to date, no training has been provided to personnel of the ISA and the Enterprise. As originally conceived, these provisions in UNCLOS were designed to ensure that personnel from developing countries would be available to meet the future staffing needs for the Enterprise. In light of the provisions of the 1994 Agreement, which effectively puts the Enterprise 'on hold' until such time as deep sea mining operations begin, this requirement may be considered less urgent. Nevertheless, ISA will be required to exercise wide-ranging regulatory functions, including an inspection and monitoring regime, for which there will be a need for a trained cadre of expertise, including from developing countries.

143. As of today, only two staff members in the Secretariat are involved in the conceptualization, management and delivery of the capacity development activities of ISA. One of these is the training coordinator, who is responsible

for the delivery of the contractor training programme. This position was introduced following the recommendations in the 2013 report on the contractor training programme and the subsequent recommendations of the LTC. The other position is not fully devoted to capacity development and is focused on conceptualization rather than management and delivery of programmes.

144. In light of this, consideration could be given to establishing a dedicated unit within the Secretariat that will mainstream all capacity development activities into the activities of the Secretariat as envisaged under Strategic Direction 5.1. In order to ensure ongoing coordination and monitoring of the different objectives and targets of each activity, it could be suggested that this would require a programme coordinator, capacity development programmes, as well as a monitoring and evaluation officer.

<b>Programme coordinator</b>
<ul style="list-style-type: none"> <li>• Resource mobilization</li> <li>• Endowment Fund MSR</li> <li>• Internship Programme</li> <li>• Project development</li> <li>• Outreach</li> <li>• Regional centres, including JTRC</li> </ul>
<b>Monitoring and Evaluation Officer</b>
<ul style="list-style-type: none"> <li>• Assessment methodology</li> <li>• Alignment with SDG14</li> <li>• Reporting against KPIs</li> </ul>

**(iv) Iterative knowledge and dissemination**

145. Knowledge and capacity development are intertwined. In the context of the implementation of Part XI of UNCLOS and the 1994 Agreement, the knowledge accumulated needs to be shared for the benefit of mankind as a whole, including through ISA. Also, pursuant to article 144 of UNCLOS and Section 5 of the Annex of the 1994 Agreement, States Parties shall promote international technical and scientific cooperation with regard to activities in the Area either between the parties concerned or by developing training, technical assistance and scientific cooperation programmes in marine science and technology and the protection and

preservation of the marine environment. These provisions are yet to be fully and effectively implemented.

146. Ensuring dissemination of research results and analysis is also a critical component of capacity building/development and as such stands high in the list of responsibilities of ISA. However, this requires that the necessary and adequate resources be allocated to ISA with a view to ensuring that the priority needs identified by developing States members of ISA could be effectively addressed.

#### **(v) Leveraging sustainable resources**

147. Mobilizing resources for implementing capacity development responses is essential to ensure their sustainability. As of today, no specific budget within ISA is dedicated to developing the capacity of developing States, members of ISA. While further consideration could be given to establish a dedicated programme supported by a specific budget, attention should be given to develop a resource mobilization strategy.

**Recommendation 54\*:** *Consideration should be given by each member of ISA to identify a national focal point for dissemination at the national level, of information on the capacity development opportunities to be implemented by ISA. Information on such national focal points should be updated regularly. The ISA Secretariat is invited to develop Terms of Reference on the role and responsibilities of national focal points that will be submitted for consideration by the Assembly.*

**Recommendation 55\*:** *Consideration should be given by each member of ISA to identify potential partners at national level, with which ISA could develop, in close cooperation, specific training and capacity development initiatives.*

**Recommendation 56\*:** *Consideration should be given to ensure that, through a programmatic approach, sensitization seminars are undertaken by ISA in all regions to raise awareness of national and regional representatives on the role and responsibilities of ISA and how to increase engagement in the activities undertaken in the Area.*

**Recommendation 57\*:** *Consideration should be given by ISA to strengthen the network for the dissemination of information on training opportunities.*

**Recommendation 58\*:** *Consideration should be given to develop and share a framework for partnership with ISA.*

**Recommendation 59\*:** *Consideration should be given to take into account existing initiatives and networks of other UN agencies, including the UN Technology Bank, to disseminate information on capacity development programmes and initiatives to be implemented by ISA.*

**Recommendation 60\*:** *Consideration should be given by ISA to develop a strong programmatic approach for capacity development.*

**Recommendation 61\*:** *Consideration should be given by ISA to strengthen the staff of the Secretariat to deliver against this programmatic approach and mobilize resources.*

**Recommendation 62\*:** *Consideration should be given by ISA to foster strategic partnerships.*

\* Recommendations formulated on the basis of the discussions held at the ISA international workshop on "Capacity development, Resources and Needs Assessment", 10-12 February 2020, Kingston.

## ANNEX 1

### Members of the Advisory Committee established to support the organization by ISA of a workshop on capacity development, resources and needs assessment

	Name	Role
1	Mr Solomon Korbieh	Minister Counsellor, Permanent Mission of Ghana to the United Nations
2	H.E Mr. Carlos den Hartog	Ambassador, Permanent Representative of Brazil to the ISA
3	H.E Tevita Suka Mangisi	Ambassador of the Kingdom of Tonga to Japan
4	Mr Andreas Kravik	International Law Adviser of the Law of the Sea, Ministry of Foreign Affairs, Norway
5	Mr Tidiani Couma	Secrétaire des Relations Extérieures, Monaco
6	Mr Miko Maekawa	Sasakawa-Foundation
7	Mrs Michelle Walker	Deputy Permanent Representative of Jamaica to the International Seabed Authority, Chair of the Legal and Technical Commission
8	Mr Se-Jong Ju	Republic of Korea, member of the Legal and Technical Commission
9	H.E Fekita Utoikamanu	High Representative for the Least Developed Countries, Landlocked Developing Countries & Small Developing States- UN-OHRLLS
10	Mr Ronan Long	Director, WMU-Sasakawa Global Ocean Institute and Nippon Foundation Professorial Chair
11	Mr Jérôme Dymont	InterRidge
12	Mr Corey McLachlan	Head of Stakeholder Engagement DeepGreen
13	Mr Liu Feng	Secretary-General, COMRA
14	Mrs Biliiana Cicin-Sain	Professor, Global Ocean Forum
15	Mr Michael W. Lodge	Secretary-General, ISA
16	Mrs Marie Bourrel-McKinnon	Senior Policy Officer-Special Assistant to the Secretary-General, ISA
17	Mr Chapi Mwango	Chief, Contract Management Unit, ISA
18	Mrs Charlotte Salpin	Senior Legal Officer, ISA
19	Ms Kayon Wray	Interim Senior Training Assistant, ISA
20	Mr Tearinaki Tanielu	Consultant, ISA
21	Mr Ryan Barbar	Staff Assistant, ISA

## ANNEX 2

### Summary of the outcomes of the workshop organized by ISA on “Capacity development, resources and needs assessment” that was held in Kingston, Jamaica, from 10 to 12 February 2020

#### 1. Background and rationale

1. The entry into force of the United Nations Convention on the Law of the Sea (UNCLOS) twenty-five years ago, has created the enabling conditions for the operationalization of the regime of the international seabed area (the Area). Through it, the international community decided that at least one part of the global commons, the mineral resources of the deep-seabed and subsoil thereof, should be managed for the benefit of all humanity. It is to achieve this objective that ISA has been established and entrusted with specific responsibilities. Its core mandate is to regulate and manage access and use of deep-seabed mineral resources whilst ensuring the protection of the marine environment. It is also mandated to ensure the equitable sharing of benefits derived from the conduct of activities in the Area, to all humanity including through the development of specific programmes aimed at strengthening the capacities of developing States and technology less developed States.

2. The ISA Strategic Plan for 2019-2022<sup>1</sup> explicitly recognizes the duty of ISA to ensure that a variety of capacity-building mechanisms are implemented for developing States. Such mechanisms should not only aim at facilitating the transfer of technology to developing States<sup>2</sup> but also ensuring the expansion of opportunities for participation in activities in the Area<sup>3</sup>. In light of this, member States of ISA have identified that the challenge for the organization is to identify mechanisms, including capacity-building programmes, to ensure fully integrated participation by developing States in activities in the Area at all levels. Strategic Direction 5 (Build

capacity for developing States) and Strategic Direction 6 (Ensure integrated participation by developing States) aim at concretizing this objective.

3. As indicated in the High-Level Action Plan relating to the implementation of the ISA Strategic Plan for 2019-2023 adopted by the Assembly in August 2019<sup>4</sup>, specific actions need to be undertaken by the ISA Secretariat by 2020. One of particular importance is to “assist developing States, in particular geographically disadvantaged States, small island developing States, least developed countries and landlocked developing countries, in identifying their needs” (high-level action 5.1.1).

4. It is to deliver against this important item that the ISA Secretariat organized the workshop on “**Capacity development, resources and needs assessment**” that was held in Kingston, Jamaica, from 10 to 12 February 2020.

5. The workshop was facilitated by H.E Mathu Joyini, Deputy Director General of Training, Research and Development (DIRCO) of the Republic of South Africa and was attended by official representatives from Members of ISA (Algeria, Argentina, Brazil, Chile, China, Cook Islands, Costa Rica, Ecuador, Egypt, European Union, Ghana, Guatemala, Indonesia, Jamaica, Korea, Mexico, Myanmar, Nauru, Nigeria, Sierra Leone, South Africa, Tonga, Trinidad & Tobago and Uganda) and experts from international and regional organizations (African Union, Commonwealth Secretariat, IOC-UNESCO, National Deep Sea Centre (JTRC), National Oceanography Centre UK, UNDESA, UNEP, UNESCO, UNICEF, UN-OHRLS, Technology

1 See ISBA/24/A/10.

2 See UNCLOS, art.144, 273 and 274

3 See UNCLOS, art.148.

4 See ISBA/25/A/15.

Bank for LDCs, World Maritime University) as well as observers of ISA (Ethiopia, Durham University's Centre for Borders Research, InterRidge, the Pew Charitable Trust), contractors (COMRA, DORD, BGR, GSR, JOGMEC, NORI, TOML, UKSRL) and national experts (Ghana, India, Kiribati and Togo).

