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The Concept of Commons and Marine Genetic Resources in Areas beyond National Jurisdiction

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Abstract

This article explores some of the ways in which marine genetic resources conceptually and normatively intersect with the concept and idea of commons. Through an analysis of the terminological ambiguities and semantic slippages characterizing the usage of the concept of commons in international law, the article addresses questions relation to the idea of global commons and to the multiple reciprocal mapping of concepts, categories and legal regimes (can the different existing inflections of the idea of commons be considered articulations of the same underlying concept? What legal categories are associated with the multiple inflections and articulations of the concept of commons? What legal regime(s) do they, or should they, refer to?) The analysis shows that the commons is best understood as a narrative, which is then unpacked, in order to illustrate how it links in multiple ways to an ensemble of legal categories and legal regimes. Finally, the article explores how do marine genetic resources fit in this conceptual and normative narrative, in order to map the applicable regimes, and examine whether, to which extent, and in what ways, marine genetic resources are, can and/or should be considered as commons.

Keywords: marine genetic resources, global commons, areas beyond national jurisdiction; BBNJ; law of the sea; common concern; common heritage of mankind; biodiversity conservation; marine biodiversity

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1. Introduction

The concept of commons has gained increasing prominence in the context of international law, as areas beyond national jurisdictions have come under increasing economic and environmental pressure, and as global natural processes and even resources located in domestic jurisdictions have begun acquiring a public interest dimension. Two key examples are climate change and the conservation

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of biodiversity, both legally characterized as common concern of humankind.¹ Moreover, even the very ecological balance of the global environment has been recognized as a common interest of the international community, or, more precisely, an ‘essential interest’ of *all* States.² Some commentators see this as the signal of an ongoing process of emergence of an ‘international public law.’³ This public inflection of international law, Ellen Hey suggests, is characterized by the superimposition of ‘common-interest normative patterns’ over more traditional ‘inter-state normative patterns.’⁴

However, the concept of commons finds in international law a multiplicity of semantic inflections, conceptual configurations and legal articulations. The very mention of commons in an international legal context immediately brings to mind the notion of the traditional global commons, that is, the high seas, the atmosphere, Antarctica and outer space. Yet, a series of other domains or areas that fall outside of national jurisdiction, as well as of resources, processes, rights regimes and even obligations, are increasingly characterized as commons. The legal regimes applicable to these ‘commons’ are however different, and sometimes significantly so. These commons in fact intersect in ambiguous, confusing and sometimes even contradictory ways⁵ with both the underlying legal categories (*res communes*, *res nullius*, *res publicae*, etc.)⁶ and the multiplicity of semantics and conceptual inflections the concept of commons may take: common areas, common good, common goods, common interest, common concern, common heritage, community of interest, common responsibility, etc. Moreover, the same resource can be enfolded by several of these inflections at once or enfolded differently in relation to its jurisdictional location.

One exemplary instance of the latter case is offered by marine genetic resources. At the time of writing, the annual session of the United Nations General Assembly (UNGA) on Oceans and Law of the Sea has just concluded. One of the central points on the agenda was the report of the Preparatory

1 Respectively, 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.

2 *Gabcikovo-Nagymaros Project (Hungary v Slovakia)* (Judgment) [1997] ICJ Rep 7 [53]. See also ‘Eighth Report on State responsibility by Mr. Roberto Ago, Special Rapporteur - the internationally wrongful act of the State, source of international responsibility (part 1)’ (1980) UN Doc A/CN.4/318/Add.5-7, 27 [33].

3 Bruno Simma, ‘Universality of International Law from the Perspective of a Practitioner’ (2009) 20 EJIL 265, 268; Vaughan Lowe, ‘The Politics of Law-Making: Are the Method and Character of Norm Creation Changing?’ in Michael Byers (ed), *The Role of Law in International Politics. Essays in International Relations and International Law* (OUP 2000); Ellen Hey, ‘International Institutions’ in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (OUP 2008).

4 Ellen Hey, quoted in Jutta Brunnée, ‘Common Areas, Common Heritage, and Common Concern’ in Bodansky, Brunnée and Hey (n 3) 552. See also Hey (n 3).

5 See eg Kathryn Milun, *The Political Uncommons: The Cross-cultural Logic of the Global Commons*, (Ashgate 2011).

6 See, in particular, Alberto Miele, ‘“Res Publica”, “Res Communis Omnium”, “Res Nullius”: Grozio e le Fonti Romane sul Diritto del Mare’ (1998) 26 Index 383.



Committee (PREPCOM), submitted in July 2017.⁷ UNGA had established the PREPCOM in 2015, with the mandate to prepare substantive recommendations on the elements of a draft text of an international legally binding instrument (ILBI) under the Convention on the Law of the Sea (UNCLOS), on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (ABNJ).⁸ On 24 December 2017, UNGA adopted a resolution convening a formal intergovernmental conference to negotiate and adopt an ILBI on such urgent theme.⁹ One of the four topics included in the negotiating agenda is marine genetic resources (MGRs), including the sharing of benefits arising from their utilization. Key issues under discussion with regard to MGRs, throughout the BBNJ process,¹⁰ and especially during the PREPCOM meetings,¹¹ involve the nature of MGRs, the regime that does and/or should govern them, and important definitional aspects. Interestingly, in the PREPCOM report, MGRs figure prominently in section B, which outlines the items on which negotiating delegations could reach neither consensus nor convergence of views in the course of the four preparatory meetings.¹² In particular, ‘further discussions’ are deemed required and necessary in relation to the question of whether MGRs could or should be considered the common heritage of mankind (CHM), or whether they do (and should) fall under the freedom of the high seas regime. The resolution of this juxtaposition is likely to affect in important ways the legal regime of MGRs in ABNJ, both from a principled and from a practical perspective.¹³

Against this background, this article will explore some of the ways in which MGRs conceptually and normatively intersect with, and are articulated through, the concept of commons. The terminological ambiguities and semantic slippages characterizing the usage of the concept of commons in international law, however, lead naturally to a number of preliminary questions. What are global

7 UNGA, ‘Report of the Preparatory Committee established by General Assembly resolution 69/292: Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction’ (2017) UN Doc A/AC.287/2017/PC.4/2 (PREPCOM Report).

8 UNGA Res ‘Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction’ (19 June 2015) UN Doc A/RES/69/292 [1(a)].

9 UNGA Res ‘International legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction’ (24 December 2017) UN Doc A/72/249.

10 Which can be said to have started with the establishment of the Ad Hoc Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction: UNGA Res 59/24 ‘Oceans and the law of the sea’ (17 November 2004) UN Doc A/RES/59/24.

11 For a review of the steps of the BBNJ process up to PREPCOM II see, eg Ronán Long and Mariamalia Rodríguez Chaves, ‘Anatomy of a New International Instrument for Marine Biodiversity beyond National Jurisdiction’ (2015) 23(6) *Environmental Liability* 213; see also Earth Negotiations Bulletin (ENB), ‘Summary of the Fourth Session of the Preparatory Committee on Marine Biodiversity beyond Areas of National Jurisdiction’ (Volume 25, Number 141, 24 July 2017).

12 Section B in fact ‘highlights some of the main issues on which there is divergence of views’, PREPCOM Report (n 7) [38(a)].

13 Section B included also other, more specific points related to MGRs, such as the nature of MGRs, clearly linked to the previous point of divergence, and other questions linked to benefit sharing, access and the appropriate forum for addressing questions related to intellectual property rights: *ibid* Section B, 17.



commons? Can the different existing inflections of the idea of commons be considered articulations of the same underlying concept? What legal categories are associated with the multiple inflections and articulations of the concept of commons? What legal regime(s) do they, or should they, refer to? What type of resources can, or should, be qualified as commons? Exploring some of these questions will serve to prepare the terrain for exploring the legal status of MGRs, the relevant legal regime(s), and discuss these questions in the context of the ongoing BBNJ process.

