中华海洋法学评论

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《中华海洋法学评论》编辑部

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卷首语

本期的四篇文章聚焦海洋开发与保护的法律问题，既涉及国家管辖范围以外区域热点法律问题，如国际海底管理局、公海保护区等，也涉及国家管辖范围内的传统法律问题，如台湾海峡水下文化遗产、海洋污染损害赔偿制度等。

国家管辖范围以外海域（ABNJ）包括公海和国际海底区域（亦称“区域”），对该区域的资源开发与环境保护，是国际海洋法的热点问题，本期有两篇论文聚焦这一议题。对国际海底区域资源的合理开发与有效利用，是国际社会维护人类共同继承财产的一项复杂而困难的工作，充斥着国际公利与各国主权、发达国家与发展中国家等各种矛盾。依据《联合国海洋法公约》而设立的“国际海底管理局企业部”的初衷，就是代表全人类开发公海海底资源，兼顾不同国家的资源共享与共同财产原则，涉及全人类的利益。但企业部的运作始终存在资金和技术两方面的困境，而无法从构想走向现实。张克宁、吕鑫楠《国际海底管理局企业部运作的资金、技术困境及对策》一文，根据国际社会已有的相关治理经验，提出促进各实体向企业部提供资金和技术积极性的鼓励机制，这是实现企业部早日运作的建设性方案。

李创的《公海保护区选划标准探析》，则探讨了在国际公海区域设立海洋保护区的法律机制与实践现状。作者回顾了现有全球 12 个公海保护区及其法律制度，客观评估了这些保护区选划标准的利弊，提出了公海保护区选划应考量的各种因素。该文主张应充分借鉴现有海洋保护区选划的有益经验，强调发挥土著人民传统知识的积极作用，制定统一标准和适用机制，并考虑重视保护区在实现生物多样性和可持续利用目标上的全球、区域和跨部门合作，为公海保护区建设提供了有益的思路。

另外两篇论文则涉及我国管辖海域的海洋遗产保护与海洋环境保护。台湾海峡海底丰富的水下文化遗产，不仅是两岸往来与海交历史的见证，也是中华海洋文化的重要组成部分，钟慧《台湾海峡水下文化遗产的法律保护》一文则在现有研究的基础上，探讨了海峡两岸在台海水下文化遗产

法律保护问题。作者主张海峡两岸应搁置分歧，构建一套合作机制以保护两岸人民共同的文化遗产。文章分析了海峡两岸对台湾海峡内的水下文化遗产的管辖权及其合作的法律依据，认为海峡两岸在台海水下文化遗产保护合作上具有坚实的法律基础和清晰的合作路径，应积极利用现有的法律机制，开展海峡内水下文化遗产保护的合作与交流。共同的文化遗产是海峡两岸政治分歧现实下特有的高度共识，探讨海峡两岸在台海水下遗产保护方面的合作前景，有利于促进海峡两岸政治互信、推动海峡两岸和平共荣的统一进程。

船舶及海上作业事故造成的溢油污染和有毒有害物质污染是目前严重破坏海洋生态的重要源头，通过立法保护海洋环境是坚持绿色可持续海洋生态环境理念、建设海洋强国的重要组成部分。赵若星、李光春《建立健全我国有毒有害物质污染损害赔偿制度的国际公约启示》一文，梳理、评估了国内外的针对有毒有害物质污染损害赔偿的法律制度及其司法实践，呼吁建立健全我国有毒有害物质污染损害赔偿的法律体系，以遏制我国有毒有害物质对海洋环境的破坏，并保障污染受害者的合法权益。海洋是全球化时代各国间经济、社会紧密联系的最重要通道，探讨海洋有毒有害物质污染损害事件的法律治理，是发展海洋经济过程中未雨绸缪的重要举措。

无论是国家管辖范围以外的公海和国际海底区域，还是中国管辖范围内海域，本期作者都站在“保护”的立场、“合作”的精神对待海洋事务，探讨海洋资源、环境与文化遗产的法制建设与有效的保护途径，都关注到国际法与各个国家和地区的立法之间的冲突、协调与衔接等复杂的问题。正如《联合国海洋法公约》有关条文所指出的，各国都有保护和保全海洋环境的义务，应在全球性或区域性的规则、标准的基础上，按照国际法承担责任，履行各国关于保护和保全海洋环境的国际义务，共同建构全球海洋治理体系，促进构建人类命运共同体的使命，这是广大海洋法工作者面临的新的重要课题，《中华海洋法学评论》将持续关注、鼓励这一课题的有益探索与研究。

《中华海洋法学评论》编辑部 谨识

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Editorial Note

The four papers in this Issue focus on the legal issues of marine exploitation and protection. Such legal issues involve not only hot ones in areas beyond national jurisdiction, such as the International Seabed Authority, High Seas Marine Protected Areas, but also traditional ones within national jurisdiction, such as underwater cultural heritage in the Taiwan Strait, and compensation system for marine pollution damage.