6. The workshop on **“Capacity development, resources and needs assessment”** provided an opportunity for participants to exchange and discuss on a series of issues associated with the implementation by ISA, of different capacity-building programmes and initiatives. The workshop also contributed to:

- 1) Clarifying the nature and objectives of capacity-building and technical assistance provided by ISA in the context of Part XI of UNCLOS;
- 2) Discussing the key findings of the draft assessment undertaken by the Secretariat on:
  - (a) the current capacity-building initiatives & programmes implemented by ISA in order to understand how to improve their effectiveness and impact;
  - (b) the resources available to ISA to address such needs.
- 3) Identifying the core elements for the design and development of a dedicated strategy for capacity-building and capacity development activities that will measurably contribute to increase capacities of ISA member States in specific area(s) identified.

## 2. Summary of the discussions

7. Each session of the workshop aimed at examining the key findings of the draft assessment report prepared by ISA Secretariat with a view of assessing the impact and effectiveness of the capacity-building programmes and initiatives implemented by ISA. In each session, particular attention was also given to discuss the challenges identified as well as exploring potential solutions.

### **Session I: Key findings of the assessment of the capacity-building programmes and initiatives implemented by ISA**

8. This first session was intended to provide participants with a common understanding

of the objectives of the workshop as well as providing an overview of the key findings of the draft assessment report prepared by the Secretariat.

9. H.E Mathu Joyini, Director of the Diplomatic Training and Support (DIRCO) of the Republic of South Africa and also workshop facilitator, highlighted the objectives and expected outcomes of the workshop. This presentation was then followed by a presentation delivered by Dr. Marie Bourrel-McKinnon who provided an overview of the legal and strategic framework within which ISA operates when developing and implementing capacity-building programmes and initiatives.

10. Participants agreed on the importance for ISA to maintain its efforts in organizing sensitization seminars and disseminating information on the results of capacity development activities implemented by ISA.

### **Session II: Key findings of the assessment of the Contractor Training Programme**

11. This second session was chaired by Mr Corey McLachlan, Head of Stakeholder Engagement at NORI. Mr Chapi Mwango, Chief of the Contract Management Unit at ISA, acted as rapporteur. The theme of this session was “Key findings of the assessment of the contractor training programme”.

12. The session started with a presentation delivered by Mr Chapi Mwango focusing on the “key findings of the draft assessment report prepared by the Secretariat on the Contractor Training Programme” which was followed by a presentation from Mr John Parianos, Manager Exploration and Polymetallic Nodules at TOML providing some “Perspectives on capacity-building”. Mr Francois Charlet, Exploration Manager and Marine Geologist at GSR delivered a third presentation on the “Assessment of the GSR training programme” which was followed by a presentation delivered by Mr Jun Jiang, Deputy-Permanent Representative of China to ISA on behalf of COMRA, on the “Assessment of the COMRA training programmes”. Two additional presentations were also delivered by two former trainees of the training programme of JOGMEC. The first one was delivered by

Ms Judith Owusu, Geochemist at the Ghana National Petroleum Corporation and the second one was delivered by Mr Hank Hedge, Geologist at the Ministry of Transport and Mining of Jamaica.

13. Participants considered the recommendations listed in the draft assessment report prepared by the Secretariat with the following suggestions:

- In recommendation 4, a suggestion was made that the LTC “should” (and not only “could”) “take into account the list of priority needs identified by developing States and regularly updated by ISA, when making its recommendations”.
- That consideration be given to expanding the Contractor Training Programme in the exploitation phase.

### **Session III: Key findings of the assessment Endowment Fund for Marine Scientific Research**

14. Session III was chaired by Mr Alan Evans, Head of the International and Strategic Partnerships Office of the National Oceanography Centre with the support of Mr Gulardi Nurbintoro, Foreign Service Officer from the Directorate for Legal Affairs and Territorial Treaties at the Ministry of Foreign Affairs of Indonesia. The theme considered under this session was “Key findings of the assessment of the Endowment Fund for Marine Scientific Research in the Area”.

15. Two presentations were delivered. One, by Mr Tearinaki Tanielu, consultant with ISA on the “Key findings of the draft assessment report” and another one, by Mr Jérôme Dymont, Senior Researcher at the Institut de Physique du Globe de Paris and CNRS on “Capacity building/development and academic research: an experience through InterRidge and beyond”.

16. This session led to detailed discussion on (i) the need for the EFMSR to take into consideration the needs of developing States members of ISA; (ii) attracting potential donors including by exploring the possibility for contractors who have not been able to select a trainee to be allowed to reallocate the unused fund for training to the EFMSR; (iii) the difficulty in attracting interest from potential donors due to the limitations imposed on the use of the

EFMSR and ; (iv) the issue of reallocation of the unspent interest of the EFMSR to support activities or requests independent from the objectives assigned to the EFMSR.

17. Participants expressed some concerns that the current restrictions imposed for the disbursement of EFMSR (i.e. only interest on the capital can be used), prevented ISA to fulfil its obligations under UNCLOS while, at the same time, discourage potential donors from contributing to the EFMSR. In line with this, participants agreed that the development of a more programmatic approach by ISA could effectively increase the impact of the EFMSR by ensuring that the use of the available funding could meet the priority needs identified by developing States members of ISA.

18. Participants considered the recommendations listed in the draft assessment report prepared by the Secretariat.

### **Session IV: Key findings of the assessment of the Internship Programme**

19. This session was chaired by Ms Alex Herman, Seabed Minerals Commissioner of the Cook Islands. Mr Antonio Cruz-Diaz, Alternate Representative of Mexico to ISA acted as rapporteur. The theme of this session was “Key findings of the assessment of the Internship Programme”.

20. A presentation was delivered by Ms Kayon Wray, on the “Key findings of the draft assessment report prepared by the ISA Secretariat” which was followed by a presentation from Mrs Ximena Hinrichs-Oyarce, Registrar at the International Tribunal for the Law of the Sea (ITLOS) on the different capacity-building schemes implemented by ITLOS. Ms Jessica Howley, provided an overview of the “Capacity-building and fellowship programmes” implemented by the Division for Ocean Affairs and the Law of the Sea (DOALOS) of the Office of Legal Affairs of the United Nations. The last presentation was delivered by Mr David Garzón Pico, Surveyor at the Oceanographic Institute of the Ecuadorian Navy and focused on benefits gained from his internship within the ISA Secretariat in 2017.

21. Former interns noted that such experience has proven to be very valuable. Several elements of the presentations were discussed by the participants including in relation to the importance for ISA to explore options to: (i) increase outreach and dissemination of internship opportunities through social media, (ii) secure financial contributions to ensure that all interns from developing States are provided with stipends and, (iii) to develop, with other institutions, including those used by the Nippon Foundation Fellowship Programme, a specific internship module.

22. Participants considered the recommendations listed in the draft assessment report prepared by the Secretariat.

### **Session V: Towards a more programmatic approach to enable ISA to deliver capacity development activities**

23. Session V was chaired by H.E Carlos den Hartog, Permanent Representative of Brazil to ISA who was supported by Mr Tearinaki Tanielu, Consultant of ISA.

24. The first presentation was delivered by the Secretary-General of ISA, Mr Michael W. Lodge, and focused on “ISA’s programmatic approach: context and suggested way forward”. Mr Sai Navoti, Chief of SIDS Unit at UNDESA presented the objectives and preliminary results of the Abyssal Initiative project implemented in partnership by UNDESA and ISA. A third presentation was provided by Mr Paul Msoma, Acting director of the Africa Mineral Development Centre and Dr Marie Bourrel-McKinnon, Senior Policy Officer at ISA on the Africa Deep Seabed Resources (ADSR) project implemented jointly by ISA, the African Union and NORAD.

25. Several elements were further discussed during the break-out group particularly in relation to the need for ISA to: (i) develop strong programmatic approach for capacity development, (ii) strengthen the staff of the Secretariat to deliver against this programmatic approach and mobilize resources; and (iii) foster strategic partnerships.

### **Session VI: The potential contribution of regional centres to the achievement of SDG14**

26. This section was chaired by Mr Nyan Lin Aung, Counsellor from the Permanent Mission of Myanmar to the United Nations in New York. Mr Ulrich Schwarz-Schampera, Head of Section Ore Deposit Geology and Analytical Fingerprint with BGR acted as rapporteur.

27. After the Chair had provided an overview of articles 275 and 276 of UNCLOS which highlight the importance of the establishment of marine scientific centres and transfer of technology, particularly to developing countries, Mrs Jihyun Lee, Director of the Office of Environment Management and Mineral Resources of the ISA Secretariat, delivered a presentation on the “Context, development and future prospects of the ISA-China Joint Training and Research Centre”.

28. A video presentation about JTRC was also made by Mr Jun Jiang, Deputy Permanent Representative of China to ISA.

29. This session was followed by an interactive break-out group discussion that was facilitated by Mr Nyan Lin. Participants made the following recommendations:

- Consideration should be given by ISA to form strategic partnerships with existing national and regional institutions to create platforms to strengthen international cooperation for capacity building/development and transfer of marine science technology instead of establishing new regional centres in each region.
- Consideration should be given by ISA to explore opportunities to ensure sustainable funding for the functioning of regional centres including by exploring necessary arrangements for co-funding with respective regional institutions.
- Consideration should be given to establish an online training platform that would enable the sharing of information and the outcomes of marine scientific research cruises or programmes.
- Consideration should be given to establish

an ISA audio-visual library through which it will be possible to sensitize on the role and functions of ISA as well as critical issues under discussion by the Council and the Assembly.

### **Session VII: Assessment of capacity needs and priorities**

30. Session VII took place in two segments. One, from 4:00pm to 5:00pm on Tuesday 11 February 2020 and the other, on Wednesday 12 February from 9:00am to 9:45am. It considered the theme “Assessment of capacity needs and priorities”. The session was chaired by Ambassador Duncan Laki, Legal Adviser at the Permanent Mission of Uganda to the United Nations; Mr. Sai S. Navoti, Chief, SIDS Unit, UN-DESA was the Rapporteur.

