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Status of the implementation of training programmes under plans of work for exploration and the allocation of training opportunities

Review of the implementation of the training programmes under plans of work for exploration and recommendations for improvement

Note by the Secretariat

I. Introduction

1. The duty of the International Seabed Authority to design and implement mechanisms to build capacity for developing States, in accordance with its mandate under the United Nations Convention on the Law of the Sea, is recognized in the strategic plan of the Authority for the period 2019–2023.¹ Specific actions to be undertaken have been further outlined in the high-level action plan of the Authority for the period 2019–2023.² Of particular importance are those related to the need to undertake regular assessments of the contractors' training programmes and their long-term impact on capacity-building (high-level action 5.4.1) and to facilitate the adjustment of those programmes to meet the needs of developing States (high-level action 5.4.2).

2. Several actions have been taken by the secretariat to deliver against those objectives. Of particular importance was the preparation, with the assistance of consultants,³ of a comprehensive review of all capacity-building programmes and initiatives implemented by the Authority between 1994 and 2019 (the “2020

* Resumed meetings of part II of the twenty-sixth session of the Legal and Technical Commission, to be held in a virtual format.

¹ ISBA/24/A/10, annex.

² ISBA/25/A/15, annex II, and ISBA/25/A/15/Corr.1.

³ The consultants were Rahul Sharma, former Chief Scientist of the National Institute of Oceanography of India, and Tearinaki Tanielu, Director of the Multilateral Affairs Division of the Ministry of Foreign Affairs and Immigration of Kiribati.



review”),⁴ which was then followed by the holding in February 2020 of an international workshop on capacity development, resources and needs assessment.⁵ In addition, a survey was conducted among all members of the Authority between April and June 2020 to assess their priority needs in relation to capacity development. All information collected through that process was collated in a report submitted by the Secretary-General to the Assembly,⁶ which eventually endorsed the recommendations contained in that report and adopted a decision calling for a programmatic approach to capacity development.⁷

3. It is in that context that the present paper has been prepared. The Legal and Technical Commission has a fundamental role to play in the administration and implementation of the contractor training programme by providing advice and recommendations to contractors and the secretariat and participating in the selection of qualified candidates. The present document contains an overview of the historical background within which the programme has been developed and implemented, as well as the principal issues identified in the implementation of the recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration.⁸

II. Historical background within which the contractor training programme has been developed and implemented

A. Background and context

4. The principles of the contractor training programme are enshrined in the provisions of resolution II of the Final Act of the Third United Nations Conference on the Law of the Sea governing preparatory investments in pioneer activities relating to polymetallic nodules. Pursuant to resolution II, paragraph 12 (a) (ii), the

⁴ Available at <https://isa.org.jm/files/files/documents/CD%20assessment%20report.pdf>.

⁵ Participants included representatives of members (Algeria, Argentina, Brazil, Chile, China, Cook Islands, Costa Rica, Ecuador, Egypt, European Union, Ghana, Guatemala, Indonesia, Jamaica, Republic of Korea, Mexico, Myanmar, Nauru, Nigeria, Sierra Leone, South Africa, Tonga, Trinidad and Tobago and Uganda) and observers (Ethiopia, Centre for Borders Research of Durham University, Interridge and Pew Charitable Trusts) of the International Seabed Authority, experts from international, regional and national organizations (African Union, Commonwealth, Department of Economic and Social Affairs of the United Nations, Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), National Deep Sea Centre (Joint Training and Research Centre), National Oceanography Centre, Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, Technology Bank for the Least Developed Countries, United Nations Environment Programme, UNESCO, United Nations Children’s Fund and World Maritime University), contractors (China Ocean Mineral Resources Research and Development Association (COMRA), Deep Ocean Resources Development (DORD), Federal Institute for Geosciences and Natural Resources (BGR), Global Sea Mineral Resources NV (GSR), Japan Oil, Gas and Metals National Corporation (JOGMEC), Nauru Ocean Resources Inc. (NORI), Tonga Offshore Mining Ltd. (TOML) and UK Seabed Resources Ltd.) and national experts (from Ghana, India, Kiribati and Togo). Both the review and the workshop were informed by an advisory committee established by the Secretary-General to provide expert input and strategic advice to the secretariat. The list of members of the advisory committee is provided in annex 1 to the 2020 review. The draft of the review was further revised in the light of comments from the advisory committee, the training subgroup of the Commission, participants in the workshop and inputs received from Colombia, Cuba, Norway, Peru and the Philippines during a public consultation held between April and June 2020. It should be noted that Colombia and Peru are observers to the Authority.