The article is structured as follows. Section 2 explores the concept of commons in international law, in order to illustrate many, if not all, of its articulations and semantic as well as legal inflections. The discussion leads to re-characterizing the commons as a narrative, rather than as a concept. The idea of narrative, I suggest, is forgiving, and its flexible contours are better able to accommodate the many inflections and articulations of the commons. Section 3 unpacks the narrative of the commons, in order to illustrate how the same narrative links in multiple ways to an ensemble of legal categories and legal regimes. Section 4 discusses MGRs, their legal status and regime(s), and examine whether, to which extent, and in what ways, MGRs are, can and/or should be considered as commons. Finally, section 5 draws some conclusions.

2. Unpacking the Concept of the Commons in International Law

The concept of the commons traverses international law in multiple ways, both diachronically and synchronically. It traverses international law's historical development, intertwined with the antagonistic concept of *proprium*, in both its private and public forms: ownership and sovereignty.¹⁴ It traverses international law's conceptual and theoretical space, through a series of normative vectors that deploy the conceptual and semantic referent of the 'commons' in different, and sometimes incompatible, ways.¹⁵ It traverses, finally, international law's structural framework in problematic ways through the emerging ecological paradigm, which unsettles the linear spatial and legal boundaries of international law and points to an inherent, unavoidable ecological commonality modern international law

14 The relation between *communis* and *proprium* embodies a biopolitical dialectic (always oscillating back and forth in a Nietzschean way, never resolved in a Hegelian synthetic fashion) crucial to modernity (see in this respect Roberto Esposito, *Bios: Biopolitics and Philosophy* (University of Minnesota Press 2008), and unfolds in a multiplicity of ways in the thought and work of many key international jurists in the early stages of modern international law, see eg Gustavo Gozzi, *Diritti e Civiltà. Storia e Filosofia del Diritto Internazionale* (Il Mulino 2010). However, modern international law has been said to embody and operationalize a juridical logic that leads to the 'uncommoning' (that is, the colonial and, subsequently, commercial appropriation) of the global and regional commons, Milun (n 5) 49.

15 On this particular question, see eg Milun (n 5) especially chapter 2.



may not be fully able to accommodate, despite ongoing attempts.¹⁶ Additionally, resources and areas beyond national jurisdiction (that is, global commons) are increasingly at the centre of legal debates in light of their (potential or actual) economic and ecological significance. This is evident from key international legal regimes (such as the climate regime)¹⁷ and from novel negotiating processes (such as the BBNJ process).¹⁸ In this respect, ideas of commons, in their various articulations, are located, as aptly observed, at the ‘junction of legal framework, sovereign discretion, collective interest and normative obligation,¹⁹ and provide ‘a site within which disputes about development and conservation are being played out.’²⁰

With regards to the law of the sea, global commons have a special significance. Indeed, two key areas framed traditionally (and despite their significantly different legal regimes), as commons, are *marine* areas: the high seas and the deep-sea bed in areas beyond national jurisdiction (the ‘Area’).²¹ It is, however, within the context of international environmental law that the concept of commons has had its most significant expansion in recent decades.²² Indeed, some commentators have noted how ‘[t]he environmental protection agenda has successfully recast “the commons” in terms of *global commons*,’ which in turn has become ‘a powerful political tool, but also an accurate depiction of the interdependence of ecological systems.’²³

16 Ecology seems to demand a re-design of the international legal grid of sovereign jurisdictions (or lack thereof) around notions of ecosystem relations, in this sense expanding significantly the notion of ‘sharedness’. This is becoming especially apparent in the context of transboundary water resources, where the interests of non-riparian States begin to be recognized in light of the ecological interest these States may have in the resource (see eg Convention on the Protection and Use of Transboundary Watercourses and International Lakes (adopted 17 March 1992, entered into force 6 October 1996) 1936 UNTS 269 and Convention on Wetlands of International Importance especially as Waterfowl Habitat (adopted 2 February 1971, entered into force 21 December 1975) 996 UNTS 245. Concepts such as common concern also try to bring into international environmental law a ‘public law’ dimension (see eg Brunnée (n 4)).

17 Climate change having been defined in 2009 (by UN Secretary General Ban Ki-moon) and in 2014 (by Prince Charles of Wales) as the ‘greatest challenge’ humanity faces, see respectively Jon Swaine, ‘Ban Ki-moon warns of catastrophe without world deal on climate change’ (*The Telegraph*, 10 August 2009) <www.telegraph.co.uk/news/earth/environment/climatechange/6004553/Ban-Ki-moon-warns-of-catastrophe-without-world-deal-on-climate-change.html> accessed 1 April 2018, and Emily Godsen, ‘Prince Charles: climate change is the greatest challenge facing humanity’ (*The Telegraph*, 22 September 2014) <www.telegraph.co.uk/news/uknews/prince-charles/11110457/Prince-Charles-climate-change-is-the-greatest-challenge-facing-humanity.html> accessed 1 April 2018.

18 UN Doc A/RES/69/292 (n 8) see in particular [1].

19 Duncan French, ‘Common Concern, Common Heritage and Other Global(-ising) Concepts: Rhetorical Devices, Legal Principles or a Fundamental Challenge?’ in Michael Bowman, Peter Davies and Edward Goodwin (eds), *Research Handbook in Biodiversity Law* (Edward Elgar 2016) 334.

20 Jane B Holder and Tatiana Flessas, ‘Emerging Commons’ (2008) 17(3) *Social & Legal Studies* 299, 304.

21 United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3 (UNCLOS) art 1(1)(1) states in this respect that the Area ‘means the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.’

22 Where the concept of commons plays for example a key role in framing issues and problems, Holder and Flessas (n 20) esp 304ff.

23 *ibid* 304.



The broad discursive reach of the concept of the commons, as well as its semantic field and its critical legal significance remain, however, politically and legally ambiguous,²⁴ and arguably under problematized.²⁵ Additionally, the concept and language of the commons is also problematically used to refer to a variety of incommensurable legal categories and legal regimes,²⁶ and is deployed in ambiguous, imprecise, and sometimes even contradictory ways,²⁷ as a number of semantic and conceptual slippages affects its deployment. The concept is for example, equally deployed in relation to open access²⁸ and closed²⁹ legal regimes. Moreover, the concept of commons is associated in various and sometimes ambiguous or imprecise ways with a number of (Roman) legal categories.³⁰

The category that probably has been more persistently associated with the global commons is that of *res communes omnium*. The category indicates a set of things – goods – common to all (*communes omnium hominibus*,³¹ that is, not falling under ownership of any individual, nor of any particular political community). Traditionally *res communes* are the air, flowing water, the sea and its shores.³² *Res communes* are openly, and legitimately, accessible by anyone, although the use must not impair an equivalent use by others.³³ They can be regulated, but it is usually recognized that the category admits no lawful appropriation. In this respect, medieval jurists distinguished between ownership (unlaw-

24 Obviously, the doctrinal literature on, respectively, common heritage and common concern is voluminous. However, there is arguably little critical legal scholarship on these themes nor comprehensive studies on the notion of commons in international law. For an exception, see Milun (n 5) esp chapter 2. See also, particularly in relation to law of the sea and the Grotian tradition, Miele (n 6).

25 The distinction between common good and common goods has received very little attention and thus remains under-explored. However, the two concepts, as recent scholarship shows, refer to two distinct and possibly antagonistic theoretical and normative horizons, see eg Maria Rosaria Marella, 'La Parzialità dei Beni Comuni contro l'Universalismo del Bene Comune' (*EuroNomade*, 6 May 2014) <www.euronomade.info/?p=2282> accessed 23 March 2016. See also, specifically on global commons, Milun (n 5). Moreover, resources considered common (whether common heritage or common concern) refer to a generic and universal referent (i.e. 'mankind' or 'humankind') whose conceptual and political delineation is, from a critical legal perspective, problematic. For a problematization of the use of humanity (or humankind) as a universal referent, see, in particular, Anna Grear, 'Deconstructing Anthropos: A Critical Legal Reflection on "Anthropocentric" Law and Anthropocene "Humanity"' (2015) 26(3) *Law and Critique* 225.

26 In this sense probably referring to two distinct knowledge domains: economics and law.

27 Milun (n 5) 31 observes, for example, how the CBD at once defines nature (i.e. biodiversity) as a commons (common concern) and sets the conditions for its appropriation.