31. The first presentation was made by H.E Ms Fekita ‘Utoikamanu, High Representative for the Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS) who spoke on the “Importance of capacity-building for LDCs, LLDCs, and SIDS in the context of the 2030 Agenda and other high-level frameworks”. The second presentation, a case study entitled: “Overview of the Technology Bank for LDCs” was presented by Mr Joshua Setipa, Director of the United Nations Technology Bank (UN-TB). Dr Marie Bourrel-McKinnon, Senior Policy Officer & Special Assistant to the Secretary-General of ISA, presented the third presentation in Session VII. She spoke on the theme: “Identification of capacity development needs and priorities by developing States – What methodology?”. The fourth and final presentation of the first segment of this session was a case study entitled: “Overview of the potential future capacity needs in deep sea research related to the protection of marine environment”. This comprehensive brief was delivered by Dr Luciano Genio, Environmental Analyst, ISA.

32. The second segment of this session started with a presentation by Professor Ronan Long, Director at the WMU-Sasakawa Global Ocean Institute of the World Maritime University and focused on the activities undertaken by this organization to “Enhance the role of women in marine scientific research”. This was followed and complemented by a presentation delivered

by Dr Marie Bourrel-McKinnon, Senior Policy Officer at ISA, which aimed at detailing further the engagement of ISA in “Enhancing the participation of women in deep sea research”.

33. Participants acknowledged the work undertaken by the Secretariat to increase the participation of women in marine scientific research and gender parity; and suggested to strengthen measures to increase the participation of women in capacity building opportunities, including by implementing specific outreach activities.

34. Following discussions held during the interactive break-out group session chaired by H.E Laki which specifically focused on the “Special needs of SIDS, LDCs and LLDCs”, participants made several suggestions including the possibility for the Secretariat to develop a matrix or a data bank containing (i) information supplied by member States and other stakeholders stipulating or listing the capacity priorities and needs of SIDS, LDCs and LLDCs; and (ii) information regarding existing institutions, frameworks, and all mechanisms currently available to be accessed by developing countries including the UN Technology Bank for LDCs.

### **Session VIII: Building strategic partnerships in support of ISA’s capacity development programmes and initiatives**

35. This session was chaired by H.E Gina Guillen-Grillo, Permanent Representative of Costa Rica to ISA. Mr Paul Msoma, Interim Director of the Africa Minerals Development Centre of the Africa Union acted as rapporteur.

36. Dr Cesar Toro, of IOC-UNESCO, provided participants with a presentation highlighting the importance of “Building synergies and opportunities through the UN Decade of Ocean Science to enhance the capacity development programme and initiatives of ISA”. This was followed by a presentation from the Secretary-General of ISA, Mr. Michael W. Lodge, on the “Future of capacity development and technology transfer to meet the needs of developing States”.

37. This session was followed by an interactive break-out group discussion that was facilitated by the Chair, H.E Gina Guillen-Grillo, Permanent

Representative of Costa Rica to ISA. Participants made the following recommendations:

- Consideration should be given by each Member of ISA to identify a national focal point for dissemination at the national level, of information on the capacity development opportunities to be implemented by ISA. Information on such national focal points should be updated regularly. The ISA Secretariat is invited to develop Terms of Reference on the role and responsibilities of national focal points that will be submitted for consideration by the Assembly.
- Consideration should be given by each Member of ISA to identify potential partners at national level, with which ISA could develop, in close cooperation, specific training and capacity development initiatives.
- Consideration should be given to ensure that, through a programmatic approach, sensitization seminars are undertaken by ISA in all regions to raise awareness of national and regional representatives on the role and responsibilities of ISA and how to increase engagement in the activities undertaken in the Area.

- Consideration should be given by ISA to strengthen the network for the dissemination of information on training opportunities.
- Consideration should be given to develop and share a framework for partnership with ISA.
- Consideration should be given to take into account existing initiatives and networks of other UN agencies, including the UN Technology Bank, to disseminate information on capacity development programmes and initiatives to be implemented by ISA.

### **3. Outcomes and way forward**

38. The discussions held during the nine sessions of the workshop provided the ISA Secretariat with the relevant elements to start developing a dedicated strategy designed with the view to enable ISA, in cooperation with all relevant stakeholders, to develop and implement the necessary programmes and initiatives to meet the specific needs and priorities of developing States Members of ISA, taking into particular consideration the need for SIDS, LDCs and LLDCs.

## ANNEX 3

### Comments by the Legal and Technical Commission training subgroup

The LTC training subgroup welcomes the opportunity to comment on this important and timely report on capacity building. Specifically, we have focused on the section dealing with contractor training, paragraphs 15 to 52.

#### Number of training opportunities

Training places have increased during the time of the current LTC training subgroup as new contracts have been signed, existing contractors have extended their contracts taking on additional training and other ongoing contractors fulfilling their existing contracts. This has resulted in a marked increase in the workload of the training subgroup and the need to carry out candidate selections intersessionally. The number of training opportunities significantly increased as contractors undertook their obligations (paragraphs 26 to 29).

#### Selection of candidates

Paragraphs 29 to 34 review the selection of the candidates for training. Selection by the current LTC training subgroup broadly follows the criteria mentioned in the report, academic achievement, experience and fit to the training criteria as given by the contractor but also the potential impact and benefit to the individual, their institution and in the country more broadly. These latter criteria are more qualitative. The current subgroup also is proactive in ensuring gender balance as far as practical within the pool of suitable candidates (see figure 3 and para 43). This subgroup has previously commented on the potential geographic imbalance that sometimes occurs, with a preponderance of candidates from one region (sometimes one institution within that region).

However, the current LTC training subgroup does not follow the process for selecting candidates for training offered at short notice outlined in paragraphs 33 and 34. The current subgroup treats each training offered as a new

opportunity and all candidates are assessed anew. Reserved candidates can apply but they are not necessarily given any priority. This is because each training opportunity may require a different set of selection criteria and also in the spirit of openness and fairness every applicant should have the same opportunity to be selected if they meet the criteria. As far as we were aware no roster of suitable candidates was created and maintained. The advent of better internet links enables the subgroup to assess training opportunities intersessionally so there is no need for a roster. Training opportunities are usually well planned but can be time-critical, as in the case of at-sea training where the trainees have to join an oceanographic expedition.

#### Finances

The differences in budgets for training between the contractors is interesting, although we note that in terms of the total investment, the training budgets are not large.

#### Training offered and disciplines covered

The main types of training offered during the current LTC training subgroup tenure appear to be at-sea training, reflecting the findings in paragraph 40. In terms of disciplines covered, geology or related training also appears to be the most commonly offered. The relatively low occurrence of environmentally-related training is, however, of concern given the increasing focus on the impact of DSM on the deep-sea environment.

One point which will require more discussion and detailed negotiation between the contractors and the ISA is the type of training offered. **Figure 2** indicates the different types of training and highlights that very few opportunities are offered which would provide in-depth training, e.g. Masters or internships, as opposed to 'experience'-based training, e.g. attending conferences or at-sea training. If training is to

fulfil its objective of tailoring the training to the needs of the developing States, then there needs to be a better alignment of the types of training on offer. **Also, as this LTC training subgroup has commented before if training is to provide suitably trained personnel for the Enterprise, the current training programmes may not be sufficient to achieve this objective.**

There is one aspect of concern in this discussion on the development of more intense targeted training. Many potential candidates will not be able to apply for extended periods of training. They have commitments and their institutions are unwilling to give the time off needed to undertake a Masters or a prolonged internship. This might explain the popularity of at-sea training. Such restrictions may have an impact on the ability of contractors and the ISA to align the training with the priorities of developing States or with developing suitably qualified personnel for the Enterprise. The way such opportunities are advertised and the expected target groups need to be carefully considered. It may be that for Masters courses or long-term training, younger, early-stage career or student candidates be considered.

Paragraph 51 discusses this issue in terms of equivalence of training offered. This is an important issue that needs discussion between the ISA Secretary-General and the Contractor, certainly at the contract negotiation phase. Discussions on equivalence may be a good topic for the LTC to consider in a future session, providing some observations and input to the ISA Secretariat.

Also, in paragraph 51 the last bullet in paragraph 51 reads *...!contractor did not have sufficient time to select an alternate candidate!*. The contractor does not 'select' an alternate candidate. A contractor could pick an alternate candidate from the reserve list in consultation with the ISA but not 'select', as the selection is done by the LTC training subgroup.

The LTC training subgroup has been at pains to point out the problems associated with getting a visa to be able to join the training and the damage this does to the CTP.

### **General points**

The training to be offered by contractors should be aligned with the developing states' human resource plans, at the national, sectoral or departmental level, and should focus on achieving sufficient numbers with relevant skills to be put at the right places, right time, doing the right things for which they are suited for the achievement of goals of the state.

There should be an overarching framework for the content of the training to ensure that the process by which valuable research, skills, knowledge, and/or technology are delivered to the developing states are relevant and effective. There should be an overarching monitoring and evaluation framework designed to evaluate the effectiveness of the training. One of the associated activities of the M&E framework could be the design of a tracer study to follow the career paths of former trainees to inform the ISA and the LTC on the allocation of future training opportunities.

While the general aims of Recommendation 11 could be a useful way to develop meaningful training, such collaborative links would also reduce the opportunities for a wider pool of people to apply for training. The ISA and LTC would none the less still be able to have a role in the selection of candidates if such schemes were established.

The LTC training subgroup agrees with the final recommendation in this section that there should be greater dialogue between the ISA, contractors, the trainees and their institutions to ensure wider impact and benefit of the training.