⁶ ISBA/26/A/7.

⁷ ISBA/26/A/18.

⁸ ISBA/19/LTC/14.

Preparatory Commission established the training programmes to be carried out in the context of pioneer investors' activities, for which draft principles, policies, guidelines and procedures were laid down.⁹

5. The fundamental importance of international technical and scientific cooperation with regard to activities in the Area, including the training of personnel of the Enterprise and nationals of developing States, is recognized in articles 144, 148 and 274 of the Convention, as read in conjunction with section 5 of the annex to the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

6. Training programmes are formulated following negotiations of an approved plan of work between the Authority and successful applicants or the contractors and then included as schedule 3 to the contract for exploration. The regulations on prospecting and exploration for polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area¹⁰ provide that:

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.¹¹

7. Section 8 of the standards clauses for exploration contract¹² provides that:

8.1 In accordance with the regulations, the contractor shall, prior to the commencement of exploration under this contract, submit to the Authority for approval proposed training programmes for the training of personnel of the Authority and developing States, including the participation of such personnel in all of the contractor's activities under this contract.

8.2 The scope and financing of the training programme shall be subject to negotiation between the contractor, the Authority and the sponsoring State or States.

8.3 The contractor shall conduct training programmes in accordance with the specific programme for the training of personnel referred to in section 8.1 hereof approved by the Authority in accordance with the regulations, which programme, as revised and developed from time to time, shall become a part of this contract as schedule 3.

8. The contractor training programme can be divided into four distinct periods: (a) 1988 to 2007; (b) 2008 to 2013; (c) 2013 to 2020; and (d) post-2020.

B. 1988 to 2007

9. During the period 1988–1999, the pioneer investors' period, 27 nationals from 19 countries received training. Each pioneer investor had to train two to three

⁹ See LOS/PCN/SCN.2/L.6/Rev.1.

¹⁰ ISBA/19/C/17, annex, ISBA/16/A/12/Rev.1, annex, and ISBA/18/A/11, annex, respectively.

¹¹ See, for example, ISBA/19/C/17, regulation 27.

¹² ISBA/19/C/17, annex IV, ISBA/16/A/12/Rev.1, annex 4, and ISBA/18/A/11, annex IV.

participants only.¹³ Five of those were trained by Germany under a special arrangement. The training content included lectures, practical assignments and on-board training for a duration of 9 to 12 months.

10. No contractor trainings were recorded for the period 2000–2007. With the exception of the Federal Institute for Geosciences and Natural Resources, which signed its contract in 2006, only the former registered pioneer investors that had already fulfilled their training obligations under resolution II were carrying out activities in the Area at that time.

11. In 2001, the Authority commissioned a report on the efficiency of training programmes under the pioneer investors regime from Baidy Diène, a former member of the Commission, with a view to evaluating the training programmes conducted by pioneer investors.¹⁴

C. 2008 to 2013

12. The period 2008 to 2013 recorded 10 individuals who received training under the contractor training programme.

13. In 2013, the Authority commissioned an external study to review the training and capacity-building obligations of exploration contractors.¹⁵ The study reviewed, inter alia, the implementation of the programme and provided short, medium- and long-term recommendations. One of the important findings of the study led to the development and adoption, in 2013, of the recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration. This marked a critical step forward by setting the number of traineeships provided by the contractors at 10 for each five-year period of the contract. It also underscored the importance for each exploration cruise to include, in principle, a training component and a minimum of one at-sea training place. This led to a significant increase in training opportunities offered for the benefit of developing States members of the Authority.

D. 2013 to 2020

14. During the period 2013–2019, 118 individuals from 37 countries were trained. Of those trainees, 35 per cent were from the Group of African States, 35 per cent from the Group of Asia-Pacific States and 28 per cent from the Group of Latin American and Caribbean States. Of the total number of participants, 16 per cent (17 participants) were from small island developing States and 13 and 9 per cent (10 participants) were from least developed countries and landlocked developing countries, respectively. Various types of training were offered by contractors, the majority being at-sea training on board research vessels (57 per cent), followed by short-term onshore training courses and fellowships (16 per cent), participation in seminars, workshops and conferences (12 per cent), internships (11 per cent) and master's degrees and PhD programmes (4 per cent).

¹³ The trainings carried out during the registered pioneer investors regime were taken into account when exploration activities regulated by the exploration regulations started. Accordingly, the seven pioneer investors were exempted from training obligations. The exemption ceased to apply when they were granted five-year extensions to their contracts in 2016/17.

¹⁴ Baidy Diène, “Report on the training programme – Assessment, evaluation, future training programme”, prepared for the International Seabed Authority, 2001.