28 Such as the high seas and the atmosphere (through its genealogical relation with the concept of *res communes omnium*). The linkage with open access regimes is what enables the folding of the concept of commons under a narrative of resource management 'tragedy'. For a seminal articulation of the argument, see Garret Hardin, 'The Tragedy of the Commons' (1968) 162(3859) *Science* 1243.

29 Such as the deep-sea bed, Antarctica or outer space (constructed as a common heritage of humankind and relating genealogically to the roman legal concept of *patrimonium* and, more remotely, possibly to the institute of *consortium ercto non cito*).

30 On this see, in particular, Miele (n 6).

31 Thus Celsus, D. 43.8.1.

32 'Et quidem naturali iure omnium communia sunt illa: aer, aqua profluens, et mare, et per hoc litora maris', Marcianus, D. 1.8.2(1).

33 An idea that in modern law of the sea was captured by the concept of 'reasonable regard' in the 1958 Convention on the High Seas (adopted 29 April 1958, entered into force 30 September 1962) 450 UNTS 11, and 'due regard' later in UNCLOS.



ful), use (open to all) and jurisdiction (reserved to the emperor).³⁴ The category of *res communes omnium* was, importantly, the legal basis for Grotius' theoretical argument for the freedom of the sea, and indeed the category maps closely, though not entirely, with the current regime regulating the high seas.³⁵ *Res communes omnium* is however intertwined in persistently confusing ways with the concept of common heritage of mankind,³⁶ with the category of *res nullius*,³⁷ and with the category of *res publicae*.³⁸ In relation to the former, an unfortunate equivalence still persists between common heritage³⁹ and *res communes omnium*,⁴⁰ despite the fact that common heritage is rather linked to the legal category of *patrimonium*,⁴¹ which falls under the broader category of *res in commercium*.⁴² In relation to *res nullius*, Milun observes that, in international law, the rhetoric of *res communes* – that is the framing discourse of global commons – is ambiguously conflated and often transformed into a practice based on the category of *res nullius*.⁴³ However, Milun, like arguably most contemporary commentators, does not address the fact that *res communes omnium* and *res nullius* have both the theoretical capacity to underpin particular inflections of the concept of commons.

The category of *res nullius*, and its associated terrestrial articulation *terra nullius*,⁴⁴ has provided key intellectual resources, a legitimating discourse and persuasive legal arguments underpinning the colonial enterprise rationalized through international law.⁴⁵ It also constitutes an important, if perhaps misguided, point of departure in at least *some* discussions of the idea of global commons. Vogler for example, who has written an influential book on global commons from an international relations perspective, suggests an equivalence between global commons, open access, *res nullius* and

34 'quod mare est commune quo ad usum, sed proprietates est nullius, sicut aer est communis usu, proprietates tamen est nullius [...] sed iurisdictio est Caesaris et sic ista tria sunt diversa, s[icilicet] proprietates, usus, et iurisdictio et protectio', Baldus, 'Pandectarum seu Digestum vetus iuris civilis tomus primus', Venetiis 1581, p 51, quoted in Alessandro Dani, 'Il Concetto Giuridico di "Beni Comuni" tra Passato e Presente' (2014) 6 (Paper 7) *Historia et ius* 1, 8-9.

35 UNCLOS Part VII 'The High Seas'.

36 Aaron X Fellmeth and Maurice Horwitz, *Guide to Latin in International Law* (OUP 2009) esp 250.

37 Milun (n 5) chapter 2.

38 Miele (n 6); we have seen also how international legal scholars have observed how the increasing significance of the concept of commons is the signal of an ongoing shift to public-interest patterns of normativity (Hey (n 3)).

39 For a lengthy treatment, see Kemal Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law 1998). For a more recent general overview, see John E Noyes, 'The Common Heritage of Mankind: Past, Present, and Future' (2011-12) 40 *Denver Journal of International Law & Policy* 447. See also Brunnée (n 4). The concept of common heritage has been described as simultaneously 'all too often subject to imprecise and incautious usage' and 'little short of revolutionary' (when translated into legal regimes, Michael Bowman, 'Environmental Protection and the Concept of Common Concern of Mankind' in Malgosia Fitzmaurice, David Ong and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar 2010) 500.

40 Thus, Miele (n 6), but also Baslar (n 39) and Milun (n 5). For the inclusion of common heritage under the category of *res communes*, see eg Fellmeth and Horwitz (n 36) 250; indeed, the authors consider, oddly, the modern idea of common heritage and the roman legal category of *res communes* to encompass together 'the high seas, Antarctica, or celestial bodies': *ibid* 250.

41 See eg Mariachiara Tallacchini, *Diritto per la Natura. Ecologia e Filosofia del Diritto* (Giappichelli 1996).

42 The specificity of common heritage being rather the collective subject and holding title to common heritage resources, and the special governance arrangements.

43 Milun (n 5) 6.

44 An 'infamous' category in the history of international law, especially as seen from the perspective of postcolonial and decolonial studies and TWAIL scholarship, see eg Antony Anghie, *Imperialism, Sovereignty and the Making of International Law* (CUP 2004).

45 See eg *ibid* and Milun (n 5).



a primordial state of nature.⁴⁶ Yet neither *res nullius* nor open access are necessarily the 'original characteristic'⁴⁷ of the commons, contrary to Vogler's suggestion (which somehow follows Hardin's own conflation of commons and unregulated open access).⁴⁸

What is important to note for our purposes though, is that while the category of *res nullius* refers to things that do not belong to anyone, it does not offer any normative indication, in and of itself, about whether or not said things may be lawfully appropriated. To understand the proprietary regime of a thing, therefore, something else is needed, another category that can interact with the category of *res nullius* in order to further define the legal regime of that particular thing. To clarify by way of an example, the general category of *res nullius* includes also the sub-categories of *res sacrae*, *res religiosae*, and *res sanctae*.⁴⁹ None of them can be appropriated by anyone: they already belong, respectively, to the Gods, to the defunct (for example, in the case of a tomb), and to the Roman people (though under divine protection). Thus, they must remain *in nullius bonis*, as they are *extra commercium*, and cannot belong to the *patrimonium* of any private individual. Indeed, the category of *res extra commercium* has a crucial place in the systematic taxonomy of things in Roman law. For reasons of space, and to avoid lengthy digressions, we cannot address this role here.⁵⁰ What is important for present purposes, however, is that there is a historical, juridical and logical connection between global commons and their double character of not being capable of appropriation by a single individual/State and being *extra commercium*.⁵¹

The category of *res nullius* however, has a second, more familiar, dimension.⁵² Indeed, it is a key concept in relation to resources that, even when located in areas governed by a regime of *res communes omnium*, can be appropriated. One example is that of marine living resources, where there is a material and legal cleavage between the idea of a fisheries or of a fish species, and the individual components.⁵³ The former is a *corpus ex distantibus*, and as such is perhaps best characterized as a *res nullius in bonis, sed universitatis*, that is, as not belonging to any individual person but to the

46 John Vogler, *The Global Commons: Environmental and Technological Governance* (2nd ed, Wiley 2000) 4.

47 *ibid.*

48 Vogler, moreover, also considers that this problematic openness of global commons, have been avoided in international law of the sea through the concept of common property (which Vogler equates, even more problematically with *res communis omnium*): *ibid.*

49 Thus, Marcianus, D. 1.8.6.2: 'Sacrae res et religiosae et sanctae in nullius bonis sunt.'

50 But see eg Paolo Maddalena, 'L'Ambiente e le sue Componenti come Beni Comuni di Proprietà Collettiva della Presente e delle Future Generazioni' (Diritto all'Ambiente, 29 December 2011) <www.dirittoambiente.net/file/varia_articoli_270.pdf> accessed 1 April 2018.

51 *ibid* esp 6.

52 Grotius indeed also understood this double inflection of the notion of *res nullius*. Grotius in fact distinguished those *res nullius* that can never be appropriated, from those *res nullius* that, not having 'been marked out for common use', could become the object of private ownership (these would be for example individual wild animals, denoted in Roman law as *res ferae*), Hugo Grotius, *The Freedom of the Seas or The Right Which Belongs to the Dutch to take part in the East Indian Trade* (Ralph van Deman Magoffin tr, OUP 1916) 28.

