MARINE GENETIC RESOURCES BEYOND NATIONAL JURISDICTION AND SUSTAINABLE DEVELOPMENT GOALS: THE PERSPECTIVE OF DEVELOPING COUNTRIES

A. GUSMAN SISWANDI
FACULTY OF LAW, UNIVERSITAS PADJADJARAN, BANDUNG, INDONESIA

STRUCTURE

• Introduction
• International legal regime related to marine genetic resources
• Sustainable Development Goals and marine genetic resources
• The perspective of developing countries
• Conclusion
INTRODUCTION

WHAT ARE “GENETIC RESOURCES”? 

• Part of “biological diversity” → the variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part
  • This includes diversity within species, between species and of ecosystems
• “Genetic material” → “any material of plant, animal, microbial or other origin containing functional units of heredity”
• “Genetic resources” → “genetic material of actual or potential value”
  (UN Convention on Biological Diversity, 1992)
WHY DO MARINE GENETIC RESOURCES MATTER?

• The development of marine natural products
  • Marine organisms have developed complex biological and chemical mechanisms for defence, attack and other still unknown purposes (de la Calle, 2009)
  • Over 14,000 new chemical entities have been identified from marine sources and at least 300 patents have been issued on marine natural products (Hunt and Vincent, 2006)
  • Since 1999, the number of marine species with genes associated with patents has been increasing at a rate of about 12% per year (Arrieta, et.al., 2010)

• The utilization of marine genetic resources
  • Marine bioprospecting ⇒ “the collection of small samples of biological material for screening in the search for commercially exploitable biologically active compounds or attributes such as genetic information” (Farrier and Tucker, 2001)
  • Marine genetic resources remain to be explored and are still rarely exploited for biotechnological gain (Allen and Jaspars, 2009)
  • Studies on trends in marine bioprospecting (e.g. Leal, 2012; Leary, et.al., 2009)

INTERNATIONAL LEGAL REGIME RELATED TO MARINE GENETIC RESOURCES
UNCLOS

• Marine genetic resources is not specifically addressed under UNCLOS
• Some provisions however are relevant
  • Marine scientific research and technology transfer (Part XIII & XIV)
    • Primarily established upon the regime of state sovereignty and jurisdiction at sea
    • Areas beyond national jurisdiction → freedom of marine scientific research
    • Peaceful purposes
    • Conducted with appropriate methods and means
    • Must not unjustifiably interfere with other legitimate uses of the sea
    • Conducted in compliance with all relevant regulations

UNCLOS

• Does not explicitly provide definition/scope of marine scientific research
• The utilization of marine genetic resources through bioprospecting = marine scientific research?
  • “... it is difficult to differentiate scientific research from commercial activities involving genetic resources, commonly referred to as bioprospecting” (UN Secretary General, 2005)
  • “Pure” v. “applied” research? → “there is considerable cross-over between the two, with pure science often forming the basis for practical oceans management decisions, and for further, commercially-oriented, research” (Rothwell and Stephens, 2010)
  • Other scholars → marine scientific research pursued for economic gains and involve the exploitation of marine living resources would belong to the UNCLOS regime on resources utilization
• The development of marine biotechnology/bioprospecting activities had not taken place when UNCLOS was negotiated
UNCLOS

• There is a need to interpret the UNCLOS provisions under Part XIII and Part XIV in light of recent developments regarding the utilization of marine genetic resources

• It may be argued that since marine biodiversity research and marine bioprospecting involve scientific method and applications, they should be viewed as parts of marine scientific research

• Since marine bioprospecting also involves the extraction of marine genetic resources aiming at commercial gains, it would also be related to the resource utilization regime under UNCLOS → sustainable utilization

UNCLOS

• Marine genetic resources within national jurisdiction
  • Arguably the law of coastal states will apply

• Marine genetic resources beyond national jurisdiction
  • UNCLOS provisions on high seas address freedom of fishing as well as conservation and management of living resources → but silent on “marine genetic resources”
  • UNCLOS provisions on the Area only addresses non-living resources / minerals
    • Art. 133 → “resources” means all solid, liquied or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules”
UN CONVENTION ON BIOLOGICAL DIVERSITY

