

REVISTA DE DIREITO INTERNACIONAL
BRAZILIAN JOURNAL OF INTERNATIONAL LAW

**Marine biodiversity management
from the global commons:**

analysing the expanded scope
of common heritage of mankind
principle

**Gestão da biodiversidade
marinha a partir dos bens
comuns globais:** uma análise
da ampliação do escopo do
princípio do patrimônio comum da
humanidade

Kavitha Chalakkal

Simi K K

VOLUME 22 • N. 2 • 2025

THE COMMON HERITAGE OF MANKIND IN
INTERNATIONAL LAW: PAST, PRESENT AND FUTURE

Sumário

EDITORIAL: INTRODUCTION AU NUMÉRO SPÉCIAL	15
Pierre-François Mercure e Harvey Mpototo Bombaka	
CRÔNICA	18
CRÔNICA SOBRE AS NEGOCIAÇÕES NO ÂMBITO DA AUTORIDADE INTERNACIONAL DOS FUNDOS MARINHOS (ISA): RUMO AO CÓDIGO DE EXPLOTAÇÃO?	20
Carina Costa de Oliveira, Robson José Calixto de Lima, Gustavo Leite Neves da Luz, Ana Flávia Barros-Plataiu, Harvey Mpototo Bombaka e Luigi Jovane	
THE COMMON HERITAGE OF MANKIND IN INTERNATIONAL LAW: PAST, PRESENT AND FUTURE	31
ACTIVITIES IN THE AREA FOR THE BENEFIT OF “MANKIND AS A WHOLE”: WHO IS ‘MANKIND’? ..	33
Shani Friedman	
EQUITABLE BENEFIT SHARING IN THE EXPLOITATION OF COMMON HERITAGE OF MANKIND AREAS ACCORDING TO THE PROVISIONS OF UNCLOS 1982: CURRENT SITUATION, CHALLENGES AND PROSPECTS	53
Yen Thi Hong Nguyen, Thang Toan Nguyen e Hiep Dinh Trong	
LE PARTAGE DES AVANTAGES FINANCIERS ISSUS DE L’EXPLOITATION DES GRANDS FONDS MARINS: UNE ILLUSTRATION DES MUTATIONS RÉCENTES DE LA NOTION DE PATRIMOINE COMMUN DE L’HUMANITÉ?	75
Marie Guimezanes	
LE “PATRONAGE DE COMPLAISANCE “ DANS LE CADRE DES ACTIVITÉS DE LA ZONE: UNE ÉPÉE DE DAMOCLÈS SUR LA PROTECTION UNIFORME DU PATRIMOINE COMMUN DE L’HUMANITÉ	94
Harvey Mpototo Bombaka	
MARINE BIODIVERSITY MANAGEMENT FROM THE GLOBAL COMMONS: ANALYSING THE EXPANDED SCOPE OF COMMON HERITAGE OF MANKIND PRINCIPLE	122
Kavitha Chalakkal e Simi K K	

LE PROJET INTERNATIONAL ICE MEMORY: LES CAROTTES DE GLACE SONT-ELLES PATRIMOINE COMMUN DE L'HUMANITÉ?	143
Pierre-François Mercure	
LA CULTURA DEL VINO COMO PATRIMONIO INMATERIAL	160
Luis Javier Capote-Pérez	
ARTIGOS SOBRE OUTROS TEMAS	173
TOWARDS THE PROSECUTION OF MARITIME PIRACY BEFORE THE INTERNATIONAL CRIMINAL COURT	175
Amr Elhow	
GENERATIVE AI IN EMERGING TECHNOLOGY: A LEGAL AND ETHICAL EXPLORATION IN MALAYSIA AND UZBEKISTAN	197
Saslina Kamaruddin, Islamobek Abduhakimov, Mohamad Ayub Dar e Nadia Nabila Mohd Saufi	
O DIREITO INTERNACIONAL DO TRABALHO FORA DO “ARMÁRIO”: A PROTEÇÃO GLOBAL DE TRABALHADORAS E TRABALHADORES LGBTI+	216
Pedro Augusto Gravatá Nicoli, Marcelo Maciel Ramos e Henrique Figueiredo de Lima	
AN OLD BUT GOLD CHALLENGE FOR INTERNATIONAL LABOUR LAW: RETHINKING THE PERSONAL SCOPE OF ILO STANDARDS	233
Olívia de Quintana Figueiredo Pasqualetto	
BALANCING GROWTH AND RESPONSIBILITY: A REVIEW OF BRAZIL’S OFFSHORE WIND FARM REGULATION	250
Danielle Anne Pamplona	
AUTONOMIA MUNICIPAL EM LITÍGIOS INTERNACIONAIS: DESAFIOS AO PACTO FEDERATIVO E À SOBERANIA NACIONAL DIANTE DO DESASTRE DE MARIANA	266
Gina Vidal Marcílio Pompeu e Audic Cavalcante Mota Dias	
LEGISLATIVE GAPS AND DIGITAL VULNERABILITIES: RECONCEPTUALIZING VIETNAM’S LEGAL FRAMEWORK TO COMBAT ONLINE CHILD SEXUAL EXPLOITATION	283
Thuyen Duy TRINH	

Marine biodiversity management from the global commons: analysing the expanded scope of common heritage of mankind principle*

Gestão da biodiversidade marinha a partir dos bens comuns globais: uma análise da ampliação do escopo do princípio do patrimônio comum da humanidade

Kavitha Chalakkal**

Simi K K***

Abstract

The overall governance and scope of the global commons under the new BBNJ Agreement (High Seas Biodiversity Agreement) concluded under the United Nations Convention on the Law of the Sea (UNCLOS 1982) include recognising the historical rights and the fair and equitable division, sharing, and allocating resources and the benefits deriving from it. Additionally, assessing the value of user rights, value as a property and as a resource, recognising the communal ownership or rights if any, and the cost of acquiring and enforcing property rights need immediate attention from the international community while enforcing the governance system for the global commons, that are considered the common heritage of mankind (CHM). The elements of the CHM principle have acceptance among the international community, especially among developing nations, least developed nations and Small Island Developing States, and the Caribbean Island communities for the regulation of activities in Areas Beyond National Jurisdiction. In this context, it is important to identify the nature of MGRs for the existing property concepts for the common resources. This study has majorly relied upon primary legal sources, comprising international treaties, legislations, and case laws, and secondary materials for a deep literature review in the areas of ABNJ, BBNJ, UNCLOS, MGRs, benefit sharing, TK, deep sea, high seas, biodiversity, actual value, potential value, sustainable use, etc. The paper focuses significance of international law in ocean governance by looking into governance of global commons. It is identified that global consensus among the international community is required on the applicability of customary principles and approaches in addressing the issues, including sustainability in exploration and exploitation, access regulation, and ensuring fair and equitable sharing of benefits.

Keywords: areas beyond national jurisdiction; BBNJ; common heritage of mankind; global commons; sustainable development goals.

* Recebido em: 25/01/2025.
Aprovado em: 01/03/2025.

** Kavitha Chalakkal is an Assistant Professor at the Inter University Centre for IPR Studies, Cochin University of Science and Technology (Kochi, Kerala, India).
E-mail: kavithachalakkal@cusat.ac.in

*** Simi K. K. is a PhD in Law and Research Scholar at the Inter University Centre for IPR Studies, Cochin University of Science and Technology (Kochi, Kerala, India).
E-mail: simikk@cusat.ac.in

Resumo

A governança e o escopo dos bens comuns globais no âmbito do novo Acordo BBNJ (Acordo sobre a Biodiversidade em Áreas Além da Jurisdição Nacional), concluído sob a égide da Convenção das Nações Unidas sobre o Direito do Mar (CNUDM, 1982), compreendem o reconhecimento dos direitos históricos e a divisão, partilha e alocação justas e equitativas dos recursos e dos benefícios deles derivados. Ademais, a avaliação do valor dos direitos de uso, do valor enquanto propriedade e enquanto recurso, o reconhecimento da propriedade ou dos direitos comunitários, quando existentes, bem como o custo de aquisição e de execução dos direitos de propriedade, demandam atenção imediata da comunidade internacional na implementação de um sistema de governança dos bens comuns globais, considerados patrimônio comum da humanidade (PCH). Os elementos do princípio do PCH encontram ampla aceitação na comunidade internacional, em especial entre os países em desenvolvimento, os países menos desenvolvidos, os Pequenos Estados Insulares em Desenvolvimento e as comunidades insulares do Caribe, no que concerne à regulamentação das atividades nas Áreas Além da Jurisdição Nacional (ABNJ). Nesse contexto, torna-se relevante identificar a natureza dos recursos genéticos marinhos (MGRs) à luz dos conceitos vigentes de propriedade aplicáveis aos recursos comuns. O presente estudo fundamenta-se majoritariamente em fontes jurídicas primárias — compostas por tratados internacionais, legislações e jurisprudência —, complementadas por materiais secundários, para uma revisão aprofundada da literatura nas áreas de ABNJ, BBNJ, CNUDM, MGRs, partilha de benefícios, conhecimentos tradicionais (TK), mar profundo, alto-mar, biodiversidade, valor real, valor potencial, uso sustentável, entre outros. O artigo sublinha a relevância do direito internacional na governança dos oceanos, examinando a gestão dos bens comuns globais e identificando a necessidade de um consenso global sobre a aplicabilidade dos princípios e abordagens costumeiros para enfrentar questões relacionadas à sustentabilidade na exploração e no aproveitamento, à regulação do acesso e à garantia de uma partilha justa e equitativa dos benefícios.

Palavras-chave: áreas além da jurisdição nacional; BBNJ; patrimônio comum da humanidade; bens comuns globais; objetivos de desenvolvimento sustentável.

1 Introduction

The marine Areas Beyond National Jurisdiction (ABNJ) are outside the State's jurisdictional limits, and the resources derived from there, the Marine Genetic Resources (MGRs), due to their nature of existence, require specific regulatory mechanisms to ensure the sustainability of the ecosystem and the resources.¹ The surge in interdependence and correlated interactions, including scientific research and other Research and Development (R&D) activities over the marine resources from ABNJ, justify the initiatives for global governance of ocean resources. Additionally, the challenges in achieving the objectives proposed under the Sustainable Development Goals (SDGs)² and other biodiversity conservation initiatives, including the Aichi Targets, proposed under the United Nations Convention on Biological Diversity 1992 (CBD), prompted the international community to take initiatives to regulate the exploitation and ensure the sustainability of biological resources.³ The accomplishment of these sustainability targets focused on addressing all elements affecting the marine realm while recognising the interrelation between anthropogenic activities.⁴ It demands augmented consistency, synchronisation, and cooperative administrative practices at the global level, stranded on globally recognised rights of the international community.

The role of international law is significant in recognising the rights of all the stakeholders over global resources and in the regulation of activities implemented through state cooperation, other international or regional policies, international arrangements, and joint decision-making.⁵ Ensuring fair and equitable benefit-sharing, regulation of access of MGRs from ABNJ, the assertion of historical rights, equitable sharing and

¹ HALL, Charles. Institutional Solutions for Governing the Global Commons: Design Factors and Effectiveness. *The Journal of Environment & Development*, v. 7, n. 2, p. 86-88, 1998.

² BABATUNDE, Abidoye *et al.* The origin and progress of the sustainable development goals. In: SHERYL, L. *et al.* (ed.) *Handbook on public policy and food security*. [S. l.]: Edward Elgar Publishing, 2024.

³ SUSTAINABLE DEVELOPMENT GOALS KNOWLEDGE PLATFORM. *Oceans and Seas*. Available at: <https://sustainabledevelopment.un.org/topics/oceanandseas>.

