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## Issues associated with the conduct of marine scientific research in exploration areas

### Report of the Secretary-General

#### Introduction

1. One of the consequences of the increase in the activities in the Area, which is manifested in the increase in the number of approved plans of work for exploration from 7 in 2011 to 27 in 2016, is an increase in the potential for conflict between contractors and researchers over the marine scientific research being conducted on the seabed in exploration areas. Many activities that are frequently carried out as part of an exploration campaign, and can therefore be considered “activities in the Area” within the definition of that term in article 1 (3) of the United Nations Convention on the Law of the Sea, may also be carried out as marine scientific research. These activities include, for example, side-scan sonar mapping using autonomous underwater vehicles, box core and multicore sampling, conductivity, temperature and depth probe measurement and deployment of remote-operated vehicles for purposes of high-density photo profiling.

2. Under article 256 of the Convention, all States and competent international organizations may conduct marine scientific research in the Area in conformity with the provisions of part XI. The relevant provision in part XI is article 143, which provides that marine scientific research in the Area shall be carried out exclusively for peaceful purposes and for the benefit of mankind as a whole, thus distinguishing it from marine scientific research conducted pursuant to article 87 (1) (f) in part VII. At the same time, the exploration regulations further provide that the regulations shall not in any way affect the freedom of scientific research, pursuant to article 87 of the Convention, or the right to conduct marine scientific research in the Area pursuant to articles 143 and 256. The Convention and the exploration regulations also require the Authority to accord to contractors the exclusive right to explore the area covered by a plan of work for exploration and to ensure that no other entity operates in the same area for resources other than those covered under the contract in a manner that might interfere with the operations of the contractor.

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3. Open and extensive marine scientific research, both in the high seas and in the Area, is necessary and desirable for many reasons. Data from marine scientific research helps to provide the knowledge base for the formulation of regulations for exploitation. Sound environmental management of the Area is likely to require large databases and thorough data analysis, which are difficult for individual contractors to acquire. A complete environmental impact assessment is very likely not possible based solely on an individual contractor's exploration area, but requires a bigger picture across environmental gradients. On the other hand, contractors are required to observe strict environmental standards and to monitor the impacts of their activities in their exploration areas. Both activities should normally complement each other, but in particular circumstances it may be that activities conducted by third parties as marine scientific research could interfere with a contractor's ongoing efforts to monitor the environmental impacts of its exploration activities. The question of how to reconcile the possibly competing interests of contractors and researchers raises a number of complex and sensitive legal questions and concerns. Furthermore, the need to guarantee both the security of tenure for contractors, on one side, and the exercise of the rights and freedoms of marine scientific research, on the other, is essential for good governance and administration of the mineral resources of the Area. The purpose of the present document is to briefly summarize those questions and to identify possible ways of responding to them consistent with the relevant provisions of the Convention.

#### **Applicable rules of the international law of the sea regarding marine scientific research**

4. Article 87 (1) (f) of the Convention provides that the freedom of the high seas includes the freedom of marine scientific research, subject to part XIII. Article 87 (2) requires that the freedoms of the high seas be exercised by all States with due regard for the rights under the Convention with respect to activities in the Area. Part XIII of the Convention deals extensively with marine scientific research. Two of the general principles for the conduct of marine scientific research, set out in article 240 (c) and (d) of part XIII, are that marine scientific research shall not unjustifiably interfere with other legitimate uses of the sea compatible with the Convention and shall be duly respected in the course of such uses, and that marine scientific research shall be conducted in compliance with all relevant regulations adopted in conformity with the Convention, including those for the protection and preservation of the marine environment. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is the recognized organization for global cooperation in the study of the oceans. In this capacity, the Intergovernmental Oceanographic Commission of UNESCO has been promoting international collaboration in all aspects of marine scientific research since its inception in 1960. It established the Advisory Body of Experts on the Law of the Sea to deal with many of the issues arising under the Convention, in particular the establishment of criteria and guidelines to assist States in ascertaining the nature and implications of marine scientific research, pursuant to article 251 of the Convention.