## ANNEX 4

Extract of high-level actions and outputs associated to Strategic Direction 5  
(ISA High-Level Action Plan 2019-2023)

No.	High-level action	Outputs for 2019–2023				
		Description	Time frame for completion	Organs responsible	Associated organs	Coordinating organs
<b>Strategic direction 5: build capacity for developing States</b>						
5.1.1	Assist developing States, in particular geographically disadvantaged States, small island developed States, least developed countries and landlocked developing countries, in identifying their needs	(i) Report on initiatives developed to facilitate the identification of the needs of developing States (ii) Collect input on the identification of the emerging needs of developing States, in particular geographically disadvantaged States, small island developing States, least developed countries and landlocked developing countries (iii) Develop a capacity-building strategy for the Authority that addresses the needs identified by developing States	2020	Secretariat		
5.1.2	Adjust capacity-building programmes as necessary to meet the needs of developing States	(i) Make adjustments to address the needs identified by developing States	2020	Secretariat	Assembly	

The following definitions apply: (a) "**responsible organ**": the entity who is the main driver of the action in question and who is ultimately accountable, (b) "**coordinating organ**": the entity who collaborates with the responsible organ driving the action, playing a substantive role to ensure inclusiveness and convergence, (c) "**Associated organ**": the entity who is involved in the action by remaining actively engaged and well informed.

Outputs for 2019–2023						
No.	High-level action	Description	Time frame for completion	Organs responsible	Associated organs	Coordinating organs
		(ii) Recommend specific measures to address the needs identified by developing States	2020	Secretariat		
5.1.3	Undertake regular assessments of the effectiveness and relevance of capacity-building programmes and initiatives implemented by the Authority	(i) Report on key findings of the assessments undertaken (ii) Recommend specific measures to improve the delivery of capacity-building programmes and measures implemented by the Authority	2020	Secretariat	Assembly	
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	Report on partnerships established to maximize funding opportunities for the Endowment Fund for Marine Scientific Research in the Area and its beneficiaries	Annual	Secretariat	Assembly	
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	No output against this action	Continuous	Secretariat		
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	(i) Ensure the dissemination of and access to all information on capacity-building opportunities on the Authority's website (ii) Ensure that all the Authority's projects and activities, as far as practicable, contain a dedicated capacity-building component	Continuous	Secretariat		

Outputs for 2019–2023						
No.	High-level action	Description	Time frame for completion	Organs responsible	Associated organs	Coordinating organs
		(iii) Develop and implement measures and process that ensure the selection of the best qualified candidates (iv) Promote and develop excellence in deep sea research among young scientists and researchers from developing States through the Secretary-General's awards	Continuous Continuous	Secretariat Secretariat		Legal and Technical Commission
5.4.1	Undertake regular assessments of contractors' training programmes and their long-term impact on capacity-building	(i) Analyze the long-term impact of the contractors' training programmes (ii) Recommend measures to improve the impact of the contractors' training programmes	2020 2020	Secretariat Secretariat	Assembly Assembly	Legal and Technical Commission Legal and Technical Commission
5.4.2	Facilitate the adjustment of contractor training programmes to meet the needs of developing States	(i) Identify, in partnership with contractors, options for the adjustment of their contractors' training programmes (ii) Develop cost-effective measures to improve the delivery of the contractors' training programmes	2021 2020	Secretariat Secretariat	Assembly Council	Legal and Technical Commission Legal and Technical Commission

## ANNEX 5

### Summary of the responses received by member States, contractors, research institutions and former trainees and interns to the surveys designed by the ISA Secretariat to receive feedback on the benefits and issues of its capacity-building programmes and initiatives

Entities	Summary of survey responses
<b>Member States</b>	<p>A total of 6 responses were received from member States (Argentina, China, Germany, Japan, Mauritius and Morocco)</p> <p>The survey to member States focused on three key areas, relevant to each of three main ISA capacity-building programmes, CTP, EFMSR and Internship Programme. The following elements are an attempt to extract the main salient points from the responses provided.</p> <p>All responses highlighted the importance for tailored capacity development programmes to address the needs identified by developing States. For China, emphasis should be placed on ensuring that the relevant information be circulated more widely with a view to ensuring that more interested people could apply. Mauritius indicated that communication between ISA and the relevant national authority was not always straight forward and that maybe, this would require establishing a specific focal point.</p> <p><i>Focus and modality of training</i></p> <p>In response to the request to provide a ‘top-10 list’ of priorities in terms of capacity development for activities in the Area, members of ISA provided the following suggestions:</p> <p><i>Issues and challenges</i></p> <p>On the question relating to the responsibility for ISA Members and in particular, sponsoring States to ensure that their capacity needs are reflected in training programmes promulgated by ISA, Argentina indicated that, “special attention should be paid to the capacity needs of the developing countries. The programmes offered by the contractors should be focused on these needs”. Japan highlighted the view that sponsoring States should not be held responsible for ensuring their capacity needs are reflected in training programmes but that due consideration should be paid to situations of donors along with recipients and that consultation process should be put in place to coordinate between both donors and recipients.</p> <p>On the question of the responsibility of the nominating authority to ensure that the former trainee be placed, upon her/his return to the country, to contribute to the national development objectives. Three member States (China, Germany, Japan) indicated that such responsibility would be key. Japan also underscored the importance of informing donors on the impact of the trainings provided.</p>

<b>Member States</b>	<p><i>Suggestions and recommendations</i></p> <p>On the question of the priority activities that ISA could consider in adjusting its capacity development programmes and initiatives, emphasis was placed on the importance to take into account the capacity needs of developing countries but also, to consider regional capacity-building workshops (Argentina, China, Morocco). Germany suggested that some bilateral/trilateral outreach events could be organized as well as further voluntary commitments and mentoring programmes. Japan proposed that the ISA Secretariat could also compile needs and challenges of both donor and recipient parties and when relevant, share the inputs with the training subgroup of the LTC. For Mauritius, an overall planning of trainings should be established in advance.</p>
<b>Contractors</b>	<p>Fourteen (14) contractors (BGR, COMRA, CMC, DORD, GSR, Government of India, IOM, JOGMEC, Government of the Republic of Korea, Ocean Mineral Singapore, NORI, TOML, UKSRL) responded to the survey and provided inputs on key issues such as the focus of training offered, experience with the candidates, communication with ISA, challenges in conducting the training programmes and suggestions for future training programmes. The responses received are further detailed in the following sections.</p> <p><i>Focus and modalities of training provided</i></p> <p>Whereas most of the training programmes were conducted exclusively onboard research vessels, some of them had pre- and post-cruise components as well that were conducted onshore, over periods varying from 8-12 weeks. The offshore trainings provided the participants with an experience in different types of exploration techniques, sample and data collection, as well as analysis and interpretation. The pre-cruise component gave them an exposure to preparation for an expedition and the post-cruise component provided them the experience on laboratory analysis and report preparation. The exclusively onshore trainings offered by some of the contractors varied from attending conferences (1-2 weeks) and internships (2 months), to Masters programme (2 years) and doctoral programme (4 years).</p> <p>From the contractor's perspective, it is difficult to ascertain whether the candidates have utilized the skills developed during the trainings provided for a purpose related to exploration of marine minerals and marine environmental research after returning to their parent organization. In order to assess the long-term benefits accrued from such trainings, it seems necessary for ISA to collect such information from the candidates in a more systematic manner.</p> <p><i>Quality and performance of the candidates</i></p> <p>Over 80% of the contractors indicated their satisfaction with the quality and performance of the selected participants. However, in some cases the training programme had to be modified to meet the candidates' background. Hence, it has been suggested that required competences in language, skills and educational background be notified in advance to the prospective participants at the application stage. Similarly, sharing the information on the candidate's qualifications and experience with the contractor providing training during the planning stage would help the contractor in designing their programme accordingly.</p> <p><i>Communication with ISA (Secretariat)</i></p> <p>All contractors responded that the communication with ISA Secretariat has been effective and without any issues.</p>

<p><b>Contractors</b></p>	<p><i>Challenges faced by contractors</i></p> <p>Contractors are typically required to submit training opportunities to ISA Secretariat at least 6 months before the commencement of training in order to allow sufficient time to advertise and select candidates, and to allow time to apply, obtain permits and / or to offer position to a reserve candidate. On the specific challenges faced that could prevent contractors from informing the Secretariat in time, the following reasons were presented:</p> <ol style="list-style-type: none"> <li>1. Short lead time to expeditions</li> <li>2. Scheduling of offshore campaigns are not predictable 6 months in advance</li> <li>3. Changes in offshore campaign schedules</li> </ol> <p>On the other hand, some of the contractors also informed that 6 months of lead time is too long for the participants to commit and there have been cases of dropouts either due to health reasons or due to personal problems and / or other commitments (may be due to change of priority or exploring other job opportunities) in the intervening period.</p> <p><i>Contact with trainees post-training</i></p> <p>Most contractors (over 60%) indicated that they had maintained contact with the trainees in order to know the progress of the candidate. In some cases, some trainees have also joined a second cruise for sample collection for Ph.D. purpose as also attended a symposium to keep breast with the new developments in their area of research.</p>
<p><b>Former trainees (CTP)</b></p>	<p>Forty responses were received from a population of 108 former trainees. The 40 respondents are nationals of 22 countries, constituting the following regional groups, Asia Pacific [28%], African group [33%] and GRULAC [33%]. About 10% of the respondents were identified as nationals from SIDS. None of the respondents were identified as nationals of LDCs or LLDCs.</p> <p>The surveys were structured to allow for close and open-ended responses, focusing on key elements necessary for review of the training programme, such as the focus of training offered, experience with the contractors and the training programme, challenges in conducting the training programmes and suggestions for future training programmes. As the level of response yields a percentage lower than the total population, it was not possible to make specific conclusions from the data gathered and assume it to reflect the entire populace. It would be most ideal to have received a larger volume of responses. But it was still very useful to draw observations on the responses provided, based on the percentage of the total response received, which provides a better understanding the training programme, what works well, and areas that may need attention. This is well-aligned with the objectives of this review and that of the upcoming workshop. It is clear at this point that there is a critical necessity for ISA to begin considering and introducing a mechanism for follow up in order to monitor the effectiveness of the training programme. Ongoing ‘monitoring and tracking’ or keeping a network or ‘alumni group’ for former trainees, would be most ideal, especially now that performance measures against reporting have been introduced in the ‘high-level action plan’.</p> <p>The response of the forty (40) former trainees, with respect to some of the key issues such as the focus of training offered, experience with the candidates, communication with ISA, challenges in conducting the training programmes and suggestions for future training programmes are described in the following sections.</p>