⁴ WCED. *Our Common Future, Managing the Commons in Report of the World Commission on Environment and Development: Our Common Future*. UN, 1987. Available at: <http://www.un-documents.net/ocf-10.htm#I>.

⁵ HALL, Charles. Institutional Solutions for Governing the Global Commons: Design Factors and Effectiveness. *The Journal of Environment & Development*, v. 7, n. 2, p. 87-91, 1998.

allocation of resources, and proper monitoring and management of intellectual property rights (IPR) over MGRs including commercialisation for benefit-sharing, etc., are some key concerns to be addressed under the new governance framework for ABNJ and the resources.⁶ Through the evolution of various legal and policy developments in ocean governance under international law, paper delves into the role and analyse the expanded scope of CHM Principle for marine biodiversity management from the ABNJ in the light of the BBNJ Agreement concluded under the UNCLOS.

2 Biodiversity as a natural resource and its significance

“Biological diversity or the biodiversity refers to the variety of life”.⁷ It is a collective expression to indicate the diversities at each stratum of biological associations, mainly categorised into genetic diversity, species diversity, and environmental diversity, including the diversity in the genetic makeup of individuals within and among the folks. The wide array of components of genetic coding, constituting the particular species, including the nucleotides, genes, or chromosomes, comes under genetic diversity.⁸ The biological/ecological divergence among the populations in diverse niches and domains is referred to as ecological diversity.⁹ Identifying the potential that elements of biodiversity can be traded as commodities, given a monetary value, has created a scope for the subject matter to qualify to the standard rules of private property, making it a discrete illustration of genetic resources getting the status as resourceful genes or genomes.

Considering that biological variability is perceived as an input for subsequent applications in R&D, that focused on evolving innovative combinations, novel genomes, genus, and ecological units in the course of instinctive progression or effected through technological

applications.¹⁰ It is again identified that the perception of biological variability and the multiplicity of hereditary attributes¹¹ as a reserve with undisclosed and unclassified extrinsic value,¹² additional discernments confer the merit to the diversity.¹³ Applicability of biodiversity in innovative scientific studies and industrial application assigns it the status as a resource.¹⁴ It can be concluded from the above observations that the concept of genetic resources is a unique category of information in specific genomes or assumed with biodiversity as a natural resource. It highlights the magnitude of information enclosed in the genetic resources, revealing that the merit and potential is not only specific to biodiversity, but also with the abundance of data it enfold.

2.1 Genetic resources, MGRs, and its non-material nature

The uniqueness and relevance of genetic resources as a meticulous category of a natural resource begins with a comprehensive perception of natural resources as “anything derived from the environment and not made by humans that is instrumental to satisfying human wants and needs. Natural resources hold their potential both as a type of resource having some instrumental value, and as a natural resource that has not been produced or designed by humans (without any human intervention).¹⁵ They are part of the natural wealth of the world”.¹⁶ The definition and the characteristics indicate the instrumental value of the resource and, at the same time, the inhuman origin of the resource. Thus, genetic resources, when employed as natural resources and scientific studies and other inventions are used to

⁶ WIJKMAN, P. M. Managing the global commons. *International Organization*, v. 36, n. 3, 1982. Available at: <https://www.jstor.org/stable/pdf/2706543.pdf>. Access on: 31 Dec. 2024.

⁷ RAO, M. B.; GURU, Manjula. *Biotechnology, IPRs and Biodiversity*. [S. l.]: Pearson Longman, 2007.

⁸ GASTON, Kevin J.; SPICER, John I. *Biodiversity: an introduction*. [S. l.]: Blackwell Publishers, 2004. p. 5.

⁹ SIMCOCK. *The First Global Integrated Marine Assessment, World Ocean Assessment I*, UM. Cambridge: Cambridge University Press, 2017. p. 499.

¹⁰ REID, Colin T.; NSOH, Walters. *The Privatisation of Biodiversity? New Approaches to Conservation Law*. [S. l.]: Edward Elgar Publishing, Inc., 2016. p. 24.

¹¹ GILLES, Boeuf. Marine Biodiversity Characteristics. *Comptes Rendus Biologies*, v. 334, n. 5-6, p. 435-436, 2011.

¹² PUSHANGADAN, P.; GEORGE, V.; IJINU, T. P.; CHITHRA, M. A. Biodiversity, Bioprospecting, Traditional Knowledge. *Journal of Traditional Medicine & Clinical Naturopathy*, v. 7, n. 1, p. 2-3, 2018.

¹³ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 92-93.

¹⁴ SIGWART, Julia D. *et al.* Unlocking the potential of marine bi-discovery. *Natural Product Reports*, v. 38, n. 7, p. 1235-1242, 2021. p. 1235-1238.

¹⁵ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 92-93.

¹⁶ MOORE, M. *A Political Theory of Territory*. Oxford: Oxford University Press, 2015. p. 163.

get potential outcomes, have instrumental value assigned to generate more profits. Additionally, it is applicable in scientific studies and knowledge enhancement of the marine areas from which resources are collected, the peculiarity of the inhabitant species, their potential, and the design of conservation or protection measures whenever necessary.

However, regarding the use and value of genetic resources, genetic information is the key characteristic. The genome carries the genetic pattern of the species in its DNA or RNA. Critics argue that genetic resources were in use much ahead of the precise understanding of nucleic acids are the bearers of the genetic information and gene sequencing of species.¹⁷ Accordingly, genetic resources are informational because the sample utilisation and its value are derived from the intangible data it holds, in place of the material or the samples that are gathered from nature, exported or exchanged as in the case of other forms of resources including digital sequence information (DSI), or the samples utilised in biopiracy.

MGRs are defined as “any material of marine plant, animal, microbial or other origin containing functional units of heredity of actual or potential value”.¹⁸ They consist of long sequences of nucleic acid that provide the information needed to generate commercially viable products and other potential output and use value.¹⁹ Nucleic acid sequences hold immense potential for discovering new species,²⁰ understanding the ocean’s role in Earth’s past, present, and future, and finding innovative ways to benefit humankind and biodiversity.²¹ Thus, MGRs include the genetic information in organisms

such as marine plants, animals, and microorganisms. These resources can be found in various forms, such as genes, proteins, enzymes, and other bioactive compounds, that form a crucial part of the marine biodiversity ecosystems, with a pivotal function in scientific research, conservation, and sustainable use. It also has to be noted that genetic resources and the samples are adequate to replace the conventional sampling or collection methods like type collections and biodiversity samples collected or accessed *in-situ* or *ex-situ* for any taxonomic studies, scientific studies, further R&D, and any other scientific and/or commercial development activities.

3 Marine genetic resources and the concept of commons

The notion of commons reflects the idea and conceptualization of traditional global commons, recognised within the multiple realms other than the ABNJ with its resources recognised as commons with different legal regimes for different sets of commons.²² However, ambiguities still prevail over the concept as well as the legal categorisation of commons as it varies from *res nullius* to *res communis* to *res publicae*, etc.²³ Protecting the commons requires a creative and imaginative effort from jurists although commons do not embody a reality external to or unfamiliar to law. However, the notion of commons holds an array of semantic nuances in public international law, where the theoretical relationship and legal expressions differ with the framework it is chosen for.

Accordingly, it could be understood that the traditional global commons demand unique practices and governance regimes to address specific issues under the prevailing legal systems. In places where any regional/area-specific authority does not exist, the subjects of all states meet upon a footing of entire equality and independence, where no one state or any of its subjects will have a right to assume or exercise authority over the subjects of another, recognizing the equality and independence of sovereign nations.²⁴ This principle is

¹⁷ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 92-93.

¹⁸ Agreement under the UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, Para 8, A/CONF.232/2023/4,2023. <https://documents-dds-ny.un.org/doc/UNDOC/LTD/N23/177/28/PDF/N2317728.pdf?OpenElement>.

¹⁹ BLEUENN, Guilloux. *Marine genetic resources, R&D and the objects of use*. Nova Jersey: John Wiley & Sons, 2018.

²⁰ VIERROS, M. *et al.* ‘Who Owns the Ocean? Policy Issues Surrounding Marine Genetic Resources’. *Limnology and Oceanography Bulletin*, v. 25, n. 2, p. 29, 2016. Available at: <https://doi.org/10.1002/lob.10108>

²¹ ROGERS, Alex D. *et al.* Marine Genetic Resources in Areas Beyond National Jurisdiction: Promoting Marine Scientific Research and Enabling Equitable Benefit Sharing. *Frontiers in Marine Science*, v. 8, p. 600, 2021. Available at: <https://www.frontiersin.org/articles/10.3389/fmars.2021.667274/full>

²² MILUN, Kathryn. *The Political Uncommons: The Cross-cultural Logic of the Global Commons*. Farnham: Ashgate 2011. p. 58-60.

²³ DE LUCIA, Vito. The Concept of Commons and Marine Genetic Resources in Areas Beyond National Jurisdiction’. *MarSafeLaw Journal*, v. 19, n. 5, 2018.

²⁴ RUTH, Lapidoth. Equity in international law, *Israel Law Review*, v.

upheld in environmental treaties throughout the 20th century referring to shared global problems by means of various expressions that presage the common concern of humankind. By the end of the century, the UN-CBD (1992) and the United Nations Framework Convention on Climate Change (UNFCCC) (1992) formally expressed the conservation of biological diversity and “change in the Earth’s climate and its adverse effects” as common concerns of humankind. The Paris Agreement (2015) also acknowledged climate change as a common concern. All these prevailing legal institutions recognise and call for an international law based on natural law to regulate and govern such areas for the benefit of humanity by addressing the common concern and thus regulating access, sustainable exploitation, and assured sharing benefits.

3.1 Genetic resources as a subject matter of IPR claims and benefit-sharing regulations

Genetic resources, as such, are not a subject matter of IPR claims because they are not the outcome of any intellectual creation or creative and productive human intervention.²⁵ GRs are eligible only for further inventions from their utilisation.²⁶ Everyone has the right to access the resources, and key limiting factors include the absence of technological and scientific expertise to work on it and the financial capacity to access,²⁷ and identification of right repository.²⁸ However, the above illustrations highlight that claims for property rights are based on the genetic resources and the information carried with them. The intangible nature of information and the scope of utilising the sequence to produce tangible output and associated intangible right claims as IPR are possible without further accessing the resources. Thus, the resource starts accepting and exhibiting its non-rivalrous nature of the public good. However, implementing property rights over the GRs, especially

MGRs of ABNJ is an impracticable task, even if it be through regulation of material supply. By assigning property rights or control rights over MGRs, the focus will shift to rights over natural information. The fact here is that repositories where the resources are preserved and serve as the donor of genetic resources also hold the right to forbid others from utilising their natural information or to sell licenses for MGRs held with them.

An additional issue in deciding the nature of property in GR research is the intent of research- whether it is basic research for taxonomic studies, basic biochemistry, conservation biology, etc., or advanced commercial-oriented research with industrial relevance.²⁹ Even though the distinction between commercial and non-commercial research³⁰ and bioprospecting with biological samples is difficult,³¹ the driving factor is the commercial incentives that motivate to continue with basic research.³² It also has to be noted that basic research is imperative in compartmentalising the research outcome for its correlation with commercial research; it may set hurdles in deciding the property associated with research, bringing ambiguities in sharing benefits and the negotiations for the use of genetic resources.³³

The correlation between natural and scientific information is based on the benefits derived and the potential value, where IPR is consigned to the inventors as a reimbursement for their shared non-tangible input. Even though counterarguments are raised on the IPR claims over MGRs, patents and other IPRs are reasoned as an incentive for the new, beneficial, and non-obvious inventions, the paradigm is non-attributable to natural resources/information. Since IPRs, including patents, are the major property rights attributed over the GRs/

22, n. 2, p. 169-171, 1987.