53 A cleavage also operative in relation to biodiversity and its components



whole relevant (international, in our case) community.⁵⁴ The individual components, on the other hand, belong to the category of *res ferae*, wild animals that falls within the category of *res in commercium*, and can be lawfully appropriated through capture.⁵⁵ This distinction is perhaps best appreciated through the regime regulating the conservation and utilization of marine living resources in the EEZ. In the EEZ coastal States in fact, while having sovereign rights to those resources, are also under a set of obligations regarding both their conservation and the utilization vis-à-vis third States and the international community. I am not suggesting this is in any way controversial (though this broader understanding of *res nullius*, faithful to Roman law, may be from a contemporary perspective). On the contrary. My point is merely that these are some of several illustrative examples of how the narrative of the commons maps to a number of different legal categories.⁵⁶ Moreover, and by contrast, the same legal category may map to a commons or to a privately appropriable good.

3. From Concept to Narrative

In addition to what has been discussed thus far, there is an ongoing expansion of the semantic reach of the concept of commons in a multiplicity of directions. This further stretches the concept in ways that, I suggest, exceeds the ability of the concept to remain useful. This expanding reach is then more appropriately accommodated by referring to a *narrative* of the commons, insofar as its forgiving, flexible contours can capture the many inflections and articulations of the commons. While traditional global commons refer to spaces or areas beyond national jurisdiction (as already identified as the high seas, the atmosphere, Antarctica and outer space), a multiplicity of novel articulations – juridical, but also moral and rhetorical – have appeared in recent decades. These make use of the semantics of the commons, but due to their heterogeneity, are better appreciated as articulations of a broad narrative, rather than a precise deployment of a single well-delineated concept. The same consideration applies to the variability of the relationship between the (global) commons and the underlying legal categories, of which I have presented a brief illustration in the previous section. This multiplicity of semantic inflections, moreover, ambiguously refers to a different set of legal regimes. Thus, the high seas⁵⁷ and the atmosphere are subject to a regime underpinned by the idea of freedom. The Area⁵⁸

54 Of course, there is also the question of physical non-excludability, see eg Richard Barnes, *Property Rights and Natural Resources* (Hart 2009) esp 22ff, and Kevin Gray, 'Property in Thin Air' (1991) 50 *Cambridge Law Journal* 252, esp 269.

55 This distinction between the whole and its components is operating within the context of the CBD, where biodiversity as such is a common concern of humankind, while the individual components can be lawfully appropriated, subject only to the condition of sustainable use.

56 We have identified three: *res communes omnium*; *patrimonium*; *res nullius*. There is, further, a variety of partial overlaps or confusions, as well as normative claims, with other categories of Roman law such as *res in publico* or *res publicae*, which, however, cannot be discussed here, again for reason of space and to avoid unnecessary digressions. See respectively Andrea Di Porto, *Res in Usu Publico e Beni Comuni. Il nodo della Tutela* (Giappichelli 2013) and Miele (n 6).

57 UNCLOS arts 87 and 116.

58 UNCLOS art 136, see also Preamble, recital 6.



and the Moon⁵⁹ are subject to a regime of common heritage. The concept of common heritage is also variously associated with Antarctica (albeit in a *sui generis* manner),⁶⁰ with plant genetic resources,⁶¹ with the human genome,⁶² and even with human rights.⁶³ Outer space, moreover, while governed by a regime of freedom, is also considered as a common interest, and presents some of the characters associated with common heritage, particularly in its *sui generis* Antarctic articulation.⁶⁴ Whales⁶⁵ and biodiversity⁶⁶ are, in general, subject to both a regime of sovereignty and one of common concern or interest. Additionally, as mentioned, the discourse of the commons has gained increasing prominence in the context of international environmental law. Indeed, both climate change⁶⁷ and the conservation of biodiversity are considered global commons by way of their characterization as the

59 The 1979 Moon Treaty, however, explicitly declares the moon to be 'common heritage of mankind' (art 11): Agreement Governing Activities of States on the Moon and Other Celestial Bodies (adopted 5 December 1979, entered into force 11 July 1984) 1363 UNTS 3.

60 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 eg Christopher Joyner, *Antarctica and the Law of the Sea* (Martinus Nijhoff 1992). See also eg Edward Guntrip, 'The Common Heritage of Mankind: An Adequate Regime for Managing the Deep Seabed?' (2003) 4 Melbourne Journal of International Law 376. 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 eg Dina Shelton, 'Common Concern of Humanity' (2009) 1 *Iustum Aequum Salutare* 33.

61 Thus, Edwin Egede, 'Common Heritage of Mankind' in Anthony Carty (ed), *Oxford Bibliographies Online: International Law* (OUP 2014), but for a contrary opinion, see Ikechi Mgbeoji 'Beyond Rhetoric: State Sovereignty, Common Concern, and the Inapplicability of the Common Heritage Concept to Plant Genetic Resources' (2003) 16(4) *Leiden Journal of International Law* 821. Plant genetic resources, however, are expressly defined as a common concern, International Treaty on Plant Genetic Resources for Food and Agriculture (adopted 3 November 2001, entered into force 29 June 2004) 2400 UNTS 303 (PGRFA Treaty), preamble, recital 3. In this respect, I imagine that Egede follows Baslar, who authored a crucial work on common heritage, and suggested that common heritage and common concern are two sides of the same idea, if not the same concept, one applicable in ABNJ, and the other in areas within national jurisdiction, see Baslar (n 39) 106.

62 Egede (n 61).

63 *ibid.*

64 See UNGA Res 1721 (XVI) (20 December 1961) where the international community recognized 'the common interest of all mankind to peaceful uses of outer space' (preamble, recital 1), a recognition reiterated in UNGA Res 1962 (XVIII) (13 December 1963) 'Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space'. The consideration of outer space as a common interest was included also in the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (adopted 27 January 1967, entered into force 10 October 1967) 610 UNTS 205 (OST Treaty), which characterizes outer space as a 'common interest' (preamble, recital 2). The OST Treaty, however, lays out that both exploration and scientific investigation of outer space shall be free for all States (art I). Yet the OST Treaty also speaks of outer space as the 'province of all mankind' (art I) and lays out a prohibition of appropriation (art II), and of 'peaceful purposes' (art IV) as regards its utilization, characters often associated with a common heritage regime, or perhaps more broadly, idea.

65 See International Convention for the Regulation of Whaling (adopted 2 December 1946, entered into force 10 November 1948) 161 UNTS 72.

66 See UNGA Res 1721 (XVI) where the international community recognized 'the common interest of all mankind to peaceful uses of outer space' (preamble, recital 1), a recognition reiterated in UNGA Res 1962 (XVIII).

67 The UN General Assembly indeed recognized that 'climate change is a common concern of mankind, since climate is an essential condition which sustains life on earth', UNGA Res 'Protection of global climate for present and future generations of mankind' (6 December 1988) UN Doc A/RES/43/53 [1]; the UNFCCC recognizes the 'change in the Earth's climate and its adverse effects' as a common concern, preamble, recital 1.



‘common concern of humankind,’⁶⁸ a concept which may or may not be distinguished from common interest.⁶⁹ Plant genetic resources are also defined as a common concern.⁷⁰ Moreover, the ecological balance of the global environment has been recognized as a common concern of the international community, or, more precisely, an ‘essential interest’ of all States.⁷¹ Common concern in this respect is a concretization of the novel public logic of publicization of international law Ellen Hey describes,⁷² yet it shows how the concept of common and of public (by contrast precisely delineated and distinguished in the Roman legal taxonomy of things) overlap in possibly problematic ways.⁷³ Finally, the narrative of the commons is also deployed in relation to international freshwater through the notion of ‘community of interest,’⁷⁴ and global cooperation is tied to the narrative of the commons by way of the concept of ‘common but differentiated responsibility.’⁷⁵

To complicate matters further, each of these inflections refers back, in a variety of sometimes ambiguous or imprecise ways, to underlying Roman legal categories that have been used to construct arguments, buttress claims or otherwise lend legitimacy to novel political and legal articulations.⁷⁶

4. MGRs as Commons?

The two preceding sections have prepared the terrain for exploring whether, to which extent and in what ways MGRs intersect with and are enfolded by the narrative of the commons. Yet what I have illustrated in the preceding sections is admittedly a complex, and perhaps even confusing, picture. The question to ask now is how do MGRs fit in this picture? What sort of commons are MGRs? Are they commons at all? Should they be? What is their legal nature? Under which legal category do they belong? What legal regime is applicable, and under which material and legal circumstances?⁷⁷ This

68 CBD preamble, recital 3.

69 The two terms are sometimes used interchangeably, eg by Bowman (n 39); Bowman also underlines how both terms have a generic and ‘narrative’ usage early on and acquire a more specific legal meaning with the Rio Conventions (ibid).