<p><b>Former trainees (CTP)</b></p>	<p><i>Current professional status</i></p> <p>Of all the 40 respondents, 22 [55%] are working in official capacities for government departments or national research institutions. Some of them are even occupying, including senior positions with titles such as Deputy Director, Director, or Head of Service. The remaining 17 [45%] are part of academia, either as lecturers, or current graduate students pursuing research related to oceans sciences, marine biodiversity, marine geology, and marine environmental research. This includes two PhD scholars supported under the CTP, who are from South Africa and Solomon Islands.</p> <p>A closer examination of the professions identified four key sectors, namely (i) geology and minerals sector [10 trainees], (ii) oceanography and fisheries [6 trainees], (iii) environmental management, ecology, taxonomy [4 trainees] and (v) Academia [17 trainees].</p> <p><i>Quality of training</i></p> <p>About 80% [30] of the former trainees indicated that the training provided was satisfactory and enabled them to learn new techniques and understand better the operations undertaken onboard research vessels. Most found it very useful to have the pre- and post-cruise components. Over 75% [29] respondents commented that the offshore trainings provided experience in different types of exploration techniques, sample and data collection, including analysis and interpretation. The pre-cruise component provided an exposure to preparation for an expedition and the post-cruise component provided them the experience on laboratory analysis and report preparation. The exclusively onshore trainings offered by some of the Contractors varied from attending conferences (1-2 weeks) and internship (2 months), to master's programme (2 years) and doctoral programme (4 years). The latter involves 2 trainees, both are still ongoing and expected to complete by end of 2020.</p> <p><i>Challenges and issues</i></p> <p>For ship-board trainees, 13 commented that they training was satisfactory and they were well integrated as part of the survey team, but noted that language and communication was a challenge. However, 5 respondents [ approx. 13%] commented that the language barrier led to limited activities and hampered learning. Some respondents commented that due to very limited activities, the trainee felt that “the contractors did not want to share technology and knowledge”.</p> <p>For the on-shore trainees, over 55% [22] commented that training was not satisfactory and out of context in the sense that ‘activities were very limited’ and ‘not relevant to their expertise’. All 22 of these respondents also commented that ‘language’ was a key challenge, and led to lectures being very difficult to understand. 2 trainees commented that it did not meet their expectations, specifically citing that they did not have any contact with the contractor over the course of the training, as the training was delivered by a ‘third party’ who delivered courses on topics that were not relevant to the trainees’ expertise and interest.</p>
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<p><b>Former trainees (CTP)</b></p>	<p>In relation to the matter of ‘sexual harassment’, while all respondents stated that this was not an issue, only 7 cited being aware of a sexual harassment policy in place, and were provided a briefing on it. The remaining 31 cited not being aware of its existence. While the response from Contractors confirm that such policies are in place and are part of IMO obligations as well as their own workplace safety and code of conduct, the lack of awareness and briefing on ‘sexual harassment’ does raise concerns.</p> <p><i>Contact with contractors or ISA post-training</i></p> <p>While a majority (24 out of 40) commented that were no contact from the contractors or the ISA post-training, others did indicate that they maintained contact with the contractors and the crew as well as other trainees. Others positively commented that the contractors continued to provide advice and specific subject matters after the training, in areas relevant to the former trainee’s official work and role.</p> <p><i>Resources to support training</i></p> <p>62% of the trainees [25] stated that they were paid through the course of the training. The respondents who were not paid [35% or 13] identified that they did not have a formal position at the time of training or were students. When asked whether their employer or nominating authority imposed a bond upon completion of the training, 57% [23] responded that no bond had been imposed on them. It is also worth indicating that 75% [30] of the trainees were provided with insurance during travel, whereas 25% did not receive insurance. None of the 22 respondents who cited having ‘no insurance’ provided additional feedback on why they did not receive it. None of their other responses indicated an issue resulting from not having ‘travel insurance’ but this could be asked in the follow up interviews and future ‘monitoring and tracking’ work of the ISA.</p> <p><i>Suggestions for improvements of CTP</i></p> <p>The majority of comments suggested an improvement in the issue of language barrier. No obvious option or remedy was suggested, but it is clear that a solution is required for the training to be more effective. A number of respondents [22 or over 55%] suggesting that it is crucial to undertake “follow ups after training to ensure knowledge gain is implemented”. Some specific suggestions were made to “consider partnering with scientists to provide short-term training in the form of workshops on aspects related to the work of ISA.</p> <p>Some trainees noted the need to tailor training towards the ‘needs of the Countries’ because “if the deep sea research capability of the developing State is more or less nonexistent, such as in my country, the training acquired will not be put to use that much”. This relates to other comments suggesting that the Contractor should “focus more on the training subject advertised when the application was made”. It also relates to comments from other trainees suggesting that the selection of candidates need to be relevant to the priority and needs of their nominating authorities for example, to “select candidates from developing countries with deep sea-mining prospects” to undertake training related to such activities.</p>
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<p><b>Former Trainees (EFMSR)</b></p>	<p>Out of the targeted 145 former trainees, only 5 responses were received, 4 from former trainees who benefitted a series of grants provided to Shanghai Jiao Tong University (SJTU) across the years 2016, 2017, 2018 and 2019. The fifth is a trainee who benefitted from the Marco-Polo-Zheng Academy. All respondents participated in a short-term training (2-4 weeks) focusing on areas related to Deep Seabed Mining and Oceans Policy and Law of the Sea. The respondents were nationals of Thailand, Malaysia, Cameroon, Venezuela and Bolivia, who are all PhD candidates, and an independent lawyer with speciality in ‘transnational disputes’. 3 of the respondents are male and 2 are female.</p> <p><i>Quality of training</i></p> <p>Training for each respondent is either 2 weeks for the (SJTU) and 4 weeks for the Marco-Polo-Zheng Academy. The 5 trainees focused on topics and issues related to ‘oceans and Law of the Sea’. All 5 respondents were highly satisfied with the training and felt that it was relevant to their work in their respective countries. Most commented on the opportunity provided to establish networks with other experts and scientists and assisted them in their ongoing research related to oceans policy and deep sea minerals and contributed immensely to their PhD research. Most respondents commented positively on the delivery of the programme and structure, as they got to visit research institutions and had series of lectures and talks from people they consider ‘experts on the subject they were trained’.</p> <p>While most commented positively, a few issues were raised. One indicated that importance should be placed on ensuring transparency in the selection process made by the research institutions. Another one suggested that ISA should be more “actively involved in the training programmes”.</p> <p>One former trainee commented on the need for ISA to undertake follow-ups with former trainees directly. The key point highlighted by all respondents identified that dissemination of training opportunities should be improved. More specifically, 3 of the 5 respondents commented that they heard about the training by ‘word of mouth’ and had not come across it in the social media channels. Suggestions were made to consider using “social media and social networking platforms” and “advertisement in special institutions interested with ISA activities”.</p>
<p><b>Endowment Fund Institutions</b></p>	<p>The Secretariat received 2 responses from the South China Sea Institute (Xiamen University) (Marco Polo - ZHENG He Academy of International Oceans Law and Policy) and the Deep Ocean Stewardship Initiative (DOSI) and International Network for scientific investigation of DEEP-sea ecosystems (INDEEP)– University of Southampton, UK.</p> <p><i>Quality of training</i></p> <p>Marco Polo Academy envisaged structured training activities to enable the participants from developing countries to acquire knowledge and make a contribution to the development and utilization of national and international seabed and the environmental protection of the marine environment in the future. DOSI and INDEEP structured training activities to enable the participants from developing countries to increase networking and discussion with deep-sea science experts and integrate to global deep-sea community. A large component of the training programmes is focused on teaching the fundamentals of deep-sea ecology, which was the case for the Namibia activity. Contact is kept post-training (although occasional), both individually and via the INDEEP/DOSI mailing list and network. Efforts are made on follow up scientific investigations in Namibia and DOSI/INDEEP work regularly with a few of the awardees who are now proactive in our network.</p>

<p><b>Former Interns</b></p>	<p>Three responses were received from a national of Jamaica and Australia, who undertook internships at the ISA Secretariat within the Office of Environmental Management and Mineral Resources (OEMMR) and the Office of Legal Affairs (OLA) in 2017 (July-September, 3 months) and 2013 (July-August, 2 months), respectively. The third respondent chose to remain anonymous. All respondents commented positively on their internship experience, noting that they were engaged in the work of the Secretariat and assigned to tasks such as “Processing contractors’ sample data, Oceandata View”; “attending the Annual Meeting, Report Writing- Deep Sea Exploration Opportunities for Jamaica and Caribbean Islands General Assembly”; “participating in the 2017 General Assembly as an observer; participated in the Special ISA Events, as well as forums, special functions and events”; and “assisting the legal office in meeting preparation; taking notes during meeting of the state parties and completing a research paper”.</p> <p>While the ‘interns’ were generally satisfied, one intern did comment about being “assigned to tasks which are not related to internship application and felt assigned supervisor did not know research proposal”. A recommendation was made to allow for more discussions between intern-supervisor prior commencement to “avoid misunderstanding each other’s purposes, and to appropriately allocate the intern’s task”. The other respondents commented that they heard about the opportunity through informal contact such as a ‘relative and friend’ and suggested that “social media platforms such as Facebook, Twitter and LinkedIn” to disseminate rather than just the ISA website and networks.</p> <p><u>Follow-up interviews with former ISA trainees.</u></p> <p>The rationale in undertaking these interviews was to provide ‘spot-light’ stories describing ‘key highlights’ of the former trainees’ experiences, find out where they are working now, and share stories of how the training assisted them in their professional careers. The ‘spot-light’ stories are intended to feature in the report as ‘case studies’ and would also feature in the workshop discussions and social media platforms.</p>
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## ANNEX 6