5. Article 256 provides that all States have the right to conduct marine scientific research in the Area in conformity with the provisions of part XI. In that regard, article 143 (3) provides that States parties may carry out marine scientific research in the Area and shall promote international cooperation in such research through a number of stipulated methods, including by effectively disseminating the results of

such research and analysis when available, through the Authority or other international channels when appropriate. In contrast, article 257 provides that all States have the right to conduct marine scientific research in the water column beyond the limits of the exclusive economic zone, i.e., in the water column superjacent to the Area and any extended continental shelf beyond 200 nautical miles from the baselines, in conformity with the Convention.

#### **Applicable rules of the international law of the sea in part XI of the Convention**

6. Article 139 (1) of the Convention provides that all States parties have the responsibility to ensure that activities in the Area, whether carried out by States parties or by natural or juridical persons which possess the nationality of States parties or are effectively controlled by them, are carried out in conformity with part XI of the Convention. Paragraph 2 of the same article sets out the conditions for liability of a State Party for damage caused by a failure to carry out its responsibilities under part XI.

7. Article 145 requires that necessary measures be taken in accordance with the Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. Article 145 tasks the Authority with adopting appropriate rules, regulations and procedures to that end. It also provides a non-exclusive list of situations to be protected.

8. Article 147 (1) requires that activities in the Area be carried out with “reasonable regard” for other activities in the marine environment. Paragraph 3 of the same article contains a reciprocal provision requiring that other activities in the marine environment be conducted with “reasonable regard” for activities in the Area. Paragraph 3 follows article 87 (2), requiring that high seas freedoms be exercised with “due regard” for the rights under the Convention with respect to activities in the Area.

9. The term “reasonable regard” is not defined in the Convention. Given the provision of article 87 (2) noted above, it may be concluded that “reasonable regard” has the same meaning as “due regard”, a term also used in many other articles of the Convention (such as 27 (4), 39 (3) (a) and 234, with regard to navigation; 60 (3) and 66 (3) (a), with regard to fishing; 79 (5), with regard to submarine cables and pipelines; 56 (2), 58 (3) and 142 (1), with regard to the rights and duties of States; 267, with regard to the legitimate interests of other States in technology transfer; and 162 (2) (d) and 167 (2), with regard to geographical representation). The Virginia Commentary suggests that “reasonable regard” in the context of article 147 “would encompass recognition of the right of all States to conduct activities in the marine environment and the obligation on all States to protect and preserve the marine environment as set out in article 192”. Another commentator suggests that the term calls “for certain forms of conduct without establishing any specific normative content”.

10. It is reasonable to conclude that marine scientific research activities in the Area must not unreasonably interfere with a contractor’s rights and duties under its contract with the Authority and that the contractor and researcher, and the sponsoring State(s) of the contractor and the State responsible for the researcher’s activities, have to give due regard to the rights of each other to conduct their activity without undue interference with the activities of the other. It is, however,

unclear what level or kind of interference would exceed the “reasonable regard” standard, and the current provisions fall short of providing the scientific community and the deep-sea mining community with practical guidance as to what actions or consequences may constitute undue interference or what specific steps must be taken to fulfil the requirement of due regard (for example, a requirement of notification or prior exchange of information). In contrast to article 142 of the Convention regarding transboundary resource deposits, there is no specific provision in the Convention or the exploration regulations that deals with the situation in which the conduct of marine scientific research in the Area affects the rights of a contractor, not even requiring notice to the contractor or the Authority of the intention to conduct such research. It is possible that the lack of a specific provision supports an interpretation that a requirement of information exchange is implicit.

**Issues associated with environmental impact assessments and other environmental obligations imposed on contractors**

11. As stated above, article 240 (d) of the Convention requires that the conduct of marine scientific research be in compliance with all relevant regulations adopted in conformity with the Convention, including those for the protection of the marine environment. Furthermore, articles 205 and 206 of the Convention require States parties to conduct environmental assessments of planned activities under their jurisdiction and control that may cause substantial pollution of or significant and harmful changes to the marine environment, and to publicize the results of their assessment. In its 2010 judgment in the case concerning *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, the International Court of Justice held that this requirement is now part of customary international law. In its 2011 advisory opinion on *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, the Seabed Disputes Chamber extended the requirement to conduct environmental impact assessments to cover activities in the Area beyond the specifics of the Convention and the Authority’s regulations.

