

## INTERNATIONAL LAW OF THE SEA

### VII. Marine Scientific Research

#### 1. Introduction

- The issue is marked by diverging and potentially colliding interests
- While studying the Part XIII of UNCLOS, one might take into account that the mechanism to regulate marine scientific research is a balance between the right to conduct it (for the researching State) and the granting of consent by the coastal State.
- As a reminder: the further from the coast, the less rights a coastal State exercise in general.
- This point of departure finds its roots in the *North Sea Continental Shelf Cases* where the International Court of Justice held that the ‘land dominates the sea’.
- There is general agreement that marine scientific research is important to enhance our knowledge about the oceans either as an end in itself (basic scientific research) or with a view to possible uses (applied scientific research) or for enhanced protection of the oceans. Scientific data is a prerequisite for filling with life many open terms used by international treaties (e.g. maximum sustainable yield; good environmental status; best practice; sustainability)
- While States active in undertaking marine scientific research activities propagate the general freedom of research, coastal States are concerned about control and security
- The UNCLOS promotes marine scientific research but makes research activities dependent upon the express consent of the coastal State in its coastal waters and provides for a principally consent-based regime concerning research in the EEZ and on the continental shelf
- The term marine scientific research is not defined by the Convention
  - The lack of a definition has the evident disadvantage of not knowing what is to be considered marine scientific research and what not.
  - However, the advantage of a lacking definition is the option of potential coverage for future developments in marine scientific research.
  - It seems that hydrographic surveys are apparently not included in marine scientific research. (Art. 40 UNCLOS)

- A study prepared by the Secretariat of the CBD and the UN Division for Ocean Affairs and the Law of the Sea (UNDOALOS) on the relationship between the CBD and UNCLOS stated that "marine scientific research could be defined as an activity that involves collection and analysis of information, data or samples aimed at increasing humankind's knowledge of the environment, and is not undertaken with the intent of economic gain". (Study of the Relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with Regard to the Conservation and Sustainable Use of Genetic Resources on the Deep Seabed, UN Doc. UNEP/CBD/SBSTTA/8/INF/3/Rev.1)
  - Yet, the requirement that research is undertaken without the intent of economic gain is questionable. The UNCLOS has not been limited to basic or fundamental research. This becomes evident for certain specific rules concerning applied research on resources in the EEZ and on the Continental Shelf in accordance with Art. 246 (5) (a).
  - Funding by industry is a relevant financial source for the often expensive marine scientific research activities.

## 2. General principles

- Marine scientific research needs to be peaceful and – evidently – scientific. (Art. 240(b) and (c))
  - Other provisions in UNCLOS reserve the exclusive economic zone, the high seas and the Area already for peaceful purposes. (Art. 58(2), 88, 141, 143(1)).
  - A general provisions sets out that in this regard States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State in accordance with Art. 301
- Every State has the right to conduct marine scientific research – no matter what their geographical location is, i.e. including land-locked States – but it should take into account the rights and duties of other States. (Art. 238, 240(c))
- States cannot claim rights over the marine environment or its resources on the basis of their conduct of marine scientific research, neither on the basis of the used installations or equipment, which do not have the status of islands. (Art. 241, 259 UNCLOS) Whether that is also true for intellectual property rights is uncertain. Arguably, exclusive rights in the form of e.g. patents are not directly based upon the research activities but upon the subsequent development using the samples. Yet, marine scientific research is inseparably linked to the relevant applications developed from using e.g. samples or marine substances.
- Installations should be marked and be identifiable. Safety zones around these installations might be created up to a breadth of 500 metres but no interference with international shipping routes is allowed. (Art. 262, 260, 261)

### **3. Promotion of research**

- UNCLOS urges States and competent international organisations to promote and facilitate (the development of) marine scientific research and to cooperate for that purpose. (Art. 239, 242-244)
- ‘States and competent international organizations shall cooperate, through the conclusion of bilateral and multilateral agreements, to create favourable conditions for the conduct of marine scientific research in the marine environment and to integrate the efforts of scientists in studying the essence of phenomena and processes occurring in the marine environment and the interrelations between them.’ (Art. 243)
- Beyond their territorial sea, ‘States shall endeavour to adopt reasonable rules, regulations and procedures to promote and facilitate marine scientific research (...) and, as appropriate, to facilitate, subject to the provisions of their laws and regulations, access to their harbours and promote assistance for marine scientific research vessels’. (Art. 255)
- The Authority, additionally, ‘shall promote and encourage the conduct of marine scientific research in the Area, and shall coordinate and disseminate the results of such research.’ (Art. 143(2))
- Furthermore, the availability and dissemination of data and research should be provided for. Special attention in this regard needs to be given to developing States. (Art. 244)

### **4. Rights of the coastal State**

#### **a) Territorial sea**

- ‘Coastal States, in the exercise of their sovereignty, have the exclusive right to regulate, authorize and conduct marine scientific research in their territorial sea.’ (Art. 245 UNCLOS)
- It is herewith emphasised that the coastal States exercises sovereignty in the territorial sea and that its ‘right to regulate, authorize and conduct’ is exclusive.
- Coastal States need to give their express consent for the conduct of marine scientific research in their territorial sea under its own conditions.
- Innocent passage, transit passage and passage through archipelagic sea lanes do not include marine scientific research and survey activities. (Art. 19(2)(j), 40, 52(1), 54)