### Status of the implementation of previous recommendations

Recommendation	Finding of current review	Status (actioned or needs attention)
<b>2001 Report</b>		
<p>1. Within the framework of the realization off the Training Programme, and even after, the Authority should work closely with candidates and their countries of origin. This can result in more efficiency while minimising the risks of training wastage. Trainees will be traced more easily. A filing system will be set up to follow up trainees in time and space, if possible.</p>	<p>The issue of monitoring and tracking has been identified as a key issue that needs attention, as it has been difficult to meaningfully assess impact of training without having an up to date ‘monitoring and tracking process’. To date, the best knowledge received on where former trainees are working is through surveys that were sent to all former trainees. But the issue is that most did not respond, especially due to the fact that considerable years have lapsed. Moving forward, surveys should be annually to Trainees undertaking training in that year.</p>	Needs attention
<p>2. As much as possible, the Authority should follow-up the training as it goes on with the structure in charge of training issues (3.1.3.h LOS/PCN/SCN.2/L.6/Rev.1)</p>	As above	As above
<p>3. At the level of the Authority, a structure should be designated to deal with and process issues relating to training.</p>	<p>This structure in the context of a training coordinator now exists. Issues relating to training are directed to the TC for resolving and follow up. In some of the processes such as selection, the TC liaises directly with a training group of the LTC.</p>	Actioned
<p>4. The selection of candidates for the approved training programmes should be carried out by the Authority’s structure in charge of training. During the selection, the implementation of the “equitable geographical distribution” criterion should be taken into account.</p>	<p>An attempt to address this is included in the “Recommendations for guidance” document. The list of applicants provided to the LTC training group for selection includes the countries and regional groups of the applicants – the LTC selection process calls for geographical (as well as gender) balancing during selection.</p>	Actioned

Recommendation	Finding of current review	Status (actioned or needs attention)
<p>5. Paragraph 2.11 of LOS/PCN/SCN.2/L.6/Rev.1 stipulates that “within the framework of the programme, the governments of trainees’ countries of origin will be required to give the Preparatory Commission the assurance that the concerned will be duly reintegrated in the profession or employed in related sectors. The governments will also be required to put the trained persons at the Enterprise’s disposal if the latter so requests and, in the interim period, at the disposal of the Preparatory Commission if it requires the services of these experts”.</p> <p>Minimal mechanisms and procedures should be adopted to try to finalise these above-mentioned procedures. This substantiates the first recommendation.</p>	Not addressed	Needs attention
<p>6. Before starting training course, all candidates selected and retained for training should sign a bond with the Authority in the form of a commitment to ensure that they will be prepared to serve, if the need arises. (This can be done through an exchange of documents, based on a bond form prepared by the Authority).</p>	Not addressed	Needs attention
<p>7. After the candidate is selected, the Authority should notify him/her as well as his/her government.</p>	Only candidate is informed.	Needs attention
<p>8. Non-selected candidates should also be informed by the Authority about their unsuccessful applications for the fellowship of the training they applied for. Their governments should be notified as well.</p>	Only candidate is informed. The list of successful candidates is posted on ISA website.	Needs attention
<p>9. A report format should be prepared by the Authority.</p>		Actioned
<p>10. The Authority should prepare and issue training certificates indicating the nature of the training received.</p>		Needs attention

Recommendation	Finding of current review	Status (actioned or needs attention)
11. The Authority should, henceforth, prepare an annual report on the activities relative to the Training Programme. The said report should take stock of all the problems encountered by the training programme in all its aspects.	Presently, semi-annual reports are made to the LTC, these however mainly cover the selection process notifying of the candidates selected in-session and intersessionally. Periodically, a comprehensive report has been made to the LTC which include the reports of long-term trainees (PhD and Masters).	Needs attention
12. The Authority should organise other training programmes, seminars and refresher courses for trainees who have already successfully pursued the Authority's training programme (Preparatory Commission).		Needs attention
13. The training programme could be improved in the future through: (a) An optimization of the training with fewer generalities because the trainees involved have at least minimum qualifications in their fields of competence. An effort should be made in this respect to ensure a more practical training with a longer period devoted to research or the implementation of acquired knowledge. (b) A differentiation, to the extent possible, of training based on the disciplines for which the training is given. It has been observed that the training has improved both qualitatively and quantitatively, with time. The last training programme drew from the experiences of the first generation training programmes. The observation is qualified and does not, in any way, take from the quality and value of training conducted by the first registered pioneer investors nor is it a value judgment on them.	(a) Clear minimum qualifications and experience are stipulated by contractors for the type of training on offer.  (b) Disciplines are specified for trainings offered by the contractors.	Actioned
14. The Authority should prepare certificates and deliver them to each trainee. These certificates should mention the training received.		Needs attention

Recommendation	Finding of current review	Status (actioned or needs attention)
15. A certificate of correct record should be awarded to registered pioneer investors, for carrying out their obligations.		N/A
<b>2013 Report</b>		
16. The Recommendations as provided in the 2001 Training Report be reviewed and considered as part of improving the process when dealing with Contractors. A new attempt should be made to locate the 27 participants of the RPI TPs and update information about their present status and assess whether they would be able to contribute to the deep-sea minerals sector or specifically the Enterprise if it existed		Needs attention
17. The process and timing of TP negotiations needs to be reviewed and follow clear and transparent Recommendations for Guidance.	The negotiations for TPs follow the clear and transparent Recommendations for Guidance on training.	Actioned
18. The Recommendations for Guidance must reflect and be consistent with the Regulations and the Standard Clauses.		Actioned
19. Recommendations for Guidance must endeavour to be an “enabling” document to assist and promote the negotiation, designing, implementation and reviewing of TPs.		Actioned
20. Recommendations for Guidance should assist in defining a TP development process which results in a TP that is practical and linked to the contractor’s plan of work, and ability and capacity to deliver.	This is an ongoing activity	Needs attention
21. TP must attempt to address not only the individual candidate’s needs but also the broader capacity development needs of the nominating State. TPs can attempt to address these needs if they are articulated in the application and nomination process.	Note: in many cases the nominating authority is not the State but rather the institution that candidate works for or, in a few cases, the institution where the candidate is pursuing or just completed pursuing tertiary education.	Needs attention

Recommendation	Finding of current review	Status (actioned or needs attention)
22. The staff of the Authority, and those who potentially may become staff of the Enterprise, must also be considered as potential beneficiaries of any TP.	It is proposed that the Secretariat staff may avail the training opportunities offered by the Contractors so as to not only get an opportunity to interact with the Contractors and also develop their own skills, but also to understand the challenges faced by the Contractors while organizing their training programmes.	Needs attention
23. The Guidelines must be clear in defining the roles and obligations of each stakeholder in the TP process. These include but not necessarily limited to; the Contractor, sponsoring State, the training candidate and the Authority including the SG and the LTC.		Actioned
24. Choosing TP candidates must be against fully transparent criteria which must be broad enough to capture the spirit and reason for training and technology transfer so that it promotes capacity development, particularly in developing countries and the Enterprise.	Observation: Setting up of the process for every stage of the training programme has given much needed clarity to the Contractors of their responsibilities and procedure for implementing the CTP.	Actioned
25. The LTC should develop electronic Application and Nomination Forms such that information received will assist it assessing the merits of the individual candidate whilst also considering the needs of the countries	The applications are sent via email or via the web-based training portal	Actioned
26. The LTC adopt as soon as possible (preferably this year) interim Recommendations for Guidance for contractors on the implementation of training programmes (colloquially these are referred to as "TP Guidelines").		Actioned
27. The LTC should recommend to the Council the holding of a stakeholders round-table meeting for the purpose of further elaborating the interim Recommendations for Guidance and with a view to the LTC reviewing the interim version next year.		Actioned
28. A more effective mechanism for TP delivery that is supported by, but not necessarily delivered by contractors needs to be developed.		Needs attention

Recommendation	Finding of current review	Status (actioned or needs attention)
<p>29. The ISA must make capacity development a core programme of the Secretariat.</p>	<p>The ISA Strategic Plan for 2019-2023 recognizes the duty of ISA to ensure that a variety of capacity-building mechanisms are developed for developing States with the following objectives:</p> <ul style="list-style-type: none"> <li>• Strategic Direction 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.</li> <li>• Strategic Direction 5.4: Build on the achievements of contractor training programmes and assess their long-term impact on capacity-building.</li> <li>• Strategic Direction 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.</li> </ul> <p>The [...] steps taken by ISA in developing clear objectives, appointment of Training Coordinator as well as assigning the responsibility to a designated officer would provide the required support for efficient implementation of all types of capacity building programmes conducted by ISA, including Contractor training programmes. Establishing a Joint Training and Research Centre as well as consideration of proposal for setting up of regional training centres would further increase the outreach of ISA in terms of capacity building for candidates from developing countries.</p>	<p>Actioned</p>

Recommendation	Finding of current review	Status (actioned or needs attention)
30. The role of sponsoring States need to be better defined such that its responsibilities are transparent.	This is clarified in the 'Recommendations for guidance of Contractors and sponsoring states relating to training programmes under plans of work for exploration' that the sponsoring state, particularly if it is also a developing country, is required to: <ul style="list-style-type: none"> <li>• inform the Secretariat of the full details of its nominated training candidate</li> <li>• whenever possible, ensure that its training requirements are based on a bilateral agreement and a requirement of its sponsorship</li> <li>• inform the Secretariat if it has training needs over and above its bilateral agreement which its contractor may not be able to satisfy.</li> </ul>	Actioned
31. A TP must not be seen as a series of ad hoc activities but something very strategic with specific objectives, goals and working to a plan.		Needs attention
32. Over the medium to long-term the Authority must develop the tools, capacity and a programme to assess the needs of its member States such that any TP and capacity developing programme is driven by need.	Observation: The forthcoming workshop on capacity building could be an excellent opportunity to invite inputs from developing countries regarding their requirements from such training programmes so that these could be shared with the Contractors proposing training programmes in future. The ISA has also received submissions from the African Group of the Assembly about programmes that could be used while collating such information from developing countries.	Needs attention
33. A process has to be developed and established where the needs of the different developing countries can be identified and integrated into future training and capacity development programmes.	As above	Needs attention