It has been a hot issue in the international law of the sea for resources exploitation and environmental protection in the areas beyond national jurisdiction (ABNJ), including the high seas and the international seabed area (also known as the Area). Two papers in this issue center on this topic. The rational exploitation and effective utilization of resources in the Area is a complex and difficult task for the international community to safeguard the common heritage of mankind, which is inundated with contradictions between the international public interest and the sovereignty of various countries, and between developed and developing countries. The "Enterprise of the International Seabed Authority" (the Enterprise) established as per the *United Nations Convention on the Law of the Sea (UNCLOS)* has an original intention of exploiting seabed resources of the high seas on behalf of all mankind. It gives considerations to the principles of resource sharing and common property of various countries, which involves the interests of all mankind. However, for its operationalization, the Enterprise is facing two crucial issues crying for urgent solutions: funding and technology accessing, leading to its failure to evolve from a concept to reality. In their paper *The Plight of Funding and Technology Accessing facing the Operationalization of the Enterprise of the International Seabed Authority and Solutions*, ZHANG Kening and LYV Xinnan put forward an incentive mechanism to boost the enthusiasm of various entities to provide funds and technology to the Enterprise based on relevant existing governance experience of the international community, which is a constructive plan to realize the early operationalization of the Enterprise.

LI Chuang discusses the legal mechanism and practical status of the

establishment of marine protected areas (MPAs) in international high seas in the paper *On the Selection Criteria of High Seas Marine Protected Areas*. The author reviews the existing 12 high seas MPAs in the world and their legal systems, objectively evaluate the advantages and disadvantages of the selection criteria for these MPAs, and puts forward various factors that should be considered in the selection of high seas MPAs. This paper argues that we should fully draw on the useful experience in the selection of existing MPAs, and emphasize the positive role of indigenous peoples' traditional knowledge. Uniform standards and applicable mechanisms should be developed while considering attaching importance to global, regional and trans-departmental cooperation of protected areas in achieving the goal of biodiversity conservation and sustainable use, which provides useful ideas for the construction of high seas MPAs.

The other two papers concern the protection of marine heritage and marine environment in the sea areas under the jurisdiction of China. The rich underwater cultural heritage of the Taiwan Strait not only serves as a witness to the history of cross-strait exchanges and marine exchanges, but also constitutes a vital piece of Chinese marine culture. On the basis of existing research, ZHONG Hui discusses the legal protection of the underwater cultural heritage of the two sides of the Taiwan Strait in her paper *Legal Protection of Underwater Cultural Heritage in the Taiwan Strait*. The author advocates that the two sides of the strait should put aside their differences and build a set of cooperation mechanisms to protect the common cultural heritage of the people on both sides. This paper analyzes the jurisdiction of the two sides of the strait over the underwater cultural heritage in the Taiwan Strait and the legal basis of their cooperation. It holds that there exist a solid legal basis and a clear path for cross-strait cooperation in the protection of underwater cultural heritage in the Taiwan Strait. The existing legal mechanism should be actively made use of to carry out cooperation and exchanges in the protection of underwater cultural heritage in the Taiwan Strait. Common cultural heritage is a unique high consensus in the reality of cross-strait political differences. Exploring the prospects of cross-strait cooperation in the protection of underwater heritage in the Taiwan Strait is conducive to promoting cross-strait political mutual trust and driving the reunification process of cross-strait peace and common prosperity.

The oil spill pollution and hazardous and noxious substances pollution

caused by ships and marine operation accidents are important sources of serious damage to marine ecology at present. Protecting the marine environment through legislation constitutes an important part of adhering to the concept of green and sustainable marine ecological environment and building a marine power. The paper *The Enlightenment on Establishing and Perfecting the System of Compensation for Pollution Damage Caused by Hazardous and Noxious Substances in China from Relevant International Convention* written by ZHAO Ruoxing and LI Guangchun sorts out and evaluates the legal system and judicial practice of compensation for pollution damage caused by hazardous and noxious substances at home and abroad. The paper calls for the establishment and improvement of such a legal system in China, in order to curb the Marine environment pollution caused by hazardous and noxious substances in China and protect the legitimate rights and interests of the victims of pollution. The oceans act as the most important channel for close economic and social ties among countries in the era of globalization. Therefore, exploring the legal governance of Marine pollution damage caused by hazardous and noxious substances is an important measure to take precautions in the process of developing the marine economy.