- CBD recognizes that States have sovereign rights over their natural resources → national governments have the authority to determine access to genetic resources
- The grant of access shall be on mutually agreed terms and subject to prior informed consent of the Contracting Party providing genetic resources
- CBD requires each Party to take appropriate measures to ensure a fair and equitable sharing of benefits arising from the utilization of genetic resources with the provider country
- CBD does not contain particular provisions on marine genetic resources, and generally it only applies within national jurisdiction

NAGOYA PROTOCOL

- Reiterates the "access and benefit-sharing" provisions under the CBD
- Specifies further obligations undertaken by the Parties
- Contains provisions on "global multilateral benefit-sharing mechanism" and "transboundary genetic resources" → but does not particularly address marine genetic resources beyond national jurisdiction
INTELLECTUAL PROPERTY RIGHTS

- Patents/other IPRs
- Inventions
- Utilization of marine genetic resources
  Requires a special approach/mecanism
- MGR beyond national jurisdiction
- Biodiversity related inventions

SUSTAINABLE DEVELOPMENT GOALS AND MARINE GENETIC RESOURCES
GOAL 14: LIFE BELOW WATER

• Conserve and sustainably use the oceans, seas and marine resources for sustainable development

• 14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

• 14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of “The future we want”

SOME QUESTIONS

• “Scientific knowledge, research capacity, technology transfer” → do they include “marine biodiversity research/bioprospecting”?

• “taking into account the IOC Guidelines” → are they also relevant to marine biodiversity research/bioprospecting?

• “to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries” → could sharing of benefits from the utilization of marine genetic resources be included?

• UNCLOS as the primary instrument that should be implemented → how to address the fact that UNCLOS is silent on marine genetic resources/marine bioprospecting?
THE PERSPECTIVE OF DEVELOPING COUNTRIES

THE ROLE OF INTERNATIONAL LAW

- International law holds a pivotal role in the implementation and achievement of the Sustainable Development Goals
- SDGs do not operate in a normative vacuum; instead, they are grounded in international law and their effectiveness would rely upon substantial provisions under relevant international instruments (Kim, 2016)
THE ROLE OF INTERNATIONAL LAW

- It has been widely observed that developed countries with their advanced biotechnology capacity would most likely have greater opportunities to reap the benefits from the utilization of genetic resources, including marine genetic resources.

- International law has a pivotal role to resolve this issue by setting an international regime that could promote equalities among countries in the context of the utilization of genetic resources.

THE CURRENT DEVELOPMENT

- UN Preparatory Committee → international legally binding instrument under the UNCLOS on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction.

- Chair's non-paper on elements of the draft text.

- G77 & China:
  - “Desiring by this new instrument to develop an effective regime of conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including through a fair and equitable regime of access to and sharing of benefits of marine genetic resources. The principle of common heritage of humankind will contribute to the realization of the said objective as, through the application of this principle, the interests and needs of humankind as a whole, especially those of developing countries will be fairly addressed and taken care of.”

- Supported also by AOSIS and CARICOM.
THE CURRENT DEVELOPMENT

• List of general principles and approaches
• Marine genetic resources
  • G77 & China:
    • The principle of common heritage of mankind must underpin the new regime governing marine genetic resources of areas beyond national jurisdiction
    • No claim or exercise of sovereignty or sovereign rights
    • Peaceful purposes
    • Equitable sharing of benefits
    • International regime
  • Also supported by CARICOM, Jamaica

THE CURRENT DEVELOPMENT

• Access and benefit-sharing
  • Developing the models based on UNCLOS, CBD/ Nagoya, ITPGRFA, Antarctic Treaty System
  • Taking into account the needs and interests regarding marine scientific research as well as the development opportunities of the developing countries, including future generations
  • Due consideration accorded to SIDS
  • Transfer of technology and strengthening the research capabilities of developing countries
• Views on a “hybrid mechanism”
• Special requirements of SIDS
CONCLUSION

SDGs: A NEW OPPORTUNITY

- Goal 14 brings together marine scientific research, technology transfer, marine biodiversity, and explicitly recognizes their crucial roles in sustainable development.

- However, in terms of marine genetic resources beyond national jurisdiction, these elements are still heavily fragmented and more concerted efforts are critically needed.

- Further elaboration is also needed in ensuring their contribution to the development of developing countries, small island developing States, and least developed countries.

- SDGs could only work if they are advocated by stronger legal implications provided under relevant international instruments.
THANK YOU