¹⁵ See [ISBA/19/LTC/7](#) and [ISBA/19/LTC/CRP.7/Rev.1](#) on recommendations for the guidance of contractors and sponsoring States relating to training programs under plans of work for exploration.

15. In 2019, in a report on training prepared for the Commission, the secretariat projected that, on the basis of existing contracts and extension agreements, about 260 new training placements would be available to candidates from developing States between 2020 and 2023.¹⁶ This represents more than two and a half times the number of opportunities offered between 2013 and 2019.

E. Post-2020

16. To date, 31 contracts are in force and, considering that each contractor is expected to provide 10 training opportunities in each five-year period, it is expected that there could be as many as 310 opportunities in the coming five-year period (2020–2024), with an average of 60 training placements per year.

17. The 2020 review provided the opportunity to collect inputs from contractors and former trainees. In total, 13 contractors¹⁷ responded to the survey and provided inputs on key issues, such as the focus of the training offered, experience with the candidates, communication with the Authority, challenges in conducting the training programmes and suggestions for future training programmes. A total of 40 responses were received from 108 former trainees. The former trainees were from 22 countries from various regional groups, including the Group of Asia-Pacific States (28 per cent), the Group of African States (33 per cent) and the Group of Latin and Caribbean States (33 per cent). The responses received are further detailed in annex 5 to the 2020 review.

18. As noted in the 2020 review, the implementation of the contractor training programme has improved over the years with the issuance by the Commission of recommendations for the guidance of contractors and sponsoring States and the implementation by the secretariat of the recommendations put forward in various reports and reviews. However, several challenges remain.

III. Principal issues identified in relation to the implementation of the recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration

19. At the eighteenth session, the Commission considered a document on the status of applications from candidates for training programmes to be provided by exploration contractors pursuant to their contracts with the Authority.¹⁸ During the discussion on training programmes, it was noted that it would be helpful to the Secretary-General if the Commission were able to draw up recommendations for the guidance of contractors in devising and implementing training programmes.¹⁹ In response to that request, the secretariat prepared a document for consideration by the Commission at the nineteenth session in which it highlighted a number of issues identified at the time in relation to the design and implementation of training programmes and proposed the establishment of a set of guidelines to address them.²⁰ As a result, the Commission adopted at that session recommendations for the

¹⁶ See 2020 review, figure 1 and para. 26.

¹⁷ BGR, COMRA, China Minmetals Corporation, DORD, GSR, Government of India, Interoceanmetal Joint Organization, JOGMEC, Government of the Republic of Korea, Ocean Mineral Singapore, NORI, TOML and UK Seabed Resources Ltd.

¹⁸ See [ISBA/18/LTC/9](#) and Add.1

¹⁹ See [ISBA/18/C/20](#), para. 18

²⁰ See [ISBA/19/LTC/7](#).

guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration.

20. The recommendations have contributed significantly to enhancing the efficiency of the contractor training programme by providing important guidance on the content of training programmes, in particular the requirement to provide the training equivalent of at least 10 trainees for each five-year period of the contract. At the twenty-second session, in the light of the increasing number of training opportunities, the Commission decided to revise the recommendations and established a working group to make suggestions in that regard. Owing to time constraints, the revision of the recommendations has however been deferred.

21. In implementing the recommendations, several issues have been identified that require further consideration by the Commission, including the selection process and the role and responsibilities of the contractors, the secretariat and the Commission, namely:

- How should a “training equivalent of at least 10 trainees” be understood?
- What measures need to be taken to better implement the requirement that training programmes must focus on practical training in the conduct of exploration and provide for full participation by such personnel in all activities covered by the contract?
- How can the contractor training programme be adjusted to align with the priority needs of developing States, as identified by them?
- What measures, if any, need to be taken to promote the training of personnel of the Authority (Enterprise)?
- What measures can be taken to address the problem of the lack of suitable candidates?
- What measures should be taken to improve the participation of women in the contractor training programme?
- Where a training opportunity cannot be pursued because of, for example, visa denial, should the contractor be required to offer another training placement or should the missed opportunity be recorded against the contractual obligation?
- What minimum incidental costs should contractors cover (e.g., insurance)?
- What should be the approach to third-party training?
- How can monitoring and evaluation be improved?

A. Issues relating to the content of training programmes

22. The most significant and recurring issues that have occurred in relation to the conceptualization, design, development and implementation of the programmes relate to the interpretation of the concepts of “equivalence” and “practical training”.