²⁵ RAUSSER, Gordon C.; SMALL, Arthur A. ‘Valuing Research Ideas: Bioprospecting and the Conservation of Genetic Resources’. *Journal of Political Economy*, v. 108, n. 1, p. 173-206, 2000.

²⁶ PADMA. Protection of Traditional Knowledge Associated with Genetic Resources, in *An Introduction to Ethical, Safety and Intellectual Property Rights Issues in Biotechnology*, Academic Press, 2017.

²⁷ BLASIAK, Robert *et al.* Corporate control and global governance of marine genetic resources. *Science advances*, v. 4, n. 6, 2018.

²⁸ LATHE, W. J. *et al.* Genomic Data Resources: Challenges and Promises, *Nature Education*, v. 1, n. 3, 2008.

²⁹ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 86-93.

³⁰ HUGHES, Kevin A.; PAUL D. Bridge. Potential impacts of Antarctic bioprospecting and associated commercial activities upon Antarctic science and scientists. *Ethics in Science and Environmental Politics*, v. 10, n. 1, p. 13-18, 2010.

³¹ GHANASHYAM, Sharma; PRADHAN, Bharat Kumar. Exploring traditional knowledge: bio-prospecting and biopiracy in India and Southeast Asian mega-diversity nations. In: PANICKER, L. K.; NELLİYAT, P.; OOMMEN, O. V. (ed.). *Biodiversity and business*. Cham: Springer, 2024. p. 447-483

³² YPSITA, Demunshi; CHUGH, Archana., ‘Role of traditional knowledge in marine bioprospecting’. *Biodiversity and Conservation*, n. 19, p. 3015-3033, 2010.

³³ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 86-93.

MGRs/or the associated information, the question on control rights over natural information requires justifications on the grounds on which IPRs are granted, similar to conventional property rights above the material, natural resources can be justified considering the human intervention including the scientific, technological and intellectual inputs.

3.2 Appropriation of natural resources from ABNJ and governance challenges

The natural resources, particularly the varying oceanic species and the biochemical components derived from the marine realm, are outside the holder's control, whether a public entity or any individual possessor. The ABNJ and the resources of potential interest to the scientific/ industrial communities in the technologically and economically advanced developed nations makes it a fundamental subject of legal debates on international platforms.³⁴ Contribution of the key concepts in environmental governance for the global commons.³⁵ mainly common concern, common heritage, common areas, common goods, common interest, shared responsibility, or even community interest, etc. over the multilateral aspects of international environmental law or the bilateral or regional commitments is important in regulating and monitoring the activities over them.³⁶ The expansion of international environmental law brought a distinction to the origin of resources/ matters related to internal to/ within jurisdictional limits of states, transboundary resources, or those belong to ABNJ.³⁷ The transboundary obligations in customary environmental law significantly transform the rules from specific to global.

The inverse relation between biological resource diversity and the technological capacity to exploit and work on them to develop commercially viable and potential products has always been a subject of controversy between the developed and developing/under-

-developed nations. UN General Assembly adopted Resolution 1803 on 14 December 1962 to recognize permanent sovereignty over natural resources (PSNR), emphasizing sovereignty over natural resources³⁸ and several economic aspects,³⁹ the major reason for the existing conflicts on the appropriation and use of natural resources.⁴⁰ The doctrine of PSNR deals with the right of the State to freely use, exploit, and regulate its natural resources within its territory,⁴¹ confined to terrestrial resources and limited distance from shore to marine areas.⁴² It created a balance by laying a certain duty on the state to manage and use its resources appropriately and carefully. The PSNR principle thus became associated with a right to self-determination and economic development for developing states and a key influencing factor for foreign investment regulations, environment law, resource management, sustainable development, and economic developments.⁴³

The developing, least developed and small island developing nations argued strongly for PSNR over the natural resources to declare an inalienable right of all peoples and states to use and freely dispose of their natural resources. The high seas are all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or the internal waters of a State, or the archipelagic waters of an archipelagic State, as per UNCLOS article 86. The Area is the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction UNCLOS, (Article 1). In the UNCLOS, mari-

³⁸ BALORO, J. Some international legal problems arising from the definition and application of the concept of "permanent sovereignty over wealth and natural resources" of states. *The Comparative and International Law Journal of Southern Africa*, v. 20, n. 3, p. 335-352, 1987.

³⁹ SCHWEBEL, Stephen M. The Story of the UN's Declaration on Permanent Sovereignty over Natural Resources. *ABAJ*, v. 49, 1963. p. 463.

⁴⁰ WAART, P. J. I. M. de. Permanent sovereignty over natural resources as a corner-stone for international economic rights and duties. *Netherlands International Law Review*, v. 24, n. 1-2, p. 304-322, 1977.

⁴¹ The General Assembly resolution 1803 (XVII) of 14 December 1962.

⁴² Maritime jurisdiction limits or boundaries as recognized and adopted through Article 57 of UNCLOS is up to 200 nautical miles from coast line of states. The maritime boundaries and areas are calculated from the baselines. In the Maritime Boundaries dataset, the baselines used were a combination of a coastline as a proxy for the low-water line (the normal baseline described in UNCLOS) and straight or archipelagic baselines.

⁴³ TOLENTINO JUNIOR, Amado S. Sovereignty over natural resources-change of concept or change of perception?. *Environmental Policy and Law*, v. 44, p. 300-306, 2014. p. 300.

³⁴ ROGER D., Congleton. Governing the global environmental commons: the political economy of international environmental treaties and institutions, p. 241-263, 2001.

³⁵ RAYNER, S. *Governance and the global commons*. London: Pinter, 1995. p. 60-93.

³⁶ OHCHR, OHRLLS, UNDESA, UNEP, UNFPA. Global Governance and Governance of the Global Commons in the Global Partnership for Development Beyond 2015', *UN System Task Team on the Post 2015 UN Development Agenda*, 2013.

³⁷ DUNCAN, French. *Common concern*, in *Michael Handbook in biodiversity law*. [S. l.]: Edward Elgar, 2016. p. 335.

time limits are specified to be until 200 nautical miles from the coast, and, beyond that, it is the High Seas and the Area, where sovereign rights are not applicable, and the resources⁴⁴ governed under the CHM principle,⁴⁵ and activities on marine biological resources from the high seas remained unregulated.⁴⁶ These limitations in existing legal regimes have featured the importance of international interventions for ocean governance.⁴⁷ The status of elements, recognised as critical components of the concept of commons,⁴⁸ has a notable significance under international law on the ecological and economic implications of ABNJ and its resources.⁴⁹ However, the reformations in international law are distinguished by overlapping concepts addressed under common-interest normative patterns over traditional global commons in inter-state normative models.⁵⁰

The dichotomous structuring of international legal order around units of statehood sovereignty under the PSNR principle⁵¹ and the ABNJ had highly influenced the development and the success of international environmental law.⁵² *Res nullius* refers to corporeal things that have not or have never had a possessor, over which rights of possession are asserted through natural law.⁵³ The high seas and the resources from there were under a *res nullius* regime for a long time. This resulted

in the resources remaining ungoverned, while the individual animal remained; it is *res communes*, or a thing common to all, i.e., in the public domain.⁵⁴ The Roman concept of *res communes* or *things common to all*, applies to *ferae naturae* or wild animals in the natural world and the competent right to utilise them.⁵⁵ An area is designated as commons either by decision to choose by the community as common to all; or through joint decision and perseverance or long-standing everyday use. It is a general situation of common ownership, administered by public law (*jus publicum* or *de communi jure*).⁵⁶ In the present concept of law, the *res communis* proceeded or has evolved into humankind's public domain and common heritage.

The interlinkage between genetic resources and biodiversity divulges their vulnerability, which demands internationally monitored region-specific regulatory measures to ensure sustainability practices in resource utilisation.⁵⁷ The continuing damages to biodiversity have been condemned both from the loss of active genetic resources, the impending inherent significance of biodiversity, and also for the ecological reverberations for humans and nature.⁵⁸ The additional importance of the demands for protection is to meet the opportunity costs when biodiversity safeguards go together with a decline in yield for dependents who sustainably use land or abstain from using it altogether.⁵⁹ MGRs, when employed as natural resources and the subsequent applications in scientific studies and other inventions reveal their potential outcome; instrumental value is assigned to generate profits. It requires the designing of specific conservation measures. Additionally, the fishery resources from ABNJ are exploited at an alarming rate, and

⁴⁴ United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397, UNCLOS Article 133 defines resources as mineral resources deriving from the area at or beneath in the seabed and article 136 emphasised the applicable principle as CHM.

⁴⁵ UNCLOS, Part VII and Part XI.

⁴⁶ Articles 86, 87(1)(f), 87(2) UNCLOS.

⁴⁷ LEE A. Kimball. *International Ocean Governance: Using International Law and Organizations to Manage Marine Resources Sustainably*. [S. l.]: IUCN, 2003. p. 45-47.

⁴⁸ FENNEL, Lee Anne. Commons, anticommons, semicommons. In: KENNETH, Ayotte; SMITH, Henry E. (ed.) *Research handbook on the economics of property law*. [S. l.]: Edward Elgar, 2011. p. 35.

⁴⁹ DE LUCIA, Vito. The Concept of Commons and Marine Genetic Resources in Areas Beyond National Jurisdiction'. *MarSafeLaw Journal*, v. 19, n. 5, 2018.

⁵⁰ MARELLA, Maria Rosaria. The commons as a legal concept. *Law and Critique*, v. 28, p. 62-64, 2017. Available at: <https://link.springer.com/article/10.1007/s10978-016-9193-0>.

⁵¹ UN Res 1803 (XVII) (1962), affirmed that all the legal measures must be based upon the 'inalienable rights of all States freely to dispose of their natural wealth and resources in accordance with their national interest, and on respect for the economic independence of States'.

⁵² Preamble of the 1972 Stockholm Declaration on the Human Environment recognise the concept. See, UN Doc. A/CONF.48/14/Rev.1, 1972 Stockholm Declaration on the Human Environment, 1972.

⁵³ MILUN, Kathryn. *The Political Uncommons: The Cross-cultural Logic of the Global Commons*. Farnham: Ashgate 2011.

⁵⁴ HEY, Ellen. 'International Institutions'. In: BODANSKY, Daniel et al. (ed.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2008.

⁵⁵ ESPOSITO, Roberto. *Bíos: Biopolitics and Philosophy*. Minnesota: University of Minnesota Press, 2008.

⁵⁶ FRENCH, Duncan. Common Concern, Common Heritage and Other Global(-ising) Concepts: Rhetorical Devices, Legal Principles or a Fundamental Challenge? In: BOWMAN, Michael; DAVIES, Peter; GOODWIN, Edward. (ed.). *Research Handbook in Biodiversity Law*. [S. l.]: Edward Elgar, 2016. p. 334.

⁵⁷ JOELI, Veitayaki. Traditional Marine Resource Management Practices used in the Pacific Islands: An Agenda for Change. *Ocean & Coastal Management*, v. 37, n. 1, p. 133-135, 1997.

⁵⁸ OLDFIELD, Margery L. *The value of conserving genetic resources*. [S. l.]: US Department of the Interior National Park Service, 1984. p. 2-7.

⁵⁹ DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018. p. 86-93.

even though they are regulated under the regional fisheries management organisations (RFMOs) for catch quota, fishes are widely exploited for scientific research and applications for their genetic properties.⁶⁰ For example, the efforts to commercially produce omega-three fortified canola oil and the method of producing the same are applied for patents, and some patents are granted in the US.⁶¹ These reveal the relevance and recognise the applications of DSI from biological resources in scientific and other commercial production activities. It emphasise the need for protection and monitoring of the activities over the marine biological diversity of ABNJ.

