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Sharing the benefits of marine genetic resources in the High Seas for conservation?

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ABSTRACT

The United Nations has resolved to start the process of negotiating an international treaty on marine genetic resources in the High Seas, because the United Nations Convention on the Law of the Sea does not cover these resources and they are under threat of extinction. However, when an international legal rule establishing international rights for "all people" over natural resources is in force, the problem of "who is entitled to what?" changes to "how to ensure conservation of resources?", which in this case means how the conservation of these resources should be financed. In this paper, the benefits and problems, and possible legal solutions obtained from adopting a legal methodology, will be depicted, based on the work of legal scholars and formal legal methodology, particularly the structures of legal reasoning, and the absence of legal rules and possible solutions to this will be discussed. Problems related to the benefits of marine genetic resources in the High Seas include how they are obtained and for whom, and these problems should be addressed for the sake of clarity in future legal rules in a way that supports the conservation of these resources. This research paper concentrates on recent developments in the High Seas vis-à-vis marine genetic resources, and the problems of financing the conservation of these natural resources. It discusses possible solutions to these problems through the equitable sharing of the benefits, following other international treaties, legal reasoning and legal arguments in relation to the manifestation of public policy.

1. Introduction

In recent articles, authors have set out the threats to biological resources in the High Seas (HS). "Marine defaunation" and, as a consequence, the disappearance of marine genetic resources (MGRs) (Blaustein, 2010; McCauley et al., 2015; Tittensor et al., 2014), and the problem of the conservation versus the exploitation and destruction of MGRs in the HS are due to, among other possibilities, the absence of international legal rules, particularly rules protecting MGRs in the HS in marine hotspots (Myers, 2000; Robert et al., 2002). The United Nations has considered this legal problem, as there may be no solution to it in the current international legal system. United Nations General Assembly Resolution Number 69/292 was passed in order to discuss the legal protection of MGRs in the HS by an international treaty (United Nations, 2015a) and later, in a second resolution, a programme of subjects to be discussed was indicated (United Nations, 2015b). The problem of the rights in MGRs in the HS seems to be solved by international treaties (United Nations, 1966a, 1966b) that, in general, establish that these resources and wealth belong to "all people". However, conservation needs finance, and the fair and equitable sharing of gains from the utilization of MGRs in the HS will be a possible answer to the question of how to finance this. Because, as stated above, MGRs belong to "all people", the procedure for distributing the gains resulting from research and the transformation of genetic information and knowledge into products to be traded (which generate benefits from patents) is the main problem today. This draws attention to an issue without discussion in the discipline of Law and not included in international legal rules: treatment of MGRs (an individual cases) in the international legal system (Raz, 1980). There is, therefore, a lacuna iuris, based on a legal problem without an answer: how can the benefits be fairly and justly shared, to finance the conservation of MGRs in the HS? Some authors

Abbreviations: MGRs, Marine Genetic Resources; HS, High Sea; UNCLOS, United Nations Convention on the Law of the Sea; CBD, Convention on Biological Diversity; NP, Nagoya Protocol; MBRs, Marine Biological Resources; GFP, Green Fluorescent Protein; ICCPRs, International Covenant on Civil and Political Rights; ICRSCRs, International Covenant on Economic, Social and Cultural Rights.

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suggest that lacunae iuris arise in various areas, while this article suggests that sharing benefits might be the main lacuna iuris, as far as financing conservation for MGRs is concerned. This research is based on legal methodology and legal reasoning (Hart, 1994), particularly individuation, the definition and absence of legal rules (based on findings in natural science), the coherence of the legal system, analogies with other legal solutions, the structure of legal solutions in relation to other resources (Dworkin, 1977; Kelsen, 2005; MacCormick, 1978; Raz, 1980; Schauer, 2009; Weinreb, 2005), legal doctrine from the law, the work of authors who have studied the lack of legal rules (Van Hoecke, 2011), the methodology of law based on the aforementioned elements but creating a possible legal rule for the "facts" (Sieckmann, 2007; Zippelius, 1983), and answers to this legal problem. This research shows that there are two possibilities: on the one hand, legal methodology could be followed to enact international legal rules by treaties that rule on sharing the benefits or, on the other hand, one could work with legal methodology in order to fill the gap. However, the second alternative will always suffer from the possibility of meeting an unanswerable problem that MGRs cannot be made subject to regulation because of their intrinsic characteristics.

2. MGRs in the HS and their benefits: current discussions in international law

One of the reasons for the threat of extinction of MGRs in the HS is the lack of legal rules to reduce the likelihood of this extinction by keeping the resources in conservation areas or in aquariums and other ex situ collections. All forms of conservation require, among other issues, finance for this form of protection. Discussions on the lack of legal rules have brought various problems to light.