Whether it is the high seas and the Area beyond national jurisdiction, or the sea areas within the jurisdiction of China, the authors of this Issue treat marine affairs from the standpoint of "protection" and with the spirit of "cooperation". The authors all keep a watchful eye on complex issues such as conflict, coordination and convergence between international law and national or regional legislation when exploring the legal construction and effective ways of protection of marine resources, environment and cultural heritage. As pointed out in the relevant provisions of the United Nations Convention on the Law of the Sea, all countries should undertake the obligation to protect and preserve the marine environment. They should assume their responsibilities subject to the international law based on global or regional rules and standards, and fulfill their international obligations on the protection and preservation of the marine environment, so as to jointly build a global marine governance system and promote the mission of building a community with shared future for mankind. This stands as a new and important issue facing the vast number of workers engaged in the law of the sea. *China Oceans Law Review* will keep an eye on and encourage beneficial exploration and research on this issue.

COLR Editorial

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国际海底管理局企业部运作的资金、技术困境及对策

张克宁　吕鑫楠 *

内容摘要：国际海底管理局企业部在逐步从构想走向现实的过程中，资金和技术是两个重要的前提条件。现有的国际法律文件对企业部获取资金和技术进行了规范，但仍存在“区域”内活动收入不足和不及时的问题，以及受制于现代知识产权制度而致发达国家缺乏技术转让意愿的困境。本文根据管理局已有经验提出鼓励方案，尝试提高各实体向企业部提供资金和技术积极性、进而促进企业部早日实现运作的途径。

关键词：国际海底管理局　企业部　资金筹措　技术

国际海底区域（以下简称“区域”）内矿产资源丰富，多金属结核、多金属硫化物和富钴铁锰结壳是当前“区域”内具有商业开采前景的矿物资源，在消除不平等、增加收入以及拓宽原材料获取途径方面[1]的潜在作用不可低估。《联合国海洋法公约》（以下简称“《公约》”），建立了以国际海底管理局（以下简称“管理局”）为核心、对“区域”内矿物资源勘探开发的基本法律框架，其中包括由其所属机关企业部（the Enterprise）直接从事“区域”矿物的勘探开发、运输、加工和销售。[2]由于一些主要发达国家反对公约第十一部分中包括企业部在内的一些规定以至不接受公约，1994 年订立的《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》（以下简称“《1994 年协定》”）为使尽可能多的国家加入公约，规定将企业部暂时冻结，在其独立运作前由管理局秘书处代为履行职务。[3]截至目前，

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本文系国家社科基金项目“我与 21 世纪海丝沿线主要国家海上合作维权策略研究”（项目编号：17VHQ012）的阶段性成果。

1 Isabel Feichtner, *Sharing the Riches of the Sea: The Redistributive and Fiscal Dimension of Deep Seabed Exploitation*, European Journal of International Law, Vol. 30:2, p. 603 (2019).

2 《联合国海洋法公约》第 170 条。

3 《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》附件第 2 节第 1 段。

企业部尚未实现独立运作。

过去十年中，国际社会对国际海底矿物资源的关注有增无减，相关国家和实体对深海勘探开发技术和设备加大投入，使得开发利用的现实性和可能性逐渐增加，企业部的运作也日趋必要和紧迫。根据《1994 年协定》附件第 2 节第 2 款，“企业部初期的深海底采矿业务应以联合企业的方式进行。当企业部以外的一个实体所提出的开发工作计划获得核准时，或当理事会收到同企业部经营联合企业的申请时，理事会即应着手审议企业部独立于管理局秘书处而运作的问题。如果同企业部合办的联合企业经营符合健全的商业原则，理事会应根据《公约》第 170 条第 2 款发出指示，允许企业部进行独立运作”。2012 年以来鹦鹉螺矿业公司（Nautilus Minerals）和波兰先后提交了组建联合企业的建议书，引发了管理局理事会就企业部独立运作的讨论。目前正在讨论当中的规章将为“区域”开发利用建立一套完善的法律框架，为各法律主体在“区域”内的开发活动提供法律依据和行为标准。在可预期的将来，随着公约和《1994 年协定》所认可的任一实体向管理局申请开发计划，理事会也必须在第一时间列入议程并就此做出决定。企业部代表全人类在“区域”内勘探开发矿物资源，将兼顾发展中国家分享收益和发达国家获得资源。早日实现企业部的运作，关乎人类社会共同继承财产原则的落实，涉及全人类的利益。