4 Approaches for ABNJ and the resources- antecedents to the CHM concept

The concepts of *res* and their applicability to traditional principles changed with the resources, technology, and scope of exploitation. The approach has changed widely from the freedom of the high seas, and in the context of SDGs, it demands more clarity. The applicability of the terminologies proposed by the global state delegates and the stakeholders for MGRs from ABNJ is important concerning the ownership over resources deriving from international spaces.

- *Res Communes* and MGRs from ABNJ

According to the Institutes of Justinian, *res communes* is a Latin term derived from Roman law having significance in international law and common law.⁶² *Res communes* are explicitly open to and recognise rightful access by anyone, even if the use must not prejudice an equivalent use by others, which is an antecedent to the concept of CHM.⁶³ It includes air, running water, the sea, and

the shores of the sea,⁶⁴ to refer to things that belong to everyone but cannot be owned or controlled by any one person. The term emphasises that the state acts as a trustee for these shared resources and ensures preservation and equitable use.⁶⁵ International jurists and other legal experts proposed different terminologies with a similar idea for ownership over international spaces and resources.

Although, regulation is permitted, but it is generally accepted that such a classification does not accede to any legitimate entitlement over the area or the spatial regime.⁶⁶ It is the resources that are appropriated and not the areas. The nature and characteristics of MGRs from ABNJ are that they are resources of actual and potential value of commercial and scientific interest, appropriation through IPR claims, and other forms of appropriation will happen. Even though *res communes* were considered property of all under the Roman law system, the same could not be the thing recognised for private property rights.⁶⁷ Thus, the concept of *res communes* applies to the spatial areas and not over the resources procured from there, and the resources- the MGRs from ABNJ do not fall under the *res communes* regime. In modern law, the concept of *res communes* plays a significant role in the evolution of maritime law, space law, and policy and practices for Antarctica. The acceptance of the principle of global commons describes all international, supranational, and global resources from which the resources belong to the common pool, over which rights of the whole of humanity prevail. It calls for an internationally accepted and regulated management mechanism to help ensure sustainable use, exploitation, and maintenance of resources and the area.

- *Res Communes omnium* and MGRs from ABNJ

Res communes omnium, a Latin term used to indicate the things held in common by all, is a concept derived from Roman law that recognises specific resources as belonging to all humanity.⁶⁸ The relevance of sharing the

⁶⁰ SORESSA M., Kitessa, and others. DHA-containing Oilseed: A Timely Solution for the Sustainability Issues Surrounding Fish Oil Sources of the Health-Benefiting Long-Chain Omega-3 Oils, v.6 *Nutrients* n. 5, p. 2040, 2014.

⁶¹ CHENG, B. *et al.* Towards the production of high levels of eicosapentaenoic acid in transgenic plants: the effects of different host species, genes and promoters. *Transgenic Research*, v. 19, p. 221-229, 2010.

⁶² An area of territory that is not subject to legal title of any state. Examples would be the high seas (see Article 2 of the Geneva Convention on the High Seas and Article 89 UNCLOS) and outer space; see UNGA Resolutions 1962 (XVII), 1721 (XVI), and 1884 (XVIII)

⁶³ BASLAR, Kemal. *The concept of the common heritage of mankind in international law*. [S. l.]: Martinus Nijhoff Publishers, 1998. p. 40.

⁶⁴ SANDARS, T. C. *The institutes of Justinian*. New York: Longmans, Green & Co, 1900. xlvii, xlviii.

⁶⁵ PERRUSO, Richard. 'The Development of the Doctrine of *Res Communes* in Medieval and Early Modern Europe'. *Tijdschrift voor Rechtsgeschiedenis*, v. 70, p. 69-71, 2002.

⁶⁶ BASLAR, Kemal. *The concept of the common heritage of mankind in international law*. [S. l.]: Martinus Nijhoff Publishers, 1998. p. 40.

⁶⁷ BASLAR, Kemal. *The concept of the common heritage of mankind in international law*. [S. l.]: Martinus Nijhoff Publishers, 1998. p. 40.

⁶⁸ BLACK'S law dictionary: definitions of the terms and phrases of american and english jurisprudence, ancient and modern. 6th. St.

resources in common to satisfy common interests was recognised by the Romans, disregarding the concept of *res nullius*, where everything in common is the subject of acquisition.⁶⁹ The European conquests over the non-European civilisations and their socio-cultural and natural assets, including their natural resources and ecosystems, emerged with time to a trilateral correlation and embraced a transformation of a Westphalian system in interactions.⁷⁰ European exploration and the subsequent scientific developments using the marine resources and their appropriation subjugated the world and echoed shifted suppositions regarding the importance of international law and the craving to apply the principle of *res communes omnium* to the global ecosystem.⁷¹

Overcoming the challenges created by enhanced private ownership over the natural resources in limiting the scope of communal interests was the key reason behind taking the position of *res communes omnium* for the natural resources.⁷² A conception of international spaces recognises global commons as “areas that were free and open to all, *res communis omnium*, fulfilled two criteria: the absence of territorial sovereignty and its prohibition”.⁷³ Even though deliberations regarding equitable sharing of resources were established among the states for long,⁷⁴ limitations in the concept of freedom of the commons failed to abolish or reduce state inconsistencies over its interpretation and execution.⁷⁵ The challenges arising from the unregulated and unrestricted freedom of commons and its impact were elucidated in Garret Hardin’s Tragedy of Commons that uncontrolled freedom will result in the devastation of the

entire commons.⁷⁶ The concept of *res communes omnium* is rooted in the idea that specific resources are essential for the well-being and survival of all individuals and, therefore, should be accessible and available to everyone. It emphasises the importance of sustainable and equitable resource management, ensuring that essential resources are preserved and utilised in a manner that benefits the entire community.⁷⁷

Consequently, the concept of *res communes omnium* includes both the human and non-human world in its normative scope. It is an essential platform for novel reflections on and articulations of the existing duties associated with the regime of freedom on the high seas. The traditional understanding of the concept focused on individualism rather than community interests, promoting the self-interest of the community members.⁷⁸ While seeking the scope of the concept in the broader context of global commons, the ABNJ, the individualistic unit among the international community, will be the sovereign states and thus protect and promote the interest of each group in the changed global preferences on economic, scientific, technical, technological, and environmental issues. The reasons and challenges arising from the scientific and technological advancements over the ecological systems and the resultant ecological crisis highlighted the practical situations in which interventions are necessary to address the aftermath of such developments. The category that has been more persistently associated with the global commons is *res communes omnium*. The category indicates a set of things- goods common to all – *communes omnium hominibus*⁷⁹ – that do not fall under the ownership of any individual, nor of any particular political community).⁸⁰ *Res extra*

Paul: West Publ., 1990. p. 1304.

⁶⁹ CHRISTOL, C. Q.; PARDO, A. The common interest: the tension between the whole and the parts. In: CHRISTOL C. Q. (ed.) *Space law: past present and future*. [S. l.]: Kluwer Law and Taxation Publication, 1991. p. 380.

⁷⁰ CHARLOTTE, Ku. The concept of *res communis* in international law. *History of European Ideas*, v. 12, n. 4, p. 459-477, 1990. p. 469.

⁷¹ CHARLOTTE, Ku. The concept of *res communis* in international law. *History of European Ideas*, v. 12, n. 4, p. 459-477, 1990. p. 469.

⁷² CHRISTOL, C. Q.; PARDO, A. The common interest: the tension between the whole and the parts. In: CHRISTOL C. Q. (ed.) *Space law: past present and future*. [S. l.]: Kluwer Law and Taxation Publication, 1991. p. 444.

⁷³ JOHN, Kish. *The Law of International Spaces*. Leiden: A. W. Sijthoff, 1973. p. 60.

⁷⁴ CASSESE, A. *International law in a divided world*. Oxford: Clarendon, 1986. p. 376-377.

⁷⁵ CHARLOTTE, Ku. The Concept of *Res Communis*. *History of European Ideas*, v. 12, n. 4, p. 459-477, 469, 1990.

⁷⁶ HARDIN, Garrett. The tragedy of the commons. In: CAHN, Matthew Alan; O'BRIEN, Rory. *Thinking about the environment: readings on politics, property and the physical world*. [S. l.]: Routledge, 2015. p. 173-178.

⁷⁷ WHITE, Lynn. The historical roots in our ecologic crisis. In: BELL, Garrett de (ed.) *Environmental Handbook*. [S. l.]: Ballentine Books Inc., 1970. p. 14.

⁷⁸ JOHNSON, P. M. The global commons, collective and individual concerns, state interests and survival, innocent bystanders and future generations. In: BORDEAU, P. M.; FASELLAA, T. (ed.) *Environmental ethics: man's relationship with nature interactions with science*. [S. l.]: Office for Official Publications for the European Community, 1990. p. 175.

⁷⁹ CAPURSO, Andrea. The end of *res communes omnium*. In: FALCON, Marco; MILANI, Mattia. (ed.) *A new role for roman taxonomies in the future of goods?* Napoli: Jovene Editore, 2022. p. 59-90. p. 59.

⁸⁰ JAMES, Anaya, S. *Indigenous peoples in international law*. 2th. [S. l.]: OUP, 2004.

*commercium*⁸¹ and *res communes humanitatis/hominibus*⁸² are considered essential concepts over the *res* (thing) in international law and specifically deal with the ownership over the international spaces, that fall under the category of global commons.

- *Res Extra Commercium*

The term *res extra commercium* originated with Roman law, and the doctrine embraces subjects that do not qualify as an object of private privileges, making them insusceptible to getting traded, thus representing and proposing a different approach.⁸³ A similar approach is accepted and followed for deep seabed and outer space. The doctrine highlights that the regions are the subject matter of common freedom of exploitation, and the sovereignty of states does not reign over the areas.⁸⁴ The expression indicates that the areas beyond the territorial limits of sovereign states fall under *res extra commercium*, which is dissociated from the rights claimed by holders of any property, including possession, exclusion, and alienation.⁸⁵ The absence of distinct legal characteristics of the doctrine challenges the applicability of the same principle over the MGRs from ABNJ, where the increased potential (economic, commercial, and scientific value and significance) required the regulation of activities over the resources from ABNJ.

- *Res Communis Humanitatis*

The Latin phrase *res communis humanitatis* does not credit its origin to Roman law,⁸⁶ deemed by its proponents to be an expansion of the *res communis* principle to fill the legal lacunae that emerged after the introduction of the CHM concept.⁸⁷ Scholars expressed diverse views, and for an immediate understanding, it could be

said that *omnium* refers to private and thus does not apply to the entire humankind, and the claims cannot be theoretically applied or equated to the doctrine of the CHM.⁸⁸ There are varying dimensions and arguments on the concept, and one proposition was that: “international areas belonging to the common heritage of mankind are conceptually *res communis*”.⁸⁹ Even though the principles of CHM is incorporated into the *res communis humanitatis* concept,⁹⁰ a clear distinction between *res communis omnium* and *res communis humanitatis* depends on the legal characteristics of the inherent resources of the area (*in situ*).⁹¹ Thus, the core difference between the two concepts is that the latter assigns and recognises humankind as the owner of natural resources. The uniqueness of the concept derives from the directives to share the benefits unlike its predecessors. The ABNJ being the vast ocean area with an abundant reserve of potential marine resources, any appropriation with economic benefits should share the proportion with the rest of the international community. Considering the special interests and needs of incapacitated states, the principle is advocated in the preamble and under the general principles and approaches of the BBNJ Agreement.