2.1. General and abstract versus specific international legal rules

Rules of international law are established with the same characteristics as all rules of law: general and abstract rules should therefore be considered in defining MGRs and how their benefits should be shared. If rules were to be enacted for every single MGR (specific) then, according to Blaustein (2010) and Koh (2009a,b), the result would be inadequate because a large percentage of these resources are unknown. MGRs discovered in the future would lie outside the rules; moreover, not all MGRs can produce benefits. In many cases, the possibilities of research and technology are limited by our capacity to access the resource or by the quality of the resource itself (if only a few exemplars of the resource are alive). Further, the "qualification" of what are MGRs should be considered in defining their quality and capacity to be the subject of research: bacteria, for example, cannot easily be trapped in the deep seabed using current technology, and this is a legal gap ("marine genetic resources were not in the purview of the UNCLOS [United Nations Convention on the Law of the Sea] negotiators" (Gjerde, 2010)).

2.2. Distinguishing the object of the regulation

In understanding the specific problem, it becomes necessary to suggest distinctions to define all the rights involved and the interests to be included in future discussions. First, it is necessary to consider the regulation of the place (the high seas) where the resources (the MGRs, which are the legal "objects" for which the rules are to be made) that are to be regulated are located. Otherwise, when the MGRs are regulated the freedom of the HS might be affected. A second distinction follows, between Marine Biological Resources (MBRs), which are a group of resources that contains the particular "object" for which the rules are to be made, and MGRs, the "object" of the regulation. International law already regulates MBRs (for example, fish are regulated by UNCLOS). In addition, a third distinction should be made in order to focus on the subject of the discussion: there is a difference between MGRs (which are the "object" of regulation), "genetic information in derivatives" such as genetic characteristics (the final "object of regulation"), and "genetic knowledge in products" (what it is possible "to create" in order to obtain a benefit). These distinctions bring to light a problem of regulation. As stated earlier, the benefits from MGRs should relate to MGRs. Therefore, the division of economic gains, when possible, should be made appropriately, but without including a ruling on resources that have been already the object of regulations such as UNCLOS.

2.3. Awareness of rules and discussions on topic to be included

Insufficient efforts have been made to answer the problem of "how to utilize MGRs in the HS and at what price" (Blaustein, 2010). A large group of stakeholders, scholars (Anderson, 2006; Koh, 2013a,b) and governments (BFN, 2011; Department of Environment, Food and Rural Affairs, 2014) and NGOs (Global Ocean Commission, 2016), agree that UNCLOS (United Nations, 1982) lacks legal rules on conservation and sustainable use as far as MGRs in the HS are concerned. However, the nature of what is lacking is not clear because of the general rules of international law. These rules establish that natural resources that are not subject to sovereign rights belong to "all people", and therefore future international legal rules should deal with other important problems like, for example, the financing of conservation. Marine biological resources (mammals) and marine living organisms (fish), all of them marine living resources, but not MGRs (Koh, 1983), have been legally protected by international legal rules related to conservation through UNCLOS (United Nations, 1982). MGRs in the HS are natural resources and, in accordance with two international treaties, they therefore belong to "all people" (United Nations, 1966a, 1966b) according to the "individuation" of legal rules (Raz, 1980). Generally, genetic resources have been recognized as "objects" of regulation by the Convention on Biological Diversity (CBD) (United Nations, 1992) and the Nagoya Protocol (NP) (United Nations, 2010), which grant international legal protection to the benefits of genetic resources through sovereign rights and responsibilities to protect these rights. The "object" of the regulation, an important concept, has been explained by stating that the purpose of the CBD is as follows: "protecting particular categories of species or particular ecosystems, it takes a look on biodiversity as a whole, including all its parts and in particular its genetic bases. The Convention's main regulatory efforts focus on genetic resources" (Beyerlin and Marauhn, 2011). These authors add: "Even though Article 1 seems to focus on conservation as the primary objective of the Conventions, the regulatory approach adopted puts a stronger focus on economic aspects, making use of an incentive structure for the benefits of biodiversity protection. This is best reflected in the Convention's focus on 'sustainable use', which entails a categorical shift away from the rather conservationist approach of the treaties adopted in the 1970s" (Beyerlin and Marauhn, 2011). Why should this pattern not be followed for sharing the benefits of MGRs in the HS? Such legal protection was not considered for MGRs in the HS in the CBD, the NP or UNCLOS. As the result of scientific developments, international efforts on regulation have focused on the utilization of MGRs in the HS (United Nations, 2015a), including the division of gains and the criteria that should be considered when developing international legal rules, based on quantity (the amount of biological and genetic resources to be protected) and quality (the sharing of benefits from MGRs creating new finance for conservation), in future treaties on the subject.