Recommendation	Finding of current review	Status (actioned or needs attention)
34. As a first step before addressing some of the medium to longer term solutions a Forum on coordination and promotion of ISA training and capacity development might provide a base on which to build. Such a forum could take the form of a workshop involving all key stakeholders including, but not restricted to, Contractors and relevant institutions (including major institutes, marine research bodies, universities, Endowment Fund partners, and regionally-based organizations) and particularly those who share and may compete for the same marine space.	As above	Needs attention
35. The Authority (Secretariat) must develop some capacity (staff & resources) so that it can manage and operate a training and capacity building (TCB) programme. Some consultative mechanism involving key stakeholders might be convened, following the recommended workshop to develop a sustainable plan and a framework for implementation. A plan, not limited to just the core interests of the ISA but might include, issues which will also benefit the wider marine sector.	As above	Needs attention
36. If the Authority becomes the future location of the TCB programme, then developing a funding model is essential. Key issues that need to be reviewed include how contractors contribute and the future of the Endowment Fund.	Developing a funding model for sustaining the capacity building initiatives for developing countries, is the key to ensure continuous benefits to the develop marine scientific research in relatively less developed regions of the world. It is necessary for ISA to consider an action plan for this purpose	Needs attention
37. The Authority must develop a communication strategy and protocols which is subscribed to by all stakeholders including contractors, the Authority and State Parties.	Observation: Although there is a set communication protocol, more effective channels by connecting with international organizations conducting studies related to or offering courses in marine scientific research may be explored by ISA in future.	Actioned
<b>Total number of recommendations (both 2001 and 2013)</b>		<b>37</b>
<b>Total number of recommendations actioned</b>		<b>15</b>
<b>Number of recommendations needing attention</b>		<b>21</b>
<b>N/A</b>		<b>1</b>

## ANNEX 7

### Summary of recommendations from the African Group submission [ISBA/25/A/8] relating to ISA capacity building programmes and status

Recommendation	Actions taken
<p>15. The African Group wishes to invite the Authority to consider the following recommended actions:</p> <p>(a) Information-gathering exercises to ensure the proper and updated understanding of the capacity and developmental needs of developing countries that the training programme could address;</p>	<p>In progress: the CB workshop will address a substantial part of this recommendation.</p>
<p>(b) Improved tracking of trainees and reporting to the Council on overall training impacts, against both:</p> <p>(i) Output targets, such as the number of trainees, number of training days, amount of expenditure in training, geographical distribution, gender parity and age representation;</p> <p>(ii) Outcome targets, such as the number of developing countries reporting increased participation in marine scientific research or activities in the Area and the number of developing countries reporting enhanced national marine technology status, scientific knowledge or national capacity;</p>	<p>(i) Output targets are currently reported to the Commission. The expenditures reported in annual reports include a heading “training”, further the recent survey of contractors has produced more direct expenditure on training, though not from all contractors.</p> <p>(ii) The outcome targets data or information has not been collected.</p>
<p>(c) Clarification for the Council of the extent to which the recommendations of the Commission for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration are binding on, and being complied with by, contractors;</p>	<p>The Recommendations are applied and used in negotiation between the contractor and Secretariat for the final TP. Clarity on the extent to which they are binding still needs to be clarified.</p>
<p>(d) Mechanisms for enabling the influence of developing States on training programmes, including consultation on contractors’ training commitments, and settling the scope of such training programmes before the grant of a contract is approved;</p>	<p>No action taken</p>
<p>(e) A minimum financial commitment on training, delivered either directly or through the Authority, from every contract for each contract;</p>	<p>No action taken</p>
<p>(f) Reports to the Council on the annual training plans, commitments and completed activities of the Secretariat and contractors and a published statement from contractors on how much each has spent annually on training, specifying the proportion spent on nationals from developing countries;</p>	<p>This is currently reported to the Commission/Council. The expenditures reported in annual reports include a heading “training”, further the recent survey of contractors has produced more direct expenditure on training, though not from all contractors.</p>

Recommendation	Actions taken
(g) The introduction of trainee safety and well-being policies and procedures and minimum training standards, including gender parity principles, for adoption by contractors;	Contractors have reported that they comply with this recommendation. Further, the Secretariat is in the process of finalising a survey on prevention of sexual harassment at sea that was initiated in 2019.
(h) Use of train-the-trainer courses;	No action taken • Alternatively, these matters may be addressed with MoU with training partners to develop the necessary programmes. • However the funding aspect would still need to be addressed.
(i) Use of open online training courses;	As above
(j) Training courses run by the Authority, which should enable the coverage of more people from diverse backgrounds and of a wider range of disciplines than are currently offered through the contractors’ training programmes, the internships and the Endowment Fund. Such courses should be made available to government officials, without taking them out of their countries or postings for extended periods of time.	As above
16. In the light of strategic direction 5.1 and the above, the African Group, having consulted its member Governments and held informal discussions with other stakeholders, has identified a need for a capacity-building programme on environmental impact assessments. The African Group therefore wishes to make a specific proposal for such a training programme to be organized by the Authority for the benefit of government officials of developing countries. The Group recommends that the training programme have a particular objective to assist participants in understanding the requisite processes, content and management tools involved from a regulatory perspective in requiring, designing, reviewing and making decisions on environmental impact assessments and reports, and the resulting monitoring activities and management plans.	Recommendation has been noted for further discussion and development of TP content in the future

Recommendation	Actions taken
<p>17. The African Group requests that the following elements be covered:</p> <ul style="list-style-type: none"> <li>• Overview of the deep ocean environment</li> <li>• Purpose and overview of environmental impact assessments</li> <li>• Data collection, sampling and mapping</li> <li>• Data management, analysis and sharing</li> <li>• Linkages between environmental impact assessments and other area-based management tools</li> <li>• Risk evaluation or assessment</li> <li>• Impact mitigation</li> <li>• Stakeholder engagement</li> <li>• Environmental management planning</li> <li>• Review and evaluation of environmental impact assessments</li> <li>• Environmental permitting</li> <li>• Environmental monitoring</li> <li>• Compliance and enforcement</li> <li>• Remediation and closure</li> </ul>	<p>Recommendation has been noted for further discussion and development of TP content in the future</p>
<p>18. The African Group has identified the need for such a training programme on the basis of its own experiences both within national jurisdictions and in the context of the Authority. The African Group notes that two environmental impact assessment reports for activities in the Area have recently been received by the Authority. The African Group also notes that member States are currently engaged in drafting and agreeing on regulations for exploitation, including provisions on the conduct of environmental impact assessments, the evaluation of environmental impact assessment reports and the monitoring of environmental impacts, including transboundary harm, and management processes. In future, once an application for exploitation is received, members of the Authority will be required to review and approve or reject environmental plans. The African Group believes that a training event focused on those areas would greatly enhance the ability of the Governments of member States to engage in the relevant regulatory discussions at the Authority.</p>	<p>As above</p>
<p>19. The African Group is willing to work with the Secretariat and the Authority's other organs, members and stakeholders to develop a programme for such a training course.</p>	<p>As above</p>

## ANNEX 8

### **Comments made by Colombia in response to the invitation by the Secretary-General of ISA to all members and observers to provide comments on the draft assessment report**

(Received on 22 May 2020)

Comments of the Republic of Colombia on the draft assessment report on capacity building programs implemented by ISA

1. It is important to keep in mind that most of the recommendations are aimed at capacity development and technology transfer in the Member States of the International Seabed Authority (ISA). There are programs such as the Endowment Fund for Marine Scientific Research in the Area, which considers the participation of non-member States, as long as their projects seek to benefit scientists from developing countries. Colombia as a country, has not participated in any of these activities, but some Colombian scientists have participated through institutions that have received the support of the Fund, which is mainly focused on ocean law and policy.
2. In relation to part II “Review of other initiatives implemented by ISA to contribute to developing the capacities of its members”, it is explained that UNCLOS plans to establish centres of technology and marine science whose functions are: to develop training and education programs, organize regional conferences, seminars and symposia; acquisition and processing of marine scientific data and information, among others. However, the Intergovernmental Oceanographic Commission (IOC-UNESCO), through its headquarters and its subcommittees in the regions, is carrying out these functions, bearing in mind that in scenarios such as the General Assembly through the resolution of the oceans and law of the sea (A/RES/74/19), the transfer of marine technology has been recognized as an important aspect of capacity building and recalls the important role of the IOC in promoting the Criteria and Guidelines for the Transfer of Marine Technology.
3. It is important to consider General Assembly resolution A/RES/ 70/1, in which goal 14.a of the Sustainable Development Goal No.14, says that the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology should be taken into account. The IOC is developing different activities through global and regional programs such as Ocean Literacy, program of the International Oceanographic Data and Information Exchange (IODE). Additionally, it has partnered with other international organizations such as the Joint WMO-IOC Collaborative Board, with the World Meteorological Organization.
4. In view of the foregoing, it is considered pertinent that this proposal be articulated with the IOC, especially since we are at a time when the United Nations Decade of Ocean Sciences for Sustainable Development begins next year, where the development of capacities, data and information are cross-cutting aspects for the fulfillment of its objectives and goals. The creation of these centres could generate confusion and a duplication of efforts to participate and report in these international scenarios.

## ANNEX 9

### **Comments made by Cuba in response to the invitation by the Secretary-General of Isa to all members and observers to provide comments on the draft assessment report**

(Received on 27 May 2020)

Comments of the Republic of Cuba on the draft assessment report on capacity building programs implemented by ISA

1. Las bases fundacionales y el marco legal que lo sustenta el Programa de Desarrollo de Capacidades de ISA están claramente explicadas.
2. Los tópicos acerca de los cuales los contratistas ofrecieron los entrenamientos satisfacen las necesidades de capacitación de cualquier centro de investigaciones marinas que desarrolle investigaciones del fondo marino tanto para la parte biótica como abiótica.
3. Las modalidades de la capacitación (entrenamientos a bordo de barcos de investigación, cursos cortos de entrenamiento en tierra, practicantes, maestrías y doctorados, seminarios, talleres y conferencias), ofrecen opciones para las posibles necesidades de los países miembros de ISA.
4. Acerca de la distribución geográfica de los candidatos participantes, sugerimos que podría tenerse en cuenta para la selección de nuevos candidatos y para la divulgación de estos entrenamientos.
5. Consideramos muy acertadas las recomendaciones realizadas por los participantes en el Taller de febrero, aunque hubo un desbalance en los representantes de los grupos regionales.
6. Sugerimos evaluar la conveniencia de incentivar el incremento de participantes a la obtención de grados científicos de master y doctores, la cual fue del 2% del total.
7. Se debe reafirmar la idea de no crear más indicadores para medir los progresos en la creación de capacidades de los programas e iniciativas y fomentar la propuesta de utilizar los ya diseñados y aceptados bajo el Objetivo 14 de los Objetivos de Desarrollo Sostenible hasta el 2030 (ODS).