5 International law on global commons and ocean governance

The principles such as sovereign equality, self-determination, cooperation, non-intervention, and good faith also have a crucial role in ensuring international cooperation in implementing strategic action plans for conserving marine areas and resources.⁹² Howe-

⁸¹ CASSESE, A. *International law in a divided world*. Oxford: Clarendon, 1986. p. 376-377.

⁸² GOLDIE, L. F. E. A note on some diverse meanings of the common heritage of mankind. *Syracuse Journal of International Law and Commerce*, v. 10, n. 1, p. 69-112, 1983. p. 81.

⁸³ CHRISTOL, C. The legal common heritage of mankind: capturing an illusive concept and applying it to the world needs. In: CHRISTOL, C. *Space law: past, present, and future*. [S. l.]: Kluwer Law and Taxation, 1991. p. 395.

⁸⁴ BASLAR, Kemal. *The concept of the common heritage of mankind in international law*. [S. l.]: Martinus Nijhoff Publishers, 1998. p. 40.

⁸⁵ STEINBERG, Philip E. *The Social Construction of the Ocean*. Cambridge: Cambridge University Press, 2001. p. 91.

⁸⁶ CHRISTOL, C. *The legal kluwer law and taxation*. Boston: [s. n.], 1991. p. 444.

⁸⁷ WOLFRUM, R. (ed.) ‘Celestial Bodies’ in *Encyclopaedia of Public International Law: Law of the Sea and Air Space* Max Plank Institute, 2013. p. 53.

⁸⁸ COCCA, A. A. *Mankind as a new legal subject: a new judicial dimension recognized by the United Nations 1972 Proc. 13th Coll. on the Law of Outer Space*. 1972. p. 212.

⁸⁹ LEFEBER, R. ‘The Exercise of Jurisdiction in the Antarctic Region and the Changing Structure of International Law: The International Community and Common Interest’. *NYIL*, v. 21, n. 81, p. 113, 1990.

⁹⁰ CHRISTOL, C. *The legal kluwer law and taxation*. Boston: [s. n.], 1991. p. 435.

⁹¹ LEFEBER, R. ‘The Exercise of Jurisdiction in the Antarctic Region and the Changing Structure of International Law: The International Community and Common Interest’. *NYIL*, v. 21, n. 81, p. 113, 1990.

⁹² United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 (UNFCCC) preamble, recital 1, and Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 De-

ver, interconnectivity between biological resources and ecological systems is seen as a common interest of humankind. It is identified to have a key role in the modification of the elements of international law and its emerging interests for public international law.⁹³ Sovereignty principles and their limitation on the applicability of national laws are hurdle in addressing the core ocean governance issues like information sharing and assessment to support decision-making, resource and environmental monitoring, and deriving applicable solutions, etc.

The commons as a collective institution depart equally from the individualistic proposition envisaged under private law and the doctrine of state sovereignty proposed under public international law. Here, state sovereignty becomes a relative concept, where the state is given a personality that is distinct from the constituted government order⁹⁴ and at the same time a determinative concept for sovereignty is the one between state and the people, and between sovereign and the subject.⁹⁵ The concept of commons is pertinent for the governance of areas that were once considered common to all, where the threat of appropriation of resources has become common and needs governance.⁹⁶ Commons in general means, “the resources belong to the international community in its entirety or are shared jointly by all”.⁹⁷ Even though the concept of commons is not new to the legal systems around the world, the changing dimensions of the notion reflect and tackle the international order and other neoliberal political and economic strategies both at a global and local level. The complicated governance issues associated with commons reflect the manifestation of intricacy between public/private dichotomy in property statutes by challenging the critical ideological frameworks against public/private and state sovereignty/market division under the new legal regime.

cember 1993) 1760 UNTS 79 (CBD) preamble, recital 3.

⁹³ SIMMA, Bruno. Universality of international law from the perspective of a practitioner. *EJIL*, v. 20, n. 2, p. 265-297, 2009.

⁹⁴ BROWNLIE, Ian. *Principles of public international law*. 5th. Oxford: Clarendon Press, 1998. p. 86-89.

⁹⁵ LOUGHLIN, Martin. *The Idea of Public Law*. Oxford: Oxford University Press, 2003. p. 65, 68, 81-87.

⁹⁶ MARELLA, Maria Rosaria. The commons as a legal concept. *Law and Critique*, v. 28, n. 12, p. 61-64, 2017. *Supra* n.12.

⁹⁷ FLEISCHER, Carl August. The International Concern for the Environment: The Concept of the Common Heritage'. In: BOTHE, M. (ed.). *Trends in Environmental Policy and Law*. Glande: IUCN, 1980. p. 330.

Additionally, the law of the sea, became a burgeoning division of international law⁹⁸ with a key role to play in regulating anthropogenic activities, including fishing, marine scientific research, accessing marine biological resources, mining, and other unregulated activities in the waters within and beyond the jurisdictional limits of states. It is in this context that the UNGA recognised the need for an overarching regulatory mechanism to bring uniformity among the nations regarding the rights and obligations for the activities carried out in the marine areas. In 1953, the UNGA Resolution 798 (VIII) recognised the physical and judicial interconnectivity of the ocean areas, including high seas, territorial waters, contiguous zones, the continental shelf, the superjacent waters, and other prevailing problems.⁹⁹ Thus, the concept of commons discussed under the international law regime is entwined with developments in international law, not only as a concept of public property but also in terms of ownership and sovereignty. Still, it represents the foundation for significant transformation initiatives and discussions of a dissident place in the international legal order. The concept of commons raises challenges to the supremacy and scope of private property with regard to its appropriation, specifically those related to the prevailing IPR system, which fostered reinforcing private property rights over the global commons or the resources belonging to CHM in a new world economic order.

5.1 ABNJ biodiversity governance and the BBNJ agreement

Ocean governance has always been a complicated issue from ancient times, where the states not only argued for more freedom in marine areas but also demanded extended sovereign rights.¹⁰⁰ By the 1600s, when the Grotian philosophy got prominence and acceptance among the maritime nations, oceans started being considered the property of no one,¹⁰¹ i.e., under common

⁹⁸ CRAIG, Allen H. *The International Law of the Sea*. Oxford: Oxford University Press, 1982. p. 3-4.

⁹⁹ UNITED NATIONS. *Regime of the High Seas 1953 UNGA resolution 798 (VIII)*. 468th Plenary Meeting. 7 Dec. 1953. Available at: <https://undocs.org/A/RES/798>.

¹⁰⁰ SCHRIJVER, Nico. Managing the Global Commons: Common Good or Common Sink? *Third World Quarterly*, v. 37, n. 7, p. 1252-1254, 2016.

¹⁰¹ FEENSTRA, Robert. *Hugo Grotius Mare Liberum 1609-2009: Original Latin Text and English Translation*. [S. l.]: Brill, 2009. p. 43.

possession.¹⁰² Before the conclusion and adoption of the UNCLOS framework, the 1970 Declaration was the only international initiative that proposed the terminology of ABNJ, which emphasised the legal status of ABNJ to be the CHM, characterised by non-appropriation of the area without any sovereign rights attuned with the principles of international law.¹⁰³ The concept of sustainable development featured in the Brundtland Report- Our Common Future emphasised that UNCLOS was the most ambitious attempt ever to provide an internationally agreed regime for the management of the oceans and the resources,¹⁰⁴ identified the marine areas as global commons and emphasised in the report as:

Traditional forms of national sovereignty raise particular problems in managing the global commons and their shared ecosystems - the oceans, outer space, and Antarctica. Some progress has been made in all three areas; much remains to be done.¹⁰⁵

The number of marine species used by humans is growing at unprecedented rates, including domestication for aquaculture, the discovery of natural products, and research and development over marine genes of medical and biotechnological interest.¹⁰⁶ The CBD is the international instrument that recognises fair and equitable sharing of benefits established with other objectives of sustainable use and conservation;¹⁰⁷ however, its jurisdictional scope is limited to areas within national jurisdiction.¹⁰⁸ Initially, the scope of existing international legal instruments was looked into to understand the feasibility of the instruments for ABNJ governance to formulate a regulatory mechanism to govern activities affecting the ABNJ and the entire marine ecological sys-

tems, in particular the MGRs. The international community identified the prevailing legal lacunae for the governance of MGRs in ABNJ, and the new initiative for the BBNJ was a brave step towards filling the legal gap. In such an effort, one of the objectives under the BBNJ Agreement is the sharing of benefits fairly and equitably among the parties for the advantages accrued from the utilisation of MGRs of ABNJ,¹⁰⁹ with special emphasis on the needs and interests of the developing, least developed Pacific Small Island Developing States (PSIDS), Geographically Disadvantaged Landlocked Developing States to address the scientific and regulatory convergence challenges.

The efforts to develop an international legally binding instrument under the UNCLOS, where CHM, being the core of arguments in the new legal regime, had the challenge of whether it should be the same as in the UNCLOS or to consider and include other principles and approaches should be adopted to effectively regulate activities. The developed nations¹¹⁰ had always supported and argued for freedom of high seas for not setting any development barriers and to bag maximum profits from the common areas. The outcome of such an inequitable system will be competition and other unavoidable complexities, including maritime supremacy and uneven opportunities in ocean governance. Ultimately, this will result in tragedy of commons and inter-generational discretion, unfairness, and inequality. To assure fairness in maritime interaction on MGRs from ABNJ, adopting and establishing a new legal regime under the law of the sea was essential.

Thus, the term ocean commons stand for a spatial domain, and for the BBNJ Agreement, it is the ABNJ. Importantly, this notion is applied to recognise knowledge holders over the commons, including the conservers of the resources, the Indigenous People and Local Communities (IPLCs) and their rights over resources. Thus, the international community and the respective states are vested with the responsibility of giving due recognition to the rights of IPLCs for the TK they have over the MGRs from ABNJ, including the straddling resources. Assets derived from the commons both tangible and intangible can result from social cooperation,

¹⁰² GROTIUS, Hugo. *Commentary on the Law of Prize and Booty*. [S. l.]: Liberty Fund 2012. Available at: <https://oll.libertyfund.org/titles/ittersum-commentary-on-the-law-of-prize-and-booty>.

¹⁰³ Resolution 2749 (XXV), Resolutions adopted on the reports of the First Committee, Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction, 1933rd plenary meeting, 17 December 1970. Available at: https://legal.un.org/diplomaticconferences/1973_los/docs/english/res/a_res_2749_xxv.pdf.

¹⁰⁴ WCED. Report of the World Commission on Environment and Development: Our common future, 1987. p. 42,427. Para 83.

¹⁰⁵ WCED. Report of the World Commission on Environment and Development: Our common future, 1987. p. 42,427. Para 83.

¹⁰⁶ ARRIETA, J. M.; DUARTE, C. M. What lies underneath: conserving the 'oceans' genetic resources'. *Proceedings of the National Academy of Sciences*, v. 107, n. 43, 2010. Available at: <https://www.pnas.org/doi/full/10.1073/pnas.0911897107>.

¹⁰⁷ UNCLOS 1982, Article 1.

¹⁰⁸ UNCLOS 1982, Article 4.

¹⁰⁹ UNGA, A/RES/72/249, United Nations. Resolution Adopted by the UN General Assembly on 24 December 2017.