70 PGRFA Treaty, preamble, recital 3.

71 Gabcikovo-Nagymaros (n 2).

72 Hey (n 3).

73 See esp Miele (n 6).

74 Indeed, the PCIJ recognized how the community of interest in a navigable river becomes the basis for a common legal right, *Territorial Jurisdiction of the International Commission of the River Oder* [1929] PCIJ Series A No 23, 27. See also Stephen McCaffrey, *The Law of International Watercourses: Non-Navigational Uses* (2nd edn, OUP 2007).

75 Particularly in the context of the climate regime. See eg UNFCCC preamble and art 3.

76 This latter use of Roman law as a source of legitimacy was already widespread during the middle ages on the part of glossators. In such cases substantive (as opposed to formal) fidelity to the Roman legal categories or concepts was not a primary concern, see eg Paolo Grossi, *L’Ordine Giuridico Medievale* (Laterza 2006).

77 On the various *proposals* that have been put forward and discussed within the context of the BBNJ process as regards the legal regime that does or should encompass MGRs see eg Natalie Y Morris-Sharma, ‘Marine Genetic Resources in Areas beyond National Jurisdiction: Issues with, in and outside of UNCLOS’ (2017) 20(1) *Max Planck Yearbook of United Nations Law Online* 71.



section will endeavour to address some of these questions in two steps. First, I will briefly outline current definitions of MGRs and the state of the relevant debates (for example in relation to the scope and inclusivity of existing definitions), within the two primary contexts of reference, the CBD and the BBNJ process. This is important in order to understand both the limits of the subject matter and the complexities and uncertainties involved. The second step will review the ways in which the narrative of the commons and MGRs intersect and interact.

In the legal framework set out in the CBD, genetic resources are one of three levels of biological diversity. The CBD distinguishes in this respect 'diversity within species, between species and of ecosystems',⁷⁸ where 'within species' indicates diversity at the genetic level. Moreover, the CBD offers a definition of both genetic material and genetic resources. Genetic material means 'any material of plant, animal, microbial or other origin containing functional units of heredity'.⁷⁹ The expression genetic resources, on the other hand, refers to 'genetic material of actual or potential value'.⁸⁰ The difference between genetic material and genetic resources, in other words, hinges on economic value.

These definitions, however, are only a starting point, as there remains a number of open questions being considered and debated both within the context of the CBD and the Nagoya Protocol, and in the BBNJ process. One of these questions is whether the definition of genetic material does, or should, include also the notion of derivatives. A derivative is, according to Article 2(e) of the Nagoya Protocol, 'a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity'.⁸¹ A second and more difficult question is whether the definition of genetic resources should include genetic sequence data, that is, the genetic information in a digitalized form.

The material scope of the definition of genetic resources is indeed a controversial and contested matter, which remains under discussion in both the context of the Nagoya Protocol and the BBNJ process.⁸² However, the status of the discussion is significantly different. In the positive regime established under the Nagoya Protocol, genetic resources include both genetic material, as defined in the CBD, and derivatives, as defined in the Nagoya Protocol itself. The scope of the inclusion of derivatives is however limited, as it does not include those naturally occurring biochemical com-

78 CBD art 2.

79 CBD art 2.

80 CBD art 2. In this respect, Art 2 also explicitly includes genetic resources within the broader definition of biological resources.

81 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (adopted 29 October 2010, entered into force 12 October 2014) UNEP/CBD/COP/DEC/X/1 (Nagoya Protocol) art 2(e).

82 The key point of contention being the possibility that, should digital sequence data NOT be included in the relevant definitions, the entire benefit sharing agreement may be largely bypassed given the increasing importance of genetic sequence data in the development of commercial products based on MGRs, as well as the lack of material information of the origin of the genetic sequence data.



pounds that are accessed *independently* of genetic resources.⁸³ Digitalized genetic information on the other hand, are not currently included in the definition, albeit debates are still ongoing.⁸⁴ The Nagoya Protocol is, however, only competent to regulate genetic resources that are located in areas within national jurisdiction, so its relevance for the purpose of this article, and for the BBNJ process more in general, is primarily that of a starting point for discussion,⁸⁵ though it does not in any way exhaust or pre-empt definitional discussions under the BBNJ process, where, for example, the question of derivatives remains open.⁸⁶

The second context of relevance in relation to the identification of the legal regime for MGRs is, evidently, UNCLOS, which establishes the rules governing living marine resources in the different maritime zones, including areas beyond national jurisdiction. UNCLOS is indeed the legal framework of reference for the current BBNJ process, and hence for debating and deciding questions related to the legal regime of MGRs in ABNJ. As of yet, no definition has been agreed upon.⁸⁷ There is arguably a certain likelihood that relevant definitions will refer to, or incorporate, the definitions already available in the CBD. However, it is also true that there is a significant distance, among delegations, in relation to the question of whether to include, for the purposes of the benefit-sharing architecture to be adopted under the future BBNJ agreement, derivatives and, most especially, genetic sequence data, in the definitional scope of MGRs.⁸⁸ Relatedly, there are different ideas as regards whether the definitional questions, and the inclusivity of the definitional scope, should be agreed upon within a single negotiating context (namely the Nagoya Protocol); or whether discussions should be maintained separate, with the (unfortunate) consequence of a likely heterogeneity of the definitions adopted in the different contexts and legal regimes.

Having briefly reviewed the current questions related to the definitional scope of MGRs, it is now time to turn to the main question this section aims to address, that is, how the narrative of the commons encompasses, intersects and interacts with MGRs. Since MGRs are but one of the three levels of

83 This can be inferred by a combined reading of Art 15 of the CBD and Art 2 of the Nagoya Protocol: Thomas Greiber and others, 'An Explanatory Guide to the Nagoya Protocol on Access and Benefit-sharing' (2012) IUCN Environmental Policy and Law Paper No 83, 70.

84 See eg COP Decision XIII/16 'Digital sequence information on genetic resources', CBD/COP/DEC/XIII/16, which established an Ad Hoc Technical Expert Group on Digital Sequence Information on Genetic Resources with the mandate to assess 'potential implications of the use of digital sequence information on genetic resources for the three objectives of the Convention and the objective of the Nagoya Protocol and implementation to achieve these objectives' [1].

85 Indeed the definitions of both the CBD and the Nagoya Protocol have been referred and included by many delegations in submissions and also in the Chair's draft non-papers throughout the PREPCOM, as well as in the 'Chair's streamlined non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction', 6 <www.un.org/depts/los/biodiversity/prepcom_files/Chairs_streamlined_non-paper_to_delegations.pdf> accessed 1 April 2018.

86 eg Japan and USA suggested a definition of genetic material that does not include derivatives (nor genetic sequence data, that is digitalized information), eventually reflected in Chair's streamlined non-paper (n 85) 6 [40]. This definition was also included as option 3: *ibid* 6-7.

87 Though there are several options on the table, Chair's streamlined non-paper (n 85) 6-7.

88 *ibid*.



biodiversity, it will be expedient to begin by looking at how the narrative of the commons intersects more generally with biodiversity *tout court*. In order to do that, we need to briefly look at the early stages of the CBD negotiations, as indeed already prior to the intergovernmental conference that led to the adoption of the CBD, the narrative of the commons was an important and controversial element in relation to how to frame the legal status of biodiversity.