23. Pursuant to paragraph 16 of the recommendations, contractors should, as a minimum, provide for the training equivalent of at least 10 trainees during each five-year period of the contract. However, no indication is given on the specific meaning of “training equivalent”, which has therefore been left to the interpretation of the secretariat and the contractors. If the absence of precise criteria or measurement allows for flexibility, in practice, this has proved to also lead to divergent interpretations. As a result, the nature and type of training opportunities offered by contractors can vary significantly, ranging from a two-day workshop to a four-year PhD programme. In some cases, the difference in content that is generated by such a

situation results in discrepancies in terms of the benefits provided to the trainees, which, in turn, calls for more consistency in the overall impacts of the training programmes. The difference of impacts attached to each require that further consideration be given to the best practicable way of ensuring such equivalence.

24. Some differences have also been identified in the implementation of paragraph 15 of the recommendations, in which it is explicitly indicated that contractors must provide training that is “practical” and it is required that contractors provide training focused on exploration activities and, where practicable, on all activities within the contractors’ plan of work. Similarly, the phrase “all activities covered by the contract” has lent itself to varied interpretations when coupled with the need for practical training or when a contractor wishes to use third-party trainers, such as general courses on the law of the sea in summer academies. In line with paragraph 15 of the recommendations, and even though it is reminded in paragraph 4 thereof that the regulations on prospecting and exploration provide that training programmes must focus on training in the conduct of exploration and provide for full participation by such personnel in all activities covered by the contract, further clarification on how to implement such training in practical terms would be useful to ensure that the activities undertaken comply with the provisions of the Convention and meet the needs identified by developing States. The importance of that issue was highlighted by several former trainees who provided inputs for the 2020 review. A majority of them (55 per cent) noted that onshore training had not been satisfactory and that the activities provided were not relevant to their expertise.²¹ Improving the recommendations on that particular point will also enable better planning, taking into consideration the different nature of activities proposed and the balance in disciplines (e.g., environmental management and monitoring, geology, data management and law and policies related to activities in the Area).

25. In addition, and further to the 2020 review, the workshop held in February 2020 and the decision of the Assembly of December 2020,²² some adjustments to the current recommendations could be considered to ensure that all capacity-building and capacity development programmes and initiatives are aligned with and meet the priority needs of developing States, as identified by them, in particular least developed countries, landlocked developing countries and small island developing States.²³ This was also highlighted in the recommendation submitted by the training subgroup of the Commission for the 2020 review that an overarching framework for the content of the training be developed to ensure that the process by which valuable research, skills, knowledge or technology are delivered to the developing States are relevant and effective.

26. Pursuant to the decision of the Assembly of December 2020, specific provisions should also be included in the recommendations to facilitate the participation of personnel of the Authority. On that particular point, it should be noted that, to date, no staff member of the Authority has benefited from such training. Recently, in February 2021, Tonga Offshore Mining Ltd. (TOML) offered a placement to the Secretariat, which, after an internal selection process, has been granted to the Geographic Information Systems officer, who will join an exploration cruise in November 2021.

²¹ 2020 review, p. 71.

²² ISBA/26/A/18.

²³ ISBA/26/A/7, para. 36 (a).

B. Issues relating to the selection process

27. Most of the contractors (80 per cent) having provided inputs for the preparation of the 2020 review indicated their satisfaction with the quality and performance of the selected participants, noting, however, that in some cases, the programmes had to be modified to meet the candidates' backgrounds.²⁴ A few issues were also identified in relation to the selection process. One of them is that, occasionally, not enough applications from suitably qualified candidates are received. This raised the question of the consideration to be given to repeat applicants who have already benefited from a prior training placement.

28. It should be recalled that, on two occasions, the Commission put forward recommendations in that regard. In 2017, it recommended that, to ensure that as wide a cross section of candidates from developing States as possible benefit from those opportunities, such applicants not be considered for another training opportunity for a period of five years.²⁵ In 2018, the Commission clarified that recommendation by adding that, while such applicants should not be considered for a training opportunity similar to the type that they had received within the past five years, they could, however, apply for another type of training within five years of receiving another training opportunity, specifying that that fact would have to be noted.²⁶

29. Of particular importance is also the need to ensure that the selection process enables more women to apply. As noted in the 2020 review, of the 108 candidates who benefited from the contractor training programme between 2013 and 2019, 49 were women (45 per cent). It is true that the proportion of women has been gradually increasing since the pioneer investors regime, when only two women benefited from the trainings provided, to then represent 25 per cent of the trainees in 2014, 42 per cent in 2017 and 50 per cent in 2019. However, more needs to be done.