¹¹⁰ SANTO, Elizabeth M. *et al.* Stuck in the middle with you (and not much time left): the third intergovernmental conference on biodiversity beyond national jurisdiction. *Marine Policy*, v. 117, n. 4, 2020.

especially in the case of cultural common, resulting in the mobilisation of resources and the communities, resulting in political, social, and economic transformations.¹¹¹ It is particularly true for the ABNJ and the resources, where the economic (based on the actual or potential value of the resource), political, ecological, and communal significance made it a core issue in legal debates. The international legal instruments negotiated on the global commons also include The UN Framework Convention on Climate Change- The Paris Agreement, the Basel Convention, CITES, the Aarhus Convention, the CBD, the recently concluded BBNJ Agreement, etc.¹¹² Thus, many international and regional initiatives have identified the significance of the conservation of ABNJ and the biodiversity thereof, along with the understanding that the problems of ocean space are interconnected and need to be addressed as a whole to tackle the ecological imbalances prevailing for the regime- the global commons.

6 Governing the global commons and the common heritage of mankind principle

Maritime delimitation and the distinction recognised under the UNCLOS regime are the high seas and the area for the regulation of specific activities. Whereas the key concern was the deep-sea mining and the associated benefit sharing was addressed under the CHM principle.¹¹³ The CHM principle was first referred to for the protection of cultural property in the preamble to the 1954 Hague Convention when any armed conflict occurs,¹¹⁴ and later in the Antarctic Treaty in

1959.¹¹⁵ The application of CHM to the marine realm was proposed in the First UN Conference on the Law of the Sea, through a statement by Prince Wan Wai-thayakon of Thailand that read: “The sea was the common heritage of mankind and that the law of the sea should ensure the preservation of that heritage for the benefit of all”,¹¹⁶ but could not gather support.¹¹⁷ The legal right vested over nations as proposed in the 1958 Geneva Convention was emphasised in 1967 when Alexander Pardo of Malta proposed the UNGA to declare: “the sea-bed and the ocean-floor, beyond the limits of national jurisdiction, to be under the Common Heritage of Mankind”.¹¹⁸

The proposal was an appeal for introducing a new principle in international law that could recognise the rights of all nations through establishing an organisation that will function for the entire humanity. The Moratorium Resolution adopted in 1969 recommended that: “States and corporations should be bound to refrain from sea-bed mining until an international regime could be established to govern this activity”.¹¹⁹ The 1970 Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction proclaimed that ABNJ areas and the resources are to be managed under the CHM principle,¹²⁰ and will apply to managing deep

¹¹¹ MARELLA, Maria Rosaria. The commons as a legal concept. *Law and Critique*, v. 28, n. 12, 2017.

¹¹² UNGA Res ‘Development of an ILBI under the UNCLOS on the conservation and sustainable use of marine biological diversity of ABNJ (19 June 2015) UN Doc A/RES/69/292 [1(a)]; United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 (UNFCCC) preamble, recital 1; and Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79 (CBD) preamble, recital 3.

¹¹³ GLASBY, G. P. Deep seabed mining: past failures and future prospects. *Marine Georesources and Geotechnology*, v. 20, n. 2, p. 161-176, 2002.

¹¹⁴ Convention for the Protection of Cultural Property in the Event of Armed Conflict of May 14, 1954 portal.unesco.org.

¹¹⁵ The Antarctic Treaty, 23 June 1962, 5778 UNTS 402., In the Antarctic Treaty (adopted 1 December 1959, entered into force 23 June 1961) 402 UNTS 71, preamble, there is no explicit mention of ‘common heritage’, but there is equivalent language, as Antarctica is characterized as the province of all mankind, like outer space. For a review of the different positions as regards Antarctica, and the differences between areas under frozen claims, and unclaimed areas, See, CHRISTOPHER, Joyner. *Antarctica and the law of the sea*. [S. L.]: Martinus Nijhoff, 1992. See also, GUNTRIP, Edward. The common heritage of mankind: an adequate regime for managing the deep seabed?. *Melbourne Journal of International Law*, v. 4, n. 2, p. 376-405, 2003. However, outer space is subject to a regime of freedom (with the limitation of peaceful utilization), while Antarctica is subject to a strict regime that prohibits most activities, and carefully regulates the few uses that are allowed (eg., scientific research and more recently tourism). It is also worthy of note that some commentators consider that the Antarctic Treaty system is rather based on the principle of common concern, see, Dina Shelton, ‘Common Concern of Humanity’ 2009.

¹¹⁶ Official Records, UNCLOS, first plenary meeting, UN Doc A/CONF.13/SR.1, p. 3, 1958.

¹¹⁷ UN Conference on the law of the sea, Plenary meetings, Official records, Volume II, 1958.

¹¹⁸ GA Official Records, 22nd session (1967), First Committee Meeting, 1 November, 1967, UN Doc. A/C.1/PV.1515.

¹¹⁹ Moratorium resolution, GA Res. 2574D (XXIV), 15 December 1969.

¹²⁰ Declaration of Principles Governing the Seabed and the Ocean

sea mining and associated exploration and exploitation activities in ABNJ; that was later adopted by the 1933rd UNGA plenary meeting of 1970 for areas beyond territorial limits elaborated proposals laid down by Pardo and agreed to the CHM principle¹²¹ as an acceptable norm of international law and the elements of CHM incorporated under Part XI of the UNCLOS 1982 framework. Thus, the core elements proposed under the CHM principle were to prevent appropriation of CHM areas, the rights and responsibilities of all the parties in managing the common areas, share the benefits for the use of CHM resources fairly and equitably among the state parties and reserve the CHM areas exclusively for peaceful purpose. The principle of CHM from its introduction in any of the international legal and policy frameworks, the subject matter remained the same, i.e., to address the issues associated with the resources or the areas that are assigned/considered as commons, and its significance will continue until the global commons that are the common concern of humankind are in existence.

6.1 Implementing the CHM principle under the UNCLOS: an analysis with the ISA

The ISA has elaborated the seabed regime under the UNCLOS and the 1994 Implementation Agreement,¹²² which orbits around the CHM principle.¹²³ The CHM principle is multifaceted and embodied in many provisions- part XI in particular,¹²⁴ under which ISA was established to function for the benefit of humankind as a whole,¹²⁵ and the activities were supposed to be regulated

Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, UN Doc A/RES/2749(XXV) (17 December 1970). 2749(XXV) (17 December 1970).

¹²¹ GOROVE, S. Concept of common heritage of mankind: a political moral or legal innovation. *San Diego Law Review*, v. 9, n. 3, p. 390-403, 1971. p. 390.

¹²² Articles 137(2), 153(1), 156-185 UNCLOS.

¹²³ Article 136, and Part XI (Article 331(6) UNCLOS; The CHM principle was officially codified in Article 136 and presented directives for the interpretation and application of Part XI of UNCLOS, as emphasised under Article 311(6) that agreed to retain the CHM as the basic principle without any scope for further amendments to what has been adopted under Art.136.

¹²⁴ SHEN, Hao. A critical assessment of the ISA's implementation of the CHM principle from the perspective of benefit-sharing regime. *International Environmental Agreements*, v. 23, n. 3, p. 355-371, 2023. p. 356.

¹²⁵ SHEN, Hao. A critical assessment of the ISA's implementation of the CHM principle from the perspective of benefit-sharing regime. *International Environmental Agreements*, v. 23, n. 3, p. 355-371,

for humankind.¹²⁶ Benefit-sharing was thus recognised as an imperative factor of the CHM principle and an internationally accepted obligation under the ISA.¹²⁷ The benefit-sharing mechanism envisaged under the CHM consists of modalities for sharing both monetary and other benefits associated with deep-sea mining,¹²⁸ consistent with what Pardo had emphasised under their proposal that “implied an active sharing of benefits, not only financial but also benefits derived from shared management and transfer of technology”.¹²⁹ Thus, the elements of the CHM principle apply to the exploitation of resources from the seabed and to assure that benefits are shared equitably with the entire humanity irrespective of their geographical distribution. The clause “shall not be a party to any agreement in derogation thereof” under UNCLOS Article 311(6) is significant in the context of the BBNJ Agreement, where multiple principles and approaches are accepted. Still, as per the provision, the basic principle of the BBNJ Agreement should also be the CHM.

6.2 CHM and freedom of high seas conflicts on governance of MGRs

The resources once considered the common heritage of humanity are getting appropriated at an alarming rate, but only countries with technical and scientific potential benefit from the resources. The concept of property over resources from the high seas and the area must be redefined to reconcile the issue.¹³⁰ The CHM principle envisaged under the UNCLOS shifted the legal regime to the sovereignty concept over resources procured from within national territories, but beyond

2023. p. 357-359.

¹²⁶ JAECKEL, A.; ARDRON, J. A.; GJERDE, K. M. ‘Sharing Benefits of the Common Heritage of Mankind - Is the Deep seabed Mining Regime Ready?’. *Marine Policy*, v. 70, p. 198-204, 2016.

¹²⁷ WILLAERT, K. ‘Effective Protection of the Marine Environment and Equitable Benefit Sharing in the Area: Empty Promises or Feasible Goals?’. *Ocean Development & International Law*, v. 51, n. 2, p. 175-192, 2020.

¹²⁸ Articles 143(3)(b)(ii), 144, 148, Annex III Article 15 of the Convention; 1994 Implementation Agreement, Annex Sect. 5(1)(b). Article 144 (Transfer of technology) and Article 148; See also, Report of the Chair of the Legal and Technical Commission on the work of the Commission at the first part of its twenty-sixth session (9 March 2020), ISA Doc. ISBA/26/C/12 (2020), paragraphs 4-7.

¹²⁹ DINGWALL, J. *International law and corporate actors in deep seabed mining*. Oxford: Oxford University Press, 2021. p. 90.

¹³⁰ JOYNER, Christopher C. The Concept of the Common Heritage of Mankind in International Law’. *Emory Int'l L. Review*, v. 615, n. 13, p. 429-432, 1999.

that, remained ungoverned, but demanding regulatory framework for the increased bioprospecting, misappropriation of resources, and claiming property rights over them.¹³¹ The “Freedom of High Seas”¹³² regime facilitated freedom of navigation, fishing, and conducting scientific research activities, raised questions on the applicable legal regime over the marine biological diversity, especially to deep-sea GRs and MGRs from ABNJ, highly migratory and straddling resources, and the traditional knowledge associated with MGRs of ABNJ, which were left unaddressed in any of the international legal and policy frameworks.¹³³

The same concern has been reflected in ocean space governance, and international law has started recognising the common interest of mankind in protecting the ocean system and its resources. Both *res communis omnium* and the High Seas recognise the shared nature of specific resources and emphasise the importance of responsible management and protection for the benefit of humanity as a whole.¹³⁴ The concepts have found application in various areas, including environmental law, regulating natural resources, and the development of international treaties and agreements. The concept of the CHM is thus more encompassing than the *res communis omnium*, where the idea underlying idea was that, special legal regimes should safeguard the specific interests of all humankind.¹³⁵

The fundamental principles of public international law implemented through an internationally agreed ABNJ activity notification and monitoring system,¹³⁶ following the principles of equality of states and equity for unhindered access to the global commons including for navigation etc, could partially address the concerns.¹³⁷ The same principle was upheld in the *Nor-*

th Sea Continental Shelf Case by the ICJ¹³⁸ declaring that the principles recognised are relevant and applicable to the global commons.¹³⁹ However, the applicability of the principle and subject of justice should be subjected to the nature and content of equity,¹⁴⁰ along with the “allotment of something rationally regarded as advantageous or disadvantageous and interested in only one instance of its application”.¹⁴¹ Thus, concepts of equity and justice complement each other. To ensure equity for the developing and other disadvantaged states in decision-making and governing the global commons under international platforms requires effective participation following the principles of justice.

Thus, the CHM principle refers to the ethical and legal status of the subject area and resource (absence of private property rights being one aspect),¹⁴² and the freedom of high seas is applicable to ABNJ and should not be confused with non-existent freedom to lay claim through property rights to the fruits of exercising that freedom including through IPRs.¹⁴³ Although the activity seems regulated, based on precedents, the CHM is an unpersuasive practical solution for precluding IPRs; but, as a principle, CHM proposes to deliver distributi-

¹³¹ BLASIAK, Robert *et al.* Corporate control and global governance of marine genetic resources. *Science advances*, v. 4, n. 6, 2018.