The first steps towards the adoption of the CBD were taken in 1987, when the Governing Council of the United Nations Environment Programme (UNEP) decided to call upon UNEP to convene an Ad Hoc Working Group of Experts on Biological Diversity to explore the 'the desirability and possible form of an umbrella convention to rationalize current activities in [the field of biological diversity], and to address other areas which might fall under such a convention.'⁸⁹ The proposal for a comprehensive instrument came from the United States,⁹⁰ ironically the only country, together with Andorra and the Holy See, which is not a Party to the CBD today.⁹¹

The three objectives of the CBD reflect the set of competing interests that emerged during the negotiations. These competing interests aligned along a North-South split and reflected conflicting ideas as regards where the emphasis of the CBD should lie: conservation or use; access to genetic resources or benefit sharing. These competing interests were further reflected in the discussions regarding the legal characterization of biodiversity. Delegations discussed many of the articulation of the concept of commons during the pre-negotiating phase, and namely common heritage, common responsibility, common interest and common concern. The concept of common heritage was, however, very quickly problematized as it was understood to entail certain legal implications that were deemed unacceptable, by developing countries in particular, as it was seen to impinge on their sovereignty over what were forcefully defended as domestic resources.⁹² It was eventually the notion of common concern that gained consensus.⁹³

89 Decision 14/26 'Rationalization of international conventions on biological diversity' in UNEP, Report of The Governing Council on the Work of its Fourteenth Session, 8-19 June 1987, General Assembly Official Records: Second Session Supplement No. 25 (A/42/25).

90 Fiona McConnell, *The Biodiversity Convention. A Negotiating History* (Kluwer Law International 1996) 5.

91 The US has signed but not ratified the CBD. However, the US participates to the work of the CBD. The main point of contention for the US was the question of intellectual property rights; see in this respect eg R Jajakumar Nayar and David Ong, 'Developing Countries, "Development" and the Conservation of Biological Diversity' in Michael Bowman and Catherine Redgewell (eds), *International Law and the Conservation of Biological Diversity* (Kluwer Law International 1996).

92 *ibid.*

93 It was indeed considered a 'fundamental principle' that 'the conservation of biological diversity was a common concern of all people. This principle required the participation of all countries and all peoples in a global partnership. It implied inter-generational equity and fair burden sharing. The common concern called for a balance between the sovereign rights of nations to exploit their natural resources and the interests of the international community in global environmental protection', Report of the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity on the Work of its Second Session (7 March 1991) UNEP/Bio.Div/WG.2/2/5, 4 [17].



In this respect, MGRs, as one element of biodiversity,⁹⁴ are a common concern of humankind,⁹⁵ even though the precise scope of their definition remains unsettled. Yet their concrete legal regime varies significantly according to their bio-geographical and jurisdictional location, as well as with their movements across locations.⁹⁶ According to general international law,⁹⁷ and to the specific provisions contained in the CBD,⁹⁸ MGRs located within the territory of a State are subject to its sovereignty. In relation to marine areas outside of the territorial sea, including marine areas beyond national jurisdiction, it is, however, UNCLOS that more comprehensively sets out the legal regime for MGRs. In this respect, we need to distinguish between several maritime zones. In the Exclusive Economic Zone, which extends from the end of the territorial sea and up to 200 nautical miles in a seaward direction, coastal States have sovereign rights over living resources in the EEZ.⁹⁹ It appears reasonable that MGRs should be included in the notion of living resources,¹⁰⁰ and thus be subject to the same legal regime.

Concerning resources located in the continental shelf,¹⁰¹ States have exclusive sovereign rights only for mineral and other non-living natural resources and for sedentary living resources (Article 77), albeit different obligations exist in relation to the so-called extended continental shelf, that is, that portion of the continental shelf which extends beyond the 200 nautical miles limit.¹⁰² To the extent that genetic material is embedded in sedentary species, States have then exclusive rights of exploitation. However, is it not inconceivable that there may exist species that are not sedentary within the meaning of the definition of sedentary species contained in Article 77, and yet still belong to the seabed, rather than to the water column (in which case they would be subject to the regime of the relevant section of the water column, i.e. territorial sea or EEZ). In that case, it becomes essential to determine the applicable regime.

94 CBD art 2.

95 Or rather, it is their conservation that is a common concern: CBD preamble, recital 3.

96 This is indeed a well-known problem with respect to any marine resources, see eg Jung-Eun Kim, 'The Incongruity between the Ecosystem Approach to High Seas Marine Protected Areas and the Existing High Seas Conservation Regime' (2013) 2 *Aegean Review of the Law of the Sea and Maritime Law* 36.

97 eg the principle of permanent sovereignty over natural resources.

98 eg Art 15, which recognizes 'the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation'.

99 However, these rights over marine living resources entail corresponding duties, such as the promotion of their 'optimum utilization' (art 56), and the duty to assume responsibility for their conservation through, primarily, determining a total allowable catch (art 61). If, moreover, Coastal States do not utilize the catch quota in full, they are obliged to give other States access to the remaining surplus (art 62(2)).

100 Thus, also Petra Drankier and others, 'Marine Genetic Resources in Areas beyond National Jurisdiction: Access and Benefit-Sharing' (2012) 27 *International Journal of Marine and Coastal Law* 375, 399-400.

101 That is, that portion of the ocean floor and subsoil beyond the territorial sea and within the EEZ boundary.

102 See especially UNCLOS art 82, which requires coastal States to 'make payments or contributions in kind' as a condition for the exercise of their sovereign rights of exploitation of the resources of the shelf.



The remaining maritime zones are located beyond national jurisdiction. Both are global commons, yet their legal regimes are significantly different. The Area is subject to a regime of common heritage under Part XI of UNCLOS.¹⁰³ This regime regulates the access to, and the sharing of benefits from seabed mining activities. In fact, the term ‘resources’ is specifically taken to mean, for the purposes of Part XI, ‘all solid, liquid or gaseous mineral resources,’ whether ‘at or beneath’ the seabed (Article 133). It would appear, therefore, that MGRs, being living resources, are not encompassed by the common heritage regime, and are thus subject to the regime of the high seas (i.e. freedom). This is indeed the opinion of a number of commentators,¹⁰⁴ and of a number of delegations within the context of the ongoing BBNJ negotiations.¹⁰⁵ However, the question remains debated,¹⁰⁶ and other scholars suggest that MGRs are subject to the common heritage regime.¹⁰⁷ I will not rehearse the arguments here.¹⁰⁸ It is, however, useful to underline how *both* the Area *and* its resources are common heritage of mankind.¹⁰⁹ In that respect, it can be suggested that the regime of the Area, defined as common heritage independently from its resources (which for the purposes of UNCLOS are *mineral* resources), extends naturally to other resources it may contain, save the fact that those other resources do not fall under the specific regime governing mineral resources under Part XI. Indeed, as Oude Elferink observes, the definition of the term resources as mineral resources may be valid for the purposes of Part XI only, rather than generally.¹¹⁰ In other words, there exist arguments supporting both positions.

103 Indeed, the ‘Area and its resources are the common heritage of mankind’ (art 136).

104 See eg WT Burke, ‘State Practice, New Ocean Uses, and Ocean Governance under UNCLOS’ in Thomas Mensah (ed), *Oceans Governance: Strategies and Approaches for the 21st Century* (Law of the Sea Institute, University of Hawaii 1996) 231; Robin Churchill and Vaughan Lowe, *The Law of the Sea* (3rd edn, Manchester University Press 1999) 239, in whose opinion both living and other non-mineral resources remain outside of the regime of the Area, and a such subject to the high seas regime, fn 49. Further on the different positions see Youna Lyons and Denise Cheong, ‘The International Legal Framework for the Protection and Sustainable Use of Marine Biological Diversity’ in Charles McManis and Burton Ong (eds), *Routledge Handbook of Biodiversity and the Law* (Routledge 2017) 73-74.

105 Indeed, MGRs, their legal status and the relevant legal regimes are among the most contentious issues in the BBNJ process, see eg PREPCOM Report (n 7) particularly Section B.

106 The existence of ‘divergent views’ on the matter was indeed reported by the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, UN Doc A/63/79 [36], and divergence is still a key element of the BBNJ process, especially in relation to the legal status of MGRs, see in particular PREPCOM Report (n 7) particularly Section B.