12. Contractors have numerous environmental obligations, including the establishment of environmental baselines and the conduct of monitoring programmes. The recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area, which contractors are required to observe as far as reasonably practicable, elaborate on and clarify the obligation of contractors to undertake environmental impact assessments. Where an environmental impact assessment is required, it must be submitted to the Authority one year prior to the commencement of activities, subject to an environmental impact assessment.

13. The problem arises that in certain cases, some marine scientific research activities may be activities that, if carried out by a contractor with a view to the exploration or exploitation of resources in the Area, would have required a prior environmental impact assessment under the recommendations issued by the Legal and Technical Commission. There is no clear requirement for researchers to carry out a prior environmental impact assessment if the same activities are carried out as marine scientific research. National obligations, including those in guidance documents, soft law or regional instruments, while relevant, may not afford a solid basis for such an obligation. The absence of a clear requirement for researchers to conduct an environmental impact assessment for relevant activities, particularly if

the plan is to work in a portion of the Area over which an exploration contract has been granted by the Authority, appears to cast doubt upon the purpose of requiring an environmental impact assessment pursuant to article 145. More practical guidance may be needed in this respect, potentially through the Advisory Body of Experts on the Law of the Sea if mandated by the governing bodies of the Intergovernmental Oceanographic Commission.

#### **Issues associated with responsibility and liability**

14. Another set of questions relate to responsibility and liability. Article 263, in part XIII, stipulates that States parties are responsible for ensuring that marine scientific research is conducted in accordance with the Convention (not part XIII only). Paragraphs 2 and 3 of article 263 provide for liability and require compensation for damage resulting from activities undertaken in contravention of the Convention and for damage caused by pollution of the marine environment arising out of marine scientific research activities.

15. Article 139, in part XI of the Convention, stipulates that States parties have the responsibility to ensure that activities in the Area, whether carried out by States parties, State enterprises or natural or juridical persons which possess the nationality of States parties or are effectively controlled by them or their nationals, are carried out in conformity with part XI. The same responsibility applies to international organizations for activities in the Area conducted by those organizations. Paragraph 2 of article 139 provides for joint and several liability for damage caused by failure to carry out its responsibility under part XI.

16. If the conduct of marine scientific research in an exploration area prevents a contractor from fully implementing its approved plan of work, will that constitute a case of non-compliance by the contractor and entail its liability? Will it qualify as an event of force majeure with the legal consequences that it entails regarding the performance of activities and the extension of the term of a contract? Since States parties have the responsibility to ensure that activities in the Area are carried out in conformity with part XI of the Convention, could such unreasonable interference entail liability for damage caused by a failure to carry out their responsibilities under part XI? Given that States parties are responsible to ensure that the conduct of marine scientific research does not contravene the Convention by unduly interfering with a contractor's exclusive rights, it seems inevitable to conclude that a case of interference could entail liability for damage caused to a contractor. It may be more difficult, however, to determine the proper forum for settlement of any dispute arising out of such a situation.

#### **Resolution of disputes**

17. In the event of a conflict between a contractor's activities and planned or existing marine scientific research, there are many modalities for seeking a resolution. As a starting point, the Authority could mediate between the States parties, contractors and researchers involved in order to accommodate their activities. Ultimately, part XV of the Convention provides a comprehensive regime for the settlement of disputes. Articles 279 and 280 require States parties to settle any dispute between them concerning the application or interpretation of the Convention by the peaceful means of their own choice. Article 288 (3) refers to the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea,

established pursuant to section 5 of part XI. Article 187 enumerates categories of disputes with respect to activities in the Area that fall under the jurisdiction of the Chamber. In particular, the Chamber has jurisdiction over disputes between States parties concerning the interpretation or application of part XI and the annexes relating thereto as well as over disputes between a State party and the Authority concerning acts or omissions of the Authority or of a State party alleged to be in violation of part XI or the annexes relating thereto or of rules, regulations and procedures of the Authority.