¹³² Articles 87-90, UNCLOS.

¹³³ MCGRAW, Désirée M. The CBD - key characteristics and implications for implementation. *Review of European Community & International Environmental Law*, v. 11, p. 17-28, 2002.

¹³⁴ KISS, Alexander. The common heritage of mankind: utopia or reality?. *International Journal*, v. 40, n. 3, p. 423-441, 1985.

¹³⁵ KISS, Alexander. The common heritage of mankind: utopia or reality?. *International Journal*, v. 40, n. 3, p. 423-441, 1985.

¹³⁶ HUMPHRIES, F. *et al.* ‘A Tiered Approach to the Marine Genetic Resource Governance Framework under the Proposed UNCLOS Agreement for Biodiversity Beyond National jurisdiction (BBNJ)’. *Marine Policy*, v. 122, 2020.

¹³⁷ CHATTOPADHYAY, Subir K. Equity in international law: its growth and development. *Journal of International and Comparative Law*, v. 5, n. 2, p. 381-406, 1975. p. 384.

¹³⁸ North Sea Continental Shelf Cases, [1969] I.C.J. 3; other than this case, the principle of equity was upheld in more cases and the decisions illustrative of the meaning and applicability of equity are: Fisheries Case (United Kingdom v. Norway), [1951] I.C.J. 116; Chorzow Factory Case, [1927] P.C.I.J., ser. A, No. 9; Serbian and Brazilian Loans Cases, [1929] P.C.I.J., ser. A, Nos. 20, 21; Diversion of Water from the Meuse Case, [1937] P.C.I.J., ser. A/B, No. 70; Venezuelan Preferential Case (Germany v. Venezuela), Hague Court Reports (Scott) 55 (Perm. Ct. Arb. 1904); Orinoco Steamship Company Case (United States v. Venezuela), Hague Court Reports (Scott) 226 (Perm. Ct. Arb. 1910); North Atlantic Coast Fisheries Case (Great Britain v. United States), 11 U.N.R.I.A.A. 167 (Perm. Ct. Arb. 1910); Island of Palmas Case (Netherlands v. United States), 2 U.N.R.I.A.A. 829 (Perm. Ct. Arb. 1928); Cayuga Indians Case

¹³⁹ SOHN, Louis B. ‘Equity in International law’ In *Proceedings of the Annual Meeting (American Society of International Law)*. *American Society of International Law*, v. 82, p. 277-291, 280, 1988.

¹⁴⁰ JANIS, Mark W. The ambiguity of equity in international law. *Brooklyn Journal of International Law*, v. 9, n. 7, 1983.

¹⁴¹ RAWLS, John. *A Theory of Justice*. [S. I]: Universal Law Publishing Company, 2013. p. 8.

¹⁴² DE LUCIA, Vito. Ocean commons and the ‘ethological’ nomos of the sea’. In: DE LUCIA, Vito; ELFERINK, Alex Oude; NGUYEN, Lan Ngoc (ed.) *International law and marine areas beyond national jurisdiction: reflections on justice, space, knowledge and power*. [S. I]: Brill, 2022. v. 95, p. 16-20.

¹⁴³ THAMBISETTY, Siva. ‘Biodiversity Beyond National Jurisdiction (Intellectual) Property Heuristics in Marine Biodiversity of Areas beyond National Jurisdiction’. *Center for Oceans Law and Policy*, v. 24, p. 31-146, 2021. Available at: <https://doi.org/10.1163/9789004422438008>.

ve justice to shield the rights of developing and other incapacitated member states by facilitating benefit-sharing. If accepted that the freedom of high seas applies to MSR, then regarding the possession of MGRs resulting from MSR is concerned, two possibilities follow – that biodiversity beyond national jurisdiction is regarded as being under common ownership or that no ownership rights exist.

Even though the CHM principle could only be seen as an agreement on constituent elements, the freedom of high seas and uninhibited access works best within the assumption that BBNJ is owner-less. The conflict here is that it appears to go against the language of UNGA Resolutions 72/249 and 69/292, which set out the need for a comprehensive global regime to address better conservation and sustainable use of the marine biological diversity of ABNJ. The language is redolent of managed common ownership rather than a *laissez-faire*, no-ownership scenario. For the freedom of high seas to be compatible with the wording of the relevant UNGA resolutions in a way that ties that principle to access and utilisation of MGRs, the status of these resources in law, and IPRs need persuasive amendments.

7 Conclusion

International initiatives for regulating activities in the global commons emphasised the need for global governance for the ABNJ areas. The legal status of marine genetic resources from ABNJ was a burning issue before the international community. To address the conflicting interests between developed nations and developing and other disadvantaged states, the scope of applicable principles and approaches that span from freedom of high seas to CHM was found noteworthy. From the Hague Conference to the recently concluded BBNJ Agreement, the need for a global governance regime with fair, informed, and benefit-sharing policies with a multilateral approach to assure consistency has been recognised. The issues associated with the resources from the global commons that span from access, utilisation, the role of human interventions and labour, possession, ownership, and appropriations of results of scientific inventions through IPRs are recognised by the international community. The initiatives for the regulation of increasing commodification of global commons

remain unaddressed for their unique political, economic, and legal issues. The other side of the argument was the consent of the international community for the above activities where a consent mechanism under which benefit sharing has to be implemented for the global commons, for which the apt principle will be the *res communes* and thus Common Concern of humankind for the global governance mechanism. Retaining the CHM as the general principle and approach under the international legally binding instruments, along with the concepts of commons and regulated responsibilities, is crucial to creating an effective regulatory regime for MGRs and MGRTK from ABNJ. It will be affected better through the principle adopted under the Paris Convention 2015 under the UN Framework Convention on Climate Change - the common but differentiated responsibility, which will effectively address the challenges in governing the global commons with more obligations over the technologically advanced biodiversity utilising state parties. Even though other additional principles and approaches are proposed and accepted for the ABNJ, they do not have a direct bearing on access regulation and fair and equitable benefit sharing.

References

- ARRIETA, J. M.; DUARTE, C. M. What lies underneath: conserving the ‘oceans’ genetic resources?. *Proceedings of the National Academy of Sciences*, v. 107, n. 43, 2010. Available at: <https://www.pnas.org/doi/full/10.1073/pnas.0911897107>.
- BABATUNDE, Abidoye *et al.* The origin and progress of the sustainable development goals. In: SHERYL, L. *et al.* (ed.) *Handbook on public policy and food security*. [S. l.]: Edward Elgar Publishing, 2024.
- BALORO, J. Some international legal problems arising from the definition and application of the concept of “permanent sovereignty over wealth and natural resources” of states. *The Comparative and International Law Journal of Southern Africa*, v. 20, n. 3, p. 335-352, 1987.
- BASLAR, Kemal. *The concept of the common heritage of mankind in international law*. [S. l.]: Martinus Nijhoff Publishers, 1998.

- BLACK'S law dictionary: definitions of the terms and phrases of american and english jurisprudence, ancient and modern. 6th. St. Paul: West Publ., 1990.
- BLASIAK, Robert *et al.* Corporate control and global governance of marine genetic resources. *Science advances*, v. 4, n. 6, 2018.
- BLEUENN, Guilloux. *Marine genetic resources, R&D and the objects of use*. Nova Jersey: John Wiley & Sons, 2018.
- BROWNLIE, Ian. *Principles of public international law*. 5th. Oxford: Clarendon Press, 1998.
- CAPURSO, Andrea. The end of res communes omnium. In: FALCON, Marco; MILANI, Mattia. (ed.). *A new role for roman taxonomies in the future of goods?* Napoli: Jovene Editore, 2022. p. 59-90.
- CASSESE, A. *International law in a divided world*. Oxford: Clarendon, 1986.
- CHARLOTTE, Ku. The concept of res communis in international law. *History of European Ideas*, v. 12, n. 4, p. 459-477, 1990.
- CHATTOPADHYAY, Subir K. Equity in international law: its growth and development. *Journal of International and Comparative Law*, v. 5, n. 2, p. 381-406, 1975.
- CHENG, B. *et al.* Towards the production of high levels of eicosapentaenoic acid in transgenic plants: the effects of different host species, genes and promoters. *Transgenic Research*, v. 19, p. 221-229, 2010.
- CHRISTOL, C. Q.; PARDO. A. The common interest: the tension between the whole and the parts. In: CHRISTOL C. Q. (ed.) *Space law: past present and future*. [S. l.]: Kluwer Law and Taxation Publication, 1991.
- CHRISTOL, C. The legal common heritage of mankind: capturing an illusive concept and applying it to the world needs. In: CHRISTOL, C. *Space law: past, present, and future*. [S. l.]: Kluwer Law and Taxation, 1991.
- CHRISTOL, C. *The legal klwuer law and taxation*. Boston: [s. n.], 1991.
- CHRISTOPHER, Joyner. *Antarctica and the law of the sea*. [S. l.]: Martinus Nijhoff, 1992.
- COCCA, A. A. *Mankind as a new legal subject: a new judicial dimension recognized by the United Nations 1972 Proc. 13th Coll. on the Law of Outer Space*. 1972.
- CRAIG, Allen H. *The International Law of the Sea*. Oxford: Oxford University Press, 1982.
- DE LUCIA, Vito. Ocean commons and the 'ethological' nomos of the sea?. In: DE LUCIA, Vito; ELFERINK, Alex Oude; NGUYEN, Lan Ngoc (ed.) *International law and marine areas beyond national jurisdiction: reflections on justice, space, knowledge and power*. [S. l.]: Brill, 2022. v. 95, p. 16-20.
- DE LUCIA, Vito. The Concept of Commons and Marine Genetic Resources in Areas Beyond National Jurisdiction?. *Mar.SafeLaw Journal*, v. 19, n. 5, 2018.
- DEPLAZES-ZEMP, Anna. Genetic resources, an analysis of a multifaceted concept. *Biological Conservation*, v. 222, p. 86-94, 2018.
- DINGWALL, J. *International law and corporate actors in deep seabed mining*. Oxford: Oxford University Press, 2021.
- DUNCAN, French. *Common concern, in Michael Handbook in biodiversity law*. [S. l.]: Edward Elgar, 2016.
- ESPOSITO, Roberto. *Bíos: Biopolitics and Philosophy*. Minnesota: University of Minnesota Press, 2008.
- FEENSTRA, Robert. *Hugo Grotius Mare Liberum 1609-2009: Original Latin Text and English Translation*. [S. l.]: Brill, 2009.
- FENNEL, Lee Anne. Commons, anticcommons, semi-commons. In: KENNETH, Ayotte; SMITH, Henry E. (ed.) *Research handbook on the economics of property law*. [S. l.]: Edward Elgar, 2011.
- FLEISCHER, Carl August. The International Concern for the Environment: The Concept of the Common Heritage?. In: BOTHE, M. (ed.). *Trends in Environmental Policy and Law*. Glande: IUCN, 1980.
- FRENCH, Duncan. Common Concern, Common Heritage and Other Global(-ising) Concepts: Rhetorical Devices, Legal Principles or a Fundamental Challenge? In: BOWMAN, Michael; DAVIES, Peter; GOODWIN, Edward. (ed.). *Research Handbook in Biodiversity Law*. [S. l.]: Edward Elgar, 2016.
- GA Official Records, 22nd session (1967), First Committee Meeting, 1 November, 1967, UN Doc. A/C.1/PV.1515.
- GASTON, Kevin J.; SPICER, John I. *Biodiversity: an introduction*. [S. l.]: Blackwell Publishers, 2004.