## ANNEX 10

### **Comments made by Norway in response to the invitation by the Secretary-General of ISA to all members and observers to provide comments on the draft assessment report**

(Received on 28 May 2020)

Norway appreciates the opportunity to provide comments on the draft assessment report of the capacity building programmes and initiatives implemented by the International Seabed Authority (ISA), and commends ISA for a detailed and thorough draft report. From a development standpoint it is important to evaluate experiences and lessons learned and make suitable adjustments to capacity building initiatives which this review does well. Recommendations in the draft report may increase the number of candidates trained and the quality of training.

Norway appreciates the focus on vulnerable and low-income countries (SIDs, LDCs etc.) and efforts to ensure needs-based capacity development training programmes, defined in cooperation with national governments and regional organizations. It is essential for any development project which seeks sustainable results to be based on needs.

We support the recommendations ISA suggests in the draft report. The recommendations will make the training in ISA more efficient and tailored to national needs (especially recommendations 7, 8, 9, 22, 23 and 34).

Norway notes that the involvement of the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) in ISA's training programmes has been limited. As a key organization for marine science within the UN system and with its leading role in the decade for ocean science, involving IOC-UNESCO in ISA's training programmes could create fruitful synergies and interesting new opportunities.

This could be particularly relevant in relation to the Endowment Fund for Marine Scientific Research (EFMSR) and recommendations 16-29 in the draft report, but also more generally when developing scientific training content (including e-learning, recommendation 48) and addressing scientific needs and gaps, as well as when advertising for and recruiting relevant candidates for training opportunities.

Some regional organizations are not observing members to ISA, for example the African Union (AU), the African Development Bank (ADB), the Caribbean Community (CARICOM), the Organization of Eastern Caribbean States (OECS), the Indian Ocean Rim Association (IORA) among others. It may be beneficial to invite these organizations to play a more active part in ISA for capacity building purposes, as many have blue economy strategies which may involve deep seabed resources. Additionally, these organizations often have detailed knowledge of the regions and the national needs and gaps of their member countries. Regional organizations may also be able to increase recruitment to secondments and internships by advertising to relevant candidates from their regions, which has been a challenge in some training programmes, according to the draft assessment report.

We note that ISA has found it difficult to find suitable candidates for training programmes, for differing reasons. Diploma or formal certification schemes (possibly in collaboration with UNESCO-IOC or higher education institutions) may also be considered as an incentive for trained personnel to fulfil training programmes.

Historically, the geographical spread of the internships provided has been quite concentrated. We would have liked to see better representation from the African and Caribbean regions. In the future, candidates for internships may be considered to be recruited and advertised for through relevant regional organizations.

Norway is supportive of the recommendations (46, 47 and 56) to build partnerships with regional centres, as many existing regional organizations have research sections and strong links with academia.

Norway looks forward to continuing working with the Authority on capacity building programmes and initiatives.

## ANNEX 11

### **Comments made by Peru in response to the invitation by the Secretary-General of ISA to all members and observers to provide comments on the draft assessment report**

(Received on 5 June 2020)

La Secretaría de la Autoridad Internacional de los Fondos Marinos (ISA, por sus siglas en inglés) ha puesto en conocimiento de los Estados parte y observadores de ese organismo el documento titulado “Informe de revisión de las capacidades e iniciativas implementadas por la Autoridad de Fondos Marinos”. El Estado peruano, en tanto observador de ese Organismo Internacional, tiene a bien realizar los siguientes comentarios:

#### **En relación a la Parte I:**

La identificación de las necesidades de capacitación de los Estados en vías de desarrollo es fundamental para la programación de la ISA, e influirá en el desarrollo de los indicadores y objetivos por categorías. La participación de los Estados de América Latina es importante a fin de identificar prioridades y necesidades de región.

El intercambio de la información sobre las experiencias de los participantes de las capacitaciones y la orientación a nuevos involucrados mejorará la visibilidad de los programas de capacitación. Asimismo, es importante el compromiso de replicar los conocimientos adquiridos a nivel regional y local.

Es importante la ampliación del programa Contractor training en la fase de explotación; siendo muy importante que sea en paralelo o asociado con temáticas relacionadas a fundamentos de buenas prácticas ambientales. Por su parte, es muy importante considerar aspectos de vulnerabilidad en el caso de fondos oceánicos y la existencia de ecosistemas únicos que deben identificarse y protegerse.

Se considera muy acertado que, en el marco de la creciente disponibilidad de oportunidades para el desarrollo de habilidades de los Estados en vía de desarrollo para los próximos años; se recomienda el fomento de programas conjuntos/colaborativos entre las instituciones de origen de beneficiarios y las que brindan capacitación con el fin de promover beneficios sostenidos de programas de capacitación. La puesta en marcha de estos programas, además de un impacto positivo en los objetivos de desarrollo nacional, favorecería la posibilidad de monitorear con indicadores claros el desarrollo profesional de los ex alumnos y su efecto multiplicador de transmisión de su experiencia y habilidades.

Sobre el punto The Endowment Fund for Marine Scientific Research in the Area (EFMSR); el análisis nos permite apreciar la valiosa capacitación proporcionada por la Autoridad Internacional de los Fondos Marinos y las actividades llevadas a cabo por las instituciones que han sido financiadas por el EFMSR. Cabe mencionar que el Estado peruano ha sido beneficiario en una de las actividades de los programas, a través de la participación en la prestigiosa institución Rhodes Academy; expresando su gratitud y esperando que podamos participar en futuras capacitaciones en el campo científico en las de diferentes especialidades de investigación de los fondos marinos.

En relación al programa de pasantías, se recomienda explorar opciones de contribución financiera de los miembros Estado, observadores y contratistas a fin de garantizar la participación adecuada de los pasantes; aspecto sujeto a consulta interna (en su estado).

**En relación a la Parte II:**

Sería visto con agrado la facilitación de los requisitos de postulación a pasantías, que el límite de edad para el caso de la mujer de Estados en desarrollo sea más flexible permitiendo una mayor participación y considerando la realidad de cada estado.

Sobre el tema relacionado a los seminarios de sensibilización, se considera muy interesante la recomendación de un enfoque programático para los seminarios a ser organizados a nivel regional; particularmente el de incluir además de los Estados Parte, a los estados que no lo son, con la consideración de que esta sea en asociación con las organizaciones regionales pertinentes.

Finalmente, Perú ha sido invitado como observador a expresar su opinión en relación a este documento. Esto pone de manifiesto que la Autoridad de Fondos Marinos Internacional genera un espacio interesante de apoyo a los países en desarrollo para fortalecer el campo de la investigación en fondos marinos a través de actividades y entrenamientos con científicos calificados. Este campo de investigación es muy importante para nosotros como estado y un mayor conocimiento nos permite garantizar una buena gestión del mismo.

Finalmente, ante la evidencia de los efectos del cambio climático en los océanos, sugerimos incluir en los contenidos de las actividades de fortalecimiento de capacidades del Plan Estratégico 2019-2023, el componente de Cambio Climático que se encuentra en el Objetivo de Desarrollo Sostenible 13: Adoptar medidas urgentes para combatir el cambio climático y sus efectos.

## ANNEX 12

### **Comments made by the Philippines in response to the invitation by the Secretary-General of ISA to all members and observers to provide comments on the draft assessment report**

(Received on 19 June 2020)

The Permanent Mission of the Republic of the Philippines to the United Nations presents its compliments to the Secretary-General of the International Seabed Authority, and, with reference to the latter's Note Verbale No. ISA/EOSG/2020/099 dated 05 June 2020, has the honor to submit the following comments of the Government of the Republic of the Philippines on the draft assessment report on the capacity-building programmes and initiatives of the International Seabed Authority.

1. On the Contractor Training Programme (CTP), the Philippines understands from the report that detailed records of trainings are not kept. As a result, information that is relevant in assessing the impact of the Programme in furthering the mandate of the Authority is not available. In this regard, the Philippines recommends the establishment of guidelines or perhaps a focal office in the Authority to keep the records of trainings. Furthermore, the Philippines supports the creation of a review mechanism to assess the long-term benefits of the Programme conducted by the Authority. Having a review mechanism will point out areas of improvement, and it will be an efficient tool in monitoring how the Programme advances the objectives of the Authority.
2. On the Endowment Fund for Marine Scientific Research (EFMSR), the Philippines notes that at present, the Authority is not consulted by institutions applying for funding with regard to the design of the activities they wish to be funded. Thus, it is difficult to assess how funded activities contribute to the objectives of the Fund. In this regard, the Philippines supports the recommendation to establish a mechanism wherein the Authority is consulted by the institutions prior to their application for funding in order to ensure that the activities proposed to be funded are in line with the objectives of the Authority.
3. On the Internship Programme, in addition to the recommendations on recruitment of interns and developing a module/programme that is in harmony with the objectives of the Authority, the Philippines recommends the fortification of the network of former interns by keeping and updating a record of their profiles, the Offices they are assigned to in their home countries and the work that they do. The lack of monitoring of former interns disables the ability of the Authority to meaningfully assess the impact of its internship training programmes to States-benefactors.

The Permanent Mission of the Republic of the Philippines to the United Nations avails itself of this opportunity to renew to the Secretary-General of the International Seabed Authority the assurances of its highest consideration.

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