18. Article 264 requires that disputes concerning the interpretation or application of the provisions of the Convention with regard to marine scientific research be settled in accordance with part XV, sections 2 and 3. As already mentioned, section 2 of part XV provides, in article 288 (3), for the jurisdiction of the Seabed Disputes Chamber. Article 290 provides for provisional measures in cases in which the court or tribunal considers that, *prima facie*, it has jurisdiction under part XV or section 5 of part XI, when appropriate under the circumstances of the case to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending a final decision.

19. The settlement of disputes by courts or tribunals would inevitably be fact-specific and may not address the whole range of legal issues as outlined above. It may also result in forum-shopping, and the risk of inconsistent interpretations of the same provisions may not be ruled out. In any event, disputes should, wherever possible, be avoided. Consequently, contentious litigation might not be the most appropriate way to clarify the core issue related to the interpretation and application of the due regard obligation and provide legal certainty as to appropriate conduct to avoid undue interference between researchers and contractors.

20. One way to avoid future disputes may be to further develop the exploration regulations in order to lay down specific rules for contractors and researchers. These could be supplemented by guidelines of a practical nature. In that regard, it may be noted that under the current regulations, during the prospecting phase prospectors are required to minimize or eliminate “actual or potential conflicts or interference with existing or planned marine scientific research activities, in accordance with the relevant future guidelines in this regard”. Unfortunately, no guidelines have yet been established pursuant to that provision, and the regulations do not address the situation during exploration and exploitation phases, which is when the issue of the contractors’ exclusive rights arises. However, perhaps the main difficulty with the regulatory approach, and one that makes it unrealistic, is the need to ensure full consistency with the rights and obligations of States and the Authority in accordance with the Convention, in particular article 143.

21. In any event, additional regulatory controls may not be an appropriate response to what is essentially a need for the clarification of existing provisions, in particular the reciprocal obligation of “reasonable regard”. Such clarification could more appropriately be obtained by means of a request for an advisory opinion of the Seabed Disputes Chamber. Article 191 of the Convention requires the Chamber to give advisory opinions at the request of the Assembly or the Council on legal questions arising within the scope of their activities. Such opinions must be rendered as a matter of urgency. In addition to avoiding the need to address the issues in the context of a specific dispute, that approach also has the benefit of greater transparency. In addition, it would allow the Chamber to benefit from

submissions on the subject matter from all States parties, including researching States and sponsoring States, as well as relevant international organizations, including the Authority and the Intergovernmental Oceanographic Commission.

22. Advice rendered by the Chamber on this important topic could contribute to the development of future regulations for exploitation by the Authority, as well as to the development of guidance for researchers by the Intergovernmental Oceanographic Commission through the Advisory Body of Experts on the Law of the Sea. Such advice could also contribute to the discussions in the preparatory committee established by the General Assembly in its resolution 69/292 to make substantive recommendations to the Assembly on the elements of a draft text of an international legally binding instrument under the Convention on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

### **Summary of questions arising**

23. On the basis of the above discussion, it is suggested that the main legal issues requiring clarification are as follows:

(a) Does the phrase “other activities in the marine environment” in article 147 (3) of the Convention include marine scientific research in the Area?

(b) What is the meaning of the term “reasonable regard” in article 147 (3) of the Convention with respect to activities in the Area, and is this meaning the same as that of the term “due regard” in article 87 (2)?

(c) What conduct would unreasonably interfere with a contractor’s rights and obligations in its exploration (or future exploitation) area?

(d) Is a prior environmental impact assessment required for the conduct of certain marine scientific research activities in the Area on the same basis as contractors are obliged to conduct in relation to some specific exploration activities, especially in the light of articles 204 and 206?

(e) What procedure should be adopted in the situation in which an entity conducting marine scientific research does not have a separate legal personality enabling a clear assignment of liability or responsibility, as in the common case of international scientific consortiums of institutions receiving funding from various States?

24. The Council is invited to consider the issues raised in the present report and to take such action or make such recommendations as may be appropriate.