#### **b) EEZ and continental shelf**

- ‘Coastal States, in the exercise of their jurisdiction, have the right to regulate, authorize and conduct marine scientific research in their exclusive economic zone and on their continental shelf in accordance with the relevant provisions of this Convention.’ (Art. 246(1))

- Clearly, coastal States can only exercise certain jurisdictional rights in the exclusive economic zone and on the continental shelf, no sovereignty.
- The ‘right to regulate, authorize and conduct’ is subject to UNCLOS, not to its own conditions.
- Coastal States need to give their consent for the conduct of marine scientific research in their exclusive economic zone (Art. 246(2)). This consent is normally implied until the project starts. (Art. 248, 252)
- The ‘relevant provisions’ state that coastal States should grant consent ‘in normal conditions’ and that this should not be unreasonably delayed or denied. (Art. 246(3) UNCLOS)
- UNCLOS lists four instances where a coastal State not necessarily has to grant consent:
  - when the ‘researching State or competent international organization has outstanding obligations to the coastal State from a prior research project’ or the researching entity does not comply with the conditions for the provision of prior information about the project (Art. 246 (5) (d), 248);
  - when the project ‘involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment’ (Art. 246 (5) (b));
  - when the project ‘is of direct significance for the exploration and exploitation of natural resources’ within 200 nautical miles from the baseline (Art. 246 (5) (a), (6));
  - when the project ‘involves the construction, operation or use of artificial islands, installations and structures’ (Art. 246 (5) (c)).
- ‘Marine scientific research activities referred to in this article shall not unjustifiably interfere with activities undertaken by coastal States in the exercise of their sovereign rights and jurisdiction provided for in this Convention.’ (Art. 246(8))

### **c) Participation and dissemination of results**

- The coastal State has the right to participate – or to be represented – in the research project without payment to its scientists. In addition, the coastal State shall be updated regularly about the project and be supplied with data and reports including the final ones. Any installations and equipment can be required to be removed. (Art. 249)
- Researching States and competent international organizations ‘shall give notice to the neighbouring land-locked and geographically disadvantaged States of the proposed research project’. (Art. 254(1))

- These neighbouring States will also have the opportunity to participate and to be supplied with basic information and any major changes in the project. (Art. 254, 248, 249 (1) (f))

## **5. International Seabed Authority**

- When marine scientific research – or marine bioprospecting – includes mining in the seabed, there is a potential involvement for the International Seabed Authority.
- The mineral resources retrieved from the Area are the common heritage of humankind (Art. 136 UNCLOS)
- International cooperation shall be achieved by participation in international research programmes. The Authority could develop special programmes ‘for the benefit of developing States and technologically less developed States’. (Art. 143(3)(b) UNCLOS)
- The fact that mining activities have to be for the benefit of all mankind and exclusively for peaceful purposes concurs with the same obligations concerning marine scientific research. (Art. 140, 141, 240(a) and 246(3) UNCLOS)
- The Authority can develop rules for
  - the transfer of technology (Art. 144 UNCLOS)
  - the protection of the marine environment (Art. 145 UNCLOS)
  - the protection of human life (Art. 146 UNCLOS)

## **6. Settlement of disputes**

- UNCLOS’ Part XV on the Settlement of Disputes is applicable to marine scientific research with the exception that coastal State does not have to accept the procedure when the dispute concerns the coastal State’s decision not to consent or to suspend or cede the project. (Art. 264, 297 (2) UNCLOS)
- During the settlement of the dispute, the researching entity shall suspend the project unless the coastal State grants its express consent to continue. (Art. 265 UNCLOS)

## **7. Difficulties and open questions**

- operational oceanography
  - Buoys floating with currents and ‘straddling’ between high seas and exclusive economic zone (Argo floats) might cause difficulties with regard to the consent of a coastal State that is necessary to conduct marine scientific research.
  - The United States of America is one of the countries that use voluntary observing vessels to obtain data about ocean space. This data collection is most often not conducted by scientists and not one of the major activities of the conductors. It might therefore be questions what the legal status of such action is and

how this might interfere with innocent passage, transit passage or archipelagic sea-lane passage.

- Bioprospecting
  - The main difference with marine scientific research seems to be the fact that the bioprospecting occurs with purpose of economic gain whereas scientific research may by definition be restricted to non-profit activities.
  - The picture blurs when one takes into account that both marine scientific research and marine bioprospecting are considerably expensive and are therefore quite often sponsored by joint ventures between entities from the public and private sector.
  - This factual situation might have as a subsequent result that results of marine scientific are mostly published and publicly available. Contrary to this, results of marine bioprospecting are often kept secret simply because the information is too valuable.
  - For marine living resources, just the freedom of the high seas seems applicable and the freedom to conduct in bioprospecting outside any claimed water column should consequently only be exercised with due regard (Art. 87(2) UNCLOS).
  - As far as so called “genetic resources” are concerned the Convention on Biological Diversity is applicable only to areas within national jurisdiction (Art. 4 (a) CBD).
    - Its three main objectives are
      - conservation of biological diversity;
      - sustainable use of its components; and
      - fair and equitable sharing of the benefits arising out of the utilization of genetic resources.
  - ‘Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms.’ (Art. 19(2) CBD)

## 8. Conclusion

- Questions regarding what marine scientific research is, what relates to it and how this is all regulated on the international level are very topical.
- Concerning genetic resources within the national jurisdiction of coastal States, it should be regarded that ‘conservation of biological diversity is a common concern of humankind’. (preamble CBD)