107 See eg Tullio Scovazzi, ‘The Concept of Common Heritage of Mankind and the Genetic Resources of the Seabed beyond the Limits of National Jurisdiction’ (2007) XIV:25 *Agenda Internacional* 11; Drankier and others (n 100); Alex Oude Elferink, ‘The Regime of the Area: Delineating the Scope of Application of the Common Heritage Principle and Freedom of the High Seas’ (2007) 22(1) *International Journal of Marine and Coastal Law* 143. Others recognize the usefulness of the common heritage framework in relation to living resources of the Area, thus eg Tullio Treves, ‘Protection of the Environment on the High Sea and in Antarctica’ in Kalliopi Koufa (ed), *Protection of the Environment for the New Millennium* (Sakkoulas Publications 2002) esp 91.

108 The reader is referred to the clearest exposition of this argument, namely Oude Elferink (n 107).

109 UNCLOS art 136.

110 For a fully developed argument in this sense, see Oude Elferink (n 107) See especially his remark that art 145(b) UNCLOS mentions ‘natural resources’ hence suggesting that there are resources of the Area besides and beyond the ‘mineral resources’ defined in art 133, *ibid* 152, fn 33. Elferink also makes the argument that art 133 ‘does not provide that PART XI is only applicable to mineral resources’ (*ibid* 152), and that the definition of the term resources is not exhaustive (*ibid* 152). See also Drankier and others (n 100) esp 402-03.



The high seas maritime zone is a residual notion¹¹¹ and is governed by a regime of freedom.¹¹² MGRs that are located in the water column of the high seas are thus logically subject to a regime of freedom (indeed two activities that are directly relevant, albeit in different ways, for MGRs are explicitly listed among the high seas freedoms in Article 87: fishing and marine scientific research). We are thus faced with many different regimes applicable to the same resource (MGRs) according to its location. Additionally, as already noted, the location of MGRs is dynamic, in a variety of senses. In relation to the general capacity for motion of the relevant organisms, MGRs may appear in different maritime zones, as they move or straddle across them. MGRs may also migrate from maritime zone to maritime zone throughout their life cycle, or their regime may depend on the particular stages at which they relevant organisms are harvested.¹¹³ This dynamism, moreover, may entail iterative crossings between maritime zones in a multiplicity of senses: from various areas beyond to various areas within national jurisdiction, as well movements between different areas beyond national jurisdiction (eg between the water column and the ocean floor, or vice versa).

What has emerged thus far is that the legal regime of MGRs is quite heterogeneous. However, as already underlined, MGRs are, regardless of their particular location or legal regime, the common concern of humankind, and as such remain enfolded within the narrative of the commons. The concept of common concern, moreover, may serve, to some extent, to render the lack of homogeneity between legal regimes less problematic, as it introduces a need to balance sovereign rights to exploit MGRs and common interests to their conservation, and, arguably, to the adoption of equitable benefit sharing arrangements. As already mentioned in the introduction, common concern introduces a public dimension to the otherwise traditionally private-law inspired inter-state architecture of international (environmental) law.¹¹⁴ An additional aspect that it is useful to mention is that some commentators suggest that common concern is but a manifestation, or an articulation of the principle of common heritage, with an operational scope limited to resources under the sovereignty of a State.¹¹⁵ And while it is important to reiterate how common concern refers more precisely to the *conservation* of biodiversity (and thus of MGRs), MGRs remain in various ways enfolded within the narrative of the commons, and this circumstance has indeed specific though variable,¹¹⁶ legal implications.

In addition to the variety of legal regimes applicable to MGRs in accordance with their physical location, a further set of complexities must be briefly presented. There exist problematic lines of demarcation that in a number of cases make the neat determination of the geographical and legal space

111 The high seas encompass 'all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State', UNCLOS art 86.

112 UNCLOS art 87.

113 As is the case, for example, in relation to sedentary species, whose definition as sedentary species is linked to a characteristic (their location and mobility) at a particular life stage, that is, 'at the harvestable stage', UNCLOS art 77(4).

114 Holland famously observed how the 'Law of Nations is but private law writ large': Thomas Holland, *Studies in International Law* (Clarendon Press 1898) 151; Lauterpacht would further expose the depth of this private law pedigree in his seminal *Herst Lauterpacht, Private Law Sources and Analogies of International Law* (Longman Greens and co. 1927).

115 Baslar (n 39).

116 In relation to scope and intensity of this enfolding. See French (n 19) for some preliminary reflections, not as regards MGRs specifically, but more broadly on the potential legal value of common concern.



that defines the legal regime of MGRs quite difficult. Some of these problematic lines of demarcation are geographical and/or jurisdictional. Others are related to the nature of the activities relevant to the harvesting of MGRs. Finally, others relate to the material substrate of the resource and its different legal characterization.

The first set of problematic lines of demarcation relates to geographical and jurisdictional fragmentation. The key issues are whether, to which extent and under which conditions it is possible to precisely locate MGRs in a particular maritime zone. This is, as we have seen, an important question, as the location determines the applicable legal regime. As we have seen, movements between maritime zones already pose some problems. However, even more problematic are those cases where ascertaining whether a particular spatial area is, for example, part of the high seas or of the ocean floor, is difficult. One first example relates to hydrothermal vents.¹¹⁷ Hydrothermal vents are characterized by large chimneys formed by the precipitation of the minerals contained in the so-called 'smokers', that is plumes of mineral-rich water that are expelled upwards from beneath the seafloor. Heated water may additionally also appear as diffuse flow of fluids that surrounds the vent field. There is a clear difference in the chemical composition between vent fluids and the surrounding seawater. Importantly, the large majority of the very specialized fauna that is to be found in hydrothermal vents ecosystems is localized where seawater and vent fluids mix. In this respect, it may not be entirely straightforward to establish whether organisms found in the extreme ecosystems of hydrothermal vents belong to the seabed, ocean floor and subsoil thereof, or to the superjacent water column, as the distinction between the latter and the gas chimneys of hydrothermal vents is not, from a legal perspective, entirely clear.¹¹⁸ Additionally, some commentators argue that minerals found in the smokers belong to the Area,¹¹⁹ which would lead to the conclusion that living organisms found in the smokers would have to belong to the Area also.

A similar question arises in relation to brine pools. Delineating a clear distinction between the water column and ocean brine pools located on the ocean floor, whose waters remain separated from the water column due to differences in salinity and density, may also not be straightforward, and indeed such separated waters may be considered to belong to the ocean floor. If that were to be the case, MGRs located in such brine pools would fall under the regime of the Area. Similar yet distinct questions arise in relation to the delineation of boundaries between maritime zones, for example between the high seas water column and the extended continental shelf or between the extended continental shelf and the Area.

These questions have been explored before in the literature,¹²⁰ so my aim here is not to articulate a novel argument, but rather that of illustrating the type of complexities that affect the legal status and regime of MGRs. Importantly, these interactions between different maritime zones, with distinct and incommensurable legal regimes, and especially the one between the extended continental shelf and

117 The information of hydrothermal vents contained in this section are based on Maria C Baker and others, 'An environmental perspective' in WWF/IUCN (eds), *The Status of Natural Resources on the High Seas* (WWF/IUCN 2001) 15-16.

118 See eg Drankier and others (n 100) 406ff.

119 Thus, Burke (n 104) 231.

120 See especially Oude Elferink (n 107) and Drankier and others (n 100).



the high seas, have been indeed highlighted as one of the areas that will define the future development of the law of the sea.¹²¹

Another line of demarcation that makes the delineation of a clear legal regime for MGRs difficult, having particularly in mind the benefit sharing architecture that should frame the exploitation of MGRs, is the line that separates marine scientific research and bioprospecting. This question has been debated at length in the literature,¹²² but there remain crucial uncertainties as regards both marine scientific research and bioprospecting, in terms of delineating the boundaries between the two activities, as both lack a clear and uniformly accepted definition.¹²³ This delineation is important to the extent that marine scientific research in ABNJ enjoys a regime of freedom,¹²⁴ while bioprospecting is being discussed in the BBNJ process with a view to adopting a regulatory framework concerning (mainly to restrict) access and establish rules for the sharing of benefits.¹²⁵ Yet distinguishing between them – for example in terms of ‘pure’ scientific research and ‘applied’ scientific research – may prove very difficult,¹²⁶ or even impossible.¹²⁷

A third, and final, line of demarcation that can be mentioned before moving on to drawing some concluding reflections, is the one that relates to the delineation of resources, and more precisely between fish as a commodity and fish as MGRs. The discussion within the BBNJ process is clearly oriented towards establishing a clear distinction between the two, yet the details, and the potential implications, are yet to be explored, let alone agreed upon.¹²⁸

121 Donald R Rothwell and others, ‘Charting the Future for the Law of the Sea’ in Donald R Rothwell and others (eds), *The Oxford Handbook of the Law of the Sea* (OUP 2015) 892.