- GHANASHYAM, Sharma; PRADHAN, Bharat Kumar. Exploring traditional knowledge: bio-prospecting and biopiracy in India and Southeast Asian mega-diversity nations. In: PANICKER, L. K.; NELLIYAT, P.; OOMMEN, O. V. (ed.). *Biodiversity and business*. Cham: Springer, 2024. p. 477-483.
- GILLES, Boeuf. Marine Biodiversity Characteristics. *Comptesrendusbiologies*, v. 334, n. 5-6, 2011.
- GLASBY, G. P. Deep seabed mining: past failures and future prospects. *Marine Georesources and Geotechnology*, v. 20, n. 2, p. 161-176, 2002.
- GOLDIE, L. F. E. A note on some diverse meanings of the common heritage of mankind. *Syracuse Journal of International Law and Commerce*, v. 10, n. 1, p. 69-112, 1983.
- GOROVE, S. Concept of common heritage of mankind: a political moral or legal innovation. *San Diego Law Review*, v. 9, n. 3, p. 390-403, 1971.
- GROTIUS, Hugo. *Commentary on the Law of Prize and Booty*. [S. l.]: Liberty Fund 2012.
- GUNTRIP, Edward. The common heritage of mankind: an adequate regime for managing the deep seabed?. *Melbourne Journal of International Law*, v. 4, n. 2, p. 376-405, 2003.
- HALL, Charles. Institutional Solutions for Governing the Global Commons: Design Factors and Effectiveness. *The Journal of Environment & Development*, v. 7, n. 2, 1998.
- HARDIN, Garrett. The tragedy of the commons. In: CAHN, Matthew Alan; O'BRIEN, Rory. *Thinking about the environment: readings on politics, property and the physical world*. [S. l.]: Routledge, 2015.
- HEY, Ellen. International Institutions. In: BODANSKY, Daniel et al. (ed.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2008.
- HUGHES, Kevin A.; PAUL D. Bridge. Potential impacts of Antarctic bioprospecting and associated commercial activities upon Antarctic science and scientists. *Ethics in Science and Environmental Politics*, v. 10, n. 1, 2010.
- HUMPHRIES, F. et al. A Tiered Approach to the Marine Genetic Resource Governance Framework under the Proposed UNCLOS Agreement for Biodiversity Beyond National jurisdiction (BBNJ). *Marine Policy*, v. 122, 2020.
- JAECKEL, A.; ARDRON, J. A.; GJERDE, K. M. Sharing Benefits of the Common Heritage of Mankind - Is the Deep seabed Mining Regime Ready?. *Marine Policy*, v. 70, 2016.
- JAMES, Anaya, S. *Indigenous peoples in international law*. 2th. [S. l.]: OUP, 2004.
- JANIS, Mark W. The ambiguity of equity in international law. *Brooklyn Journal of International Law*, v. 9, n. 7, 1983.
- JOELI, Veitayaki. Traditional Marine Resource Management Practices used in the Pacific Islands: An Agenda for Change. *Ocean & Coastal Management*, v. 37, n. 1, 1997.
- JOHN, Kish. *The Law of International Spaces*. Leiden: A. W. Sijthoff, 1973.
- JOHNSON, P. M. The global commons, collective and individual concerns, state interests and survival, innocent bystanders and future generations. In: BORDEAU, P. M.; FASELLAA, T. (ed.) *Environmental ethics: man's relationship with nature interactions with science*. [S. l.]: Office for Official Publications for the European Community, 1990.
- JOYNER, Christopher C. The Concept of the Common Heritage of Mankind in International Law'. *Emory Int'l L. Review*, v. 615, n. 13, 1999.
- KISS, Alexandrer. The common heritage of mankind: utopia or reality?. *International Journal*, v. 40, n. 3, 1985.
- LATHE, W. J. et al. Genomic Data Resources: Challenges and Promises, *Nature Education*, v. 1, n. 3, 2008.
- LEE A. Kimball. *International Ocean Governance: Using International Law and Organizations to Manage Marine Resources Sustainably*. [S. l.]: IUCN, 2003.
- LEFEBER, R. The Exercise of Jurisdiction in the Antarctic Region and the Changing Structure of International Law: The International Community and Common Interest. *NYIL*, v. 21, n. 81, 1990.
- LOUGHLIN, Martin. *The Idea of Public Law*. Oxford: Oxford University Press, 2003.
- MARELLA, Maria Rosaria. The commons as a legal concept. *Law and Critique*, v. 28, n. 12, 2017.
- MCGRAW, Désirée M. The CBD - key characteristics and implications for implementation. *Review of European*

- Community & International Environmental Law*, v. 11, p. 17-28, 2002.
- MILUN, Kathryn. *The Political Uncommons: The Cross-cultural Logic of the Global Commons*. Farnham: Ashgate 2011.
- MOORE, M. *A Political Theory of Territory*. Oxford: Oxford University Press, 2015.
- Moratorium resolution, GA Res. 2574D (XXIV), 15 December 1969.
- North Atlantic Coast Fisheries Case (Great Britain v. United States), 11 U.N.R.I.A.A. 167 (Perm. Ct. Arb. 1910).
- North Sea Continental Shelf Cases, [1969] I.C.J. 3.
- OLDFIELD, Margery L. *The value of conserving genetic resources*. [S. l.]: US Department of the Interior National Park Service, 1984.
- PADMA. Protection of Traditional Knowledge Associated with Genetic Resources, in *An Introduction to Ethical, Safety and Intellectual Property Rights Issues in Biotechnology*, Academic Press, 2017.
- PERRUSO, Richard. The Development of the Doctrine of *Res Communes* in Medieval and Early Modern Europe. *TijdschriftvoorRechtsgeschiedenis*, v. 70, 2002.
- PUSHPANGADAN, P.; GEORGE, V.; IJINU, T. P.; CHITHRA, M. A. Biodiversity, Bioprospecting, Traditional Knowledge. *Journal of Traditional Medicine & Clinical Naturopathy*, v. 7, n. 1, 2018.
- RAO, M. B.; GURU, Manjula. *Biotechnology, IPRs and Biodiversity*. [S. l.]: Pearson Longman, 2007.
- RAUSSER, Gordon C.; SMALL, Arthur A. Valuing Research Ideas: Bioprospecting and the Conservation of Genetic Resources. *Journal of Political Economy*, v. 108, n. 1, 2000.
- RAWLS, John. *A Theory of Justice*. [S. l.]: Universal Law Publishing Company, 2013.
- RAYNER, S. *Governance and the global commons*. London: Pinter, 1995.
- REID, Colin T.; NSOH, Walters. *The Privatisation of Biodiversity? New Approaches to Conservation Law*. [S. l.]: Edward Elgar Publishing Inc., 2016.
- ROGER D. Congleton. *Governing the global environmental commons: the political economy of international environmental treaties and institutions*. 2001.
- ROGERS, Alex D. *et al.* Marine Genetic Resources in Areas Beyond National Jurisdiction: Promoting Marine Scientific Research and Enabling Equitable Benefit Sharing. *Frontiers in Marine Science*, v. 8, 2021.
- RUTH, Lapidoth. Equity in international law. *Israel Law Review*, v. 22, n. 2, 1987.
- SANDARS, T. C. *The institutes of Justinian*. New York: Longmans, Green & Co, 1900.
- SANTO, Elizabeth M. *et al.* Stuck in the middle with you (and not much time left): the third intergovernmental conference on biodiversity beyond national jurisdiction. *Marine Policy*, v. 117, n. 4, 2020.
- SCHRIJVER, Nico. Managing the Global Commons: Common Good or Common Sink? *Third World Quarterly*, v. 37, n. 7, 2016.
- SCHWEBEL, Stephen M. The Story of the UN's Declaration on Permanent Sovereignty over Natural Resources. *ABAJ*, v. 49, 1963.
- SHEN, Hao. A critical assessment of the ISA's implementation of the CHM principle from the perspective of benefit-sharing regime. *International Environmental Agreements*, v. 23, n. 3, p. 355-371, 2023.
- SIGWART, Julia D. *et al.* Unlocking the potential of marine biodiscovery. *Natural Product Reports*, v. 38, n. 7, p. 1235-1242, 2021.
- SIMCOCK. *The First Global Integrated Marine Assessment, World Ocean Assessment I*, UM. Cambridge: Cambridge University Press, 2017.
- SIMMA, Bruno. Universality of international law from the perspective of a practitioner. *EJIL*, v. 20, n. 2, p. 265-297, 2009.
- SOHN, Louis B. Equity in International law' In *Proceedings of the Annual Meeting (American Society of International Law)*. *American Society of International Law*, v. 82, 1988.
- SORESSA, M. Kitessa *et al.* DHA-containing Oilseed: A Timely Solution for the Sustainability Issues Surrounding Fish Oil Sources of the Health-Benefitting Long-Chain Omega-3 Oils. *Nutrients*, v. 6, n. 5, 2014.
- STEINBERG, Philip E. *The Social Construction of the Ocean*. Cambridge: Cambridge University Press, 2001.
- SUSTAINABLE DEVELOPMENT GOALS KNOWLEDGE PLATFORM. *Oceans and Seas*. Available

ble at: <https://sustainabledevelopment.un.org/topics/oceanandseas>.

THAMBISETTY, Siva. Biodiversity Beyond National Jurisdiction (Intellectual) Property Heuristics in Marine Biodiversity of Areas beyond National Jurisdiction. *Center for Oceans Law and Policy*, v. 24, 2021.

TOLENTINO JUNIOR, Amado S. Sovereignty over natural resources-change of concept or change of perception?. *Environmental Policy and Law*, v. 44, p. 300-306, 2014.

UNITED NATIONS. *Regime of the High Seas 1953 UNGA resolution 798 (VIII)*. 468th Plenary Meeting. 7 Dec. 1953. Available at: <https://undocs.org/A/RES/798>.

VIERROS, M. *et al.* Who Owns the Ocean? Policy Issues Surrounding Marine Genetic Resources. *Limnology and Oceanography Bulletin*, v. 25, n. 2, 2016.

WAART, P. J. I. M. de. Permanent sovereignty over natural resources as a corner-stone for international economic rights and duties. *Netherlands International Law Review*, v. 24, n. 1-2, 1977.

WCED. *Our Common Future, Managing the Commons in Report of the World Commission on Environment and Development: Our Common Future*. UN, 1987. Available at: <http://www.un-documents.net/ocf-10.htm#I>.

WCED. Report of the World Commission on Environment and Development: Our common future 42, 427, 1987.

WHITE, Lynn. The historical roots in our ecologic crisis. In: BELL, Garrett de (ed.) *Environmental Handbook*. [S. l.]: Ballentine Books Inc., 1970.

WIJKMAN, P. M. Managing the global commons. *International Organization*, v. 36, n. 3, 1982.

WILLAERT, K. Effective Protection of the Marine Environment and Equitable Benefit Sharing in the Area: Empty Promises or Feasible Goals?. *Ocean Development & International Law*, v. 51, n. 2, 2020.

WOLFRUM, R. (ed.) 'Celestial Bodies' in *Encyclopaedia of Public International Law: Law of the Sea and Air Space* Max Plank Institute, 2013.

YPSITA, Demunshi; CHUGH, Archana., Role of traditional knowledge in marine bioprospecting. *Biodiversity and Conservation*, n. 19, 2010.

Para publicar na Revista de Direito Internacional, acesse o endereço eletrônico
www.rdi.uniceub.br ou www.brazilianjournal.org.
Observe as normas de publicação, para facilitar e agilizar o trabalho de edição.