30. Since 2017, some important measures have been initiated by the secretariat, in cooperation with contractors, after the Authority registered with the United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, held in 2017, a voluntary commitment to enhancing the role and participation of women in marine scientific research. The commitment was recently strengthened by the launch of a dedicated project entitled "Women in deep-sea research"²⁷ led by the Authority and implemented together with the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, which is aimed at advancing women empowerment and leadership in deep-sea research, in particular for women scientists from developing States, especially least developed countries, landlocked developing countries and small island developing States. Several contractors have already confirmed their commitment to that goal by allocating half of their training opportunities to women (Marawa Research and Exploration Ltd., Nauru Ocean Resources Inc. and TOML). The inclusion in the recommendations for the guidance of contractors and sponsoring States of provisions encouraging contractors to establish and develop positive measures in favour of women's empowerment and leadership through the delivery of the contractor training programme is likely to be useful.

²⁴ 2020 review, p. 69.

²⁵ ISBA/23/LTC/7, para. 16 (b).

²⁶ ISBA/24/LTC/5, para. 21 (b).

²⁷ See www.isa.org.jm/vc/enhancing-role-women-mst/WIDSR-project.

C. Issues relating to implementation

31. A recurring issue in the implementation of the contractor training programme relates to the implications of the late issuance of visas. This particular impediment was also highlighted by the training subgroup of the Commission in its comments for the 2020 review, raising the question of the implications of such issue for contractors. In a few cases, training places have been lost because of rejected or delayed visa applications for trainees to travel to the countries of training or, in some cases, to the countries of embarkation for at-sea training. In such a situation, clarification is needed as to whether the contractor should be required to offer another training placement.

32. Another point for consideration relates to the minimum incidental cost to be covered under the contractor training programme. Contractors have adopted a variety of approaches, including in relation to medical incidental cost and stipend, and more consistency would be beneficial. For example, 62 per cent of the trainees who provided inputs for the 2020 review indicated that they were paid through the course of the training. Furthermore, 75 per cent indicated that they had been provided with insurance during travel, whereas 25 per cent did not receive any insurance coverage.²⁸

33. The use of third-party entities by contractors also require further discussion and consideration, in particular to determine the conditions under which their activities would comply with the objectives of the contractor training programme and ensure that their selection process is aligned with the one established under the recommendations. Clear guidance is particularly needed as to the role of the secretariat and the Commission in approving the use of such entities, including with regard to guaranteeing the quality of the activities undertaken and their overall benefits for the trainees.

34. Consideration could also be given to requesting further information from contractors on the resources allocated to their training programmes. The 2020 review identified significant variation in some of the amounts communicated, voluntarily, by contractors.²⁹ It was noted, for example, that the average cost per trainee could range over a five-year period from \$9,450 to \$130,150 and represent between 0,5 and 7 per cent of the total costs of exploration operations.

D. Reporting, monitoring and evaluation of impact

35. Training, as a form of capacity-building and development, must be understood as a long-term and complex process that evolves in time, in particular to meet the needs of developing States members of the Authority. It is therefore essential for contractors and the Authority to be able to adjust the training programmes and activities delivered regularly. To that end, information is needed on the benefits and impact of those programmes and activities.

36. In their replies to the survey conducted in preparation for the 2020 review, several contractors highlighted the difficulty in ascertaining whether the candidates had used the skills developed during the trainings provided after returning to their parent organizations.³⁰ To date, because of the absence of clear indicators and targets, the secretariat is also not able to provide any qualitative information on that issue. In fact, this issue was also identified by the training subgroup of the Commission as in need of improvement in their comments submitted for the 2020 review when it noted that there should be an overarching monitoring and evaluation framework designed

²⁸ See 2020 review, p. 72.

²⁹ Ibid., p. 18 and table 1.

³⁰ Ibid., para. 46.

to evaluate the effectiveness of the training. One of the associated activities of the framework could be the design of a tracer study to follow the career paths of former trainees to inform the Authority and the Commission on the allocation of future training opportunities.³¹

37. Collecting regular feedback is also essential, and it would be important that both trainees and contractors reply to a post-training survey from the secretariat, in addition to the reporting procedure envisaged in section VI of the recommendations.

IV. Recommendations

38. The Commission is invited to take note of the elements contained in the present document.

39. The Commission is also invited to review the recommendations for the guidance of contractors and sponsoring States relating to training programmes under plans of work for exploration and, for that purpose, to request that the training subgroup work together with the secretariat intersessionally and submit draft revised recommendations for consideration by the Commission at its twenty-seventh session, in February/March 2022.

³¹ Ibid., p. 64.