122 See eg Tullio Scovazzi, ‘Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International Sea-Bed Authority’ (2004) 19 *The International Journal of Marine and Coastal Law* 383; Sharelle Hart, ‘Elements of a Possible Implementation Agreement to UNCLOS for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction’ (2008) IUCN Environmental Policy and Law Papers, Marine Series No 4; Louise Angélique de La Fayette, ‘A New Regime for the Conservation and Sustainable Use of Marine Biodiversity and Genetic Resources Beyond the Limits of National Jurisdiction’ (2009) 24 *The International Journal of Marine and Coastal Law* 221.

123 While marine scientific research is addressed in Part XIII of UNCLOS, there is no legal definition. As regards bioprospecting, there is no official definition, though the practice is ‘generally understood as the scientific investigation of living organisms for commercially valuable genetic and biochemical resources’, de La Fayette (n 122) 228.

124 See UNCLOS arts 256 (for the Area) and 257 (for the high seas), though subject to the limitation of art 240.

125 The regulation of access may indeed apply only in relation to bioprospecting, see Chair’s streamlined non-paper (n 85) 15, yet if there is no practical way to distinguish between the two, any regulation may prove pointless.

126 Hart (n 122) 16.

127 Scovazzi for example maintains that ‘it is impossible to establish a clear-cut distinction between one activity and the other and between one purpose and the other. A research endeavour organized with the intent to increase human knowledge may well result in the discovery of commercially valuable information and vice versa’: Scovazzi (n 107) 18.

128 eg in the Chair’s streamlined non-paper (n 85) fish is addressed in two parts, under ‘use of terms’ (‘Definition must take into account the distinction between fish used for its genetic properties and fish as a commodity’), and under ‘material scope’ (in relation to ‘Fish and other biological resources used for research on their genetic properties’ it is suggested that a ‘scientifically-informed threshold would be established, whereby if a particular (fish) species is extracted or harvested for the purpose of bioprospecting for marine genetic resources beyond a certain amount (depending on species and habitat variability), it would be considered a commodity. Such threshold could be elaborated by a scientific/technical body under the instrument’), respectively 7 and 14.



5. Conclusions

In this article, I have endeavoured to explore some of the ways in which MGRs are conceptually and normatively enfolded within, and articulated through, the concept of commons. Indeed, we have seen how what I have reframed as the *narrative* of the commons traverses and envelops MGRs in a multiplicity of ways. However, regardless of the consideration of MGRs as a commons, or the ways in which the narrative of the commons enfolds MGRs, it is also important to understand the particular legal regime underlying any one inflection of the narrative of the commons with respect to MGRs. The article has thus also endeavoured to show how these two dimensions have a variable relation, and that the narrative of the commons, and some of its underlying concepts, are linked in complex ways to a variety of legal categories and legal regimes. The latter in particular vary, even significantly, in relation to the physical and legal localization of MGRs in diverse maritime zones, a location that, moreover, may vary over time for the same organism. Two questions remain, however. The first is whether the heterogeneity of legal regimes is, in fact, a problem. In other words, the question is whether the legal regime of MGRs should be determined exclusively by the maritime zone where MGRs are located, or whether, by contrast, the nature of the resource should determine the appropriate legal regime regardless of the maritime zone(s) where it is found. The second question relates to whether it is either possible, or useful, to bring MGRs under *one* inflection of the narrative of the commons, and if so, which one.

As we have seen, there are many perspectives from which to approach the question of the legal status of MGRs, as well as a divergence of views among both legal scholars and States. Indeed, the systematization and harmonization of the legal regime of MGRs is both difficult theoretically and controversial politically. What is arguably needed, is a practically useful and theoretically sound notion capable of articulating a coherent yet sufficiently flexible legal framework. The principle of common concern may be one such idea.¹²⁹ More than any other inflection of the narrative of the commons, in fact, common concern seems capable of accommodating most, if not all, the tensions inherent in the complex issues raised by MGRs. Both the (potential or actual) multiplicity of legal regimes and the difficult delineation of the MGRs in the boundary areas discussed at the end of the previous section can be addressed from the perspective of common concern, given its neutral stance as regards questions of title and/or sovereignty.

As already mentioned, MGRs (or rather, the conservation of biodiversity of which they are one constitutive element) are already a common concern of humankind. The advantage of utilizing the principle of common concern in relation to MGRs is that it is, in part, already applicable. Moreover, common concern has a broad scope, and can more easily include the multiplicity of legal regimes that are (potentially or actually) already associated with MGRs in the various maritime zones. Because the question of title is not relevant for the purposes of characterizing a resource as a common

¹²⁹ As argued for example by one of IUCN's submission to the PREPCOM process, where the principle of common concern was put forward as a 'pragmatic solution,' IUCN Intervention on applicable principle to Marine Genetic Resources, PREPCOM 3.



concern (nor for the legal effects of such characterization to be effective), common concern is thus able to accommodate otherwise problematic state changes (eg the transition from juvenile to harvestable stages relevant for the legal regime of sedentary species), as well as movements across maritime zones, and, finally, situations where the association with one or another maritime zone is unclear, difficult to determine or controversial (such as the case of hydrothermal vents or brine pools).

Other advantages of the principle of common concern are that it is able to articulate a balance between the sovereign rights of nations to exploit their natural resources and the interests of the international community in global environmental protection, though this particular aspect is not so pressing for resource located in ABNJ. Moreover, and this is indeed an important aspect of common concern, the principle is a key element of a broader process of publicization of international (environmental) law. According to Birnie, Boyle and Redgwell, the concept of common concern has a crucial function towards the globalization of the scope and normative reach of international environmental law, which it can no longer be characterized 'as simply a system governing transboundary relations among neighbouring States.'¹³⁰ Similarly, Judge Weeramantry emphasized how international environmental law must be always put in relation to 'global concerns of humanity as a whole.'¹³¹ In this respect, common concern is a key element in the already mentioned process where 'common-interest normative patterns' are gaining traction vis-à-vis more traditional 'inter-state normative patterns.'¹³²

Considering MGRs as common concern may be beneficial from the particular point of view of conservation vis-à-vis the variety of legal regimes that may obtain in the different maritime zones. However, it must be kept in mind that from the point of view of resource extraction and exploitation, as already observed,¹³³ common concern may fall short of satisfying the political aims and legal requirements for a regime of access and benefit sharing.

These questions, however, cannot be settled here. By way of conclusion then, it shall be sufficient to observe how, like international law more broadly, MGRs are traversed by a multiplicity of conceptual and normative vectors that reproduce the tensions that exist between a narrative of the commons and a narrative of resource ownership or sovereignty, between the *communis* and the *proprium*. The same tensions are present and are under discussion within the context of the BBNJ process, and it is certainly a possibility that the legal regime applicable to MGRs that will be adopted in the new agreement will be heterogeneous, and treat MGRs located in the Area and those located in the high seas differently. Yet, in both cases, MGRs will inevitably intersect with the narrative of the commons, and that may facilitate a common architecture for benefit sharing, if not of access, and rules aimed at conserving MGRs as a common concern of humankind.

130 Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* (OUP 2009) 130.

131 Gabčíkovo-Nagymaros (n 2), Separate Opinion of Vice-President Weeramantry, 115.

132 Hey (n 3) 552.

133 Morris-Sharma (n 77) 90.