企业部直接从事“区域”内活动，关键在于资金和技术。笔者依据国际海底管理局有关开发规章和对联合企业安排的既有讨论，梳理了企业部资金筹措和技术获取的法律文件，在此基础上简要探讨了这些法律条文的利弊，分析了企业部资金筹措和技术获取存在的现实困境，试图依据已被管理局接纳的鼓励措施对克服现有的难题提出建议，并简要讨论了我国在实现企业部运作的利益和立场。

一、企业部资金与技术获取的国际法规制

“企业部”这一构想的渊源可追溯到 1971 年 13 个拉美国家向“和平利用国家管辖范围以外海床洋底委员会（The Committee on the Peaceful Uses ofthe Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction）”提交的报告。[4] 在其后的联合国谈判中，这一构想被不断丰富、完善。在第三次联合国海洋法会议上，各国代表针对包括企业部在内的勘探开发国际海底资源机构的设置各抒己见，关注了组织框架、开发模式、资金、技术等议题，以谋求在有效进行深海资源开发的同时，兼顾环境以及包括陆上生产国在内的攸关方的利益，并能够特别考虑到发展中国家的需要。会议最终形成了《公约》。此后，国际社会在《公约》的

4 转引自 Roy S. Lee, *The Enterprise-Operational Aspects and Implications*, Columbia Journal of World Business, Vol. 15:4, p. 62 (1980).

基础上，又通过了多项法律文件，为企业部设立了原则性的权利和义务。这些法律文件包括《1994 年协定》，依据《公约》授权、管理局在其职权范围内制定的规则、规章和程序。

（一）企业部获取资金和技术的法律规制

在资金方面，《公约》列举了企业部的资金来源，并为确保企业部的尽快建立，规定缔约国应尽一切努力支持企业部向资本市场和国际金融机构申请借款。[5] 大会还应免除企业部开办期间（自商业开发起不超过 10 年）向管理局缴付的款项，并将全部净收入留作企业部的储备金。[6]

在《公约》基础上，管理局针对多金属结核、多金属硫化物和富钴铁锰结壳[7]三种主要矿物资源，相继制定了三个探矿和勘探规章。其中多金属硫化物和富钴铁锰结壳规章创造性地给予了申请者在提供保留区或联合企业股份二者之间进行选择的权利。[8] 按照该项规定，如申请人可向企业部提供联合企业的股份（来执行“平行开发制”原则规定），企业部应至少获得 20% 的股份，其中一半为无偿获得，且除非另有协议，企业部不为联合企业提供资金或担保，申请者还应向企业部提供增加股份参与的权利。[9]

在技术方面，《公约》规定，原则上管理局和缔约国应相互合作，促进“区域”活动相关的科学知识和技术的转让，并特别推动企业部和发展中国家根据公平合理的条款和条件取得有关的技术，促进企业部和发展中国家人员接受技术培训和参与“区域”内活动。[10]《1994 年协定》进一步设定了技术转让应遵照的其他三条法律原则，以保证企业部能够获取技术，即按照公平合理的商业条件从公开市场或联合企业安排获取技术，在符合知识产权有效保护的情况下取得技术，以及通

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5 《联合国海洋法公约》附件四第 11 条。

6 《联合国海洋法公约》附件四第 10 条。

7 管理局关于三种矿物的介绍：多金属结核，ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/ia7_chi.pdf; 富钴结壳，ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/ia9_chi.pdf; 多金属硫化物，ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/ia8_chi.pdf.

8 Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, ISA, ISBA/16/A/12/Rev.1, 15 November 2010, Regulation 16; Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, ISA, ISBA/18/A/11, 22 October 2012, Regulation 16.

9 同前注 9, ISBA/16/A/12/Rev.1, Regulation 19; 同前注 , ISBA/18/A/11, Regulation 19.

10 《联合国海洋法公约》第 144 条，第 273 条。

过促进国际技术和科学合作取得技术。[11]

（二）“区域”开发规章草案

目前，企业部的开发规章仍处于有序谈判之中，文本几经利益攸关方评论和理事会修改，内容日趋完善，已进入后期实质性内容的讨论阶段。开发规章草案对于企业部的规范几乎仅仅停留在对合格申请者、联合企业安排、鼓励、财务资料等问题的原则性和普遍性规定上。中国在开发规章草案的评论意见中，亦希望细化和丰富企业部的相关规范。[12]

（三）现有规章的利弊评估

从《公约》到《1994 年协定》，再到管理局框架下制定的规则、规章和程序，现有的法律文件对企业部的认知更加务实，法律规制也在逐步完善。在资金层面上，《公约》规定了企业部资金来源，亦考虑到企业部成立、初始运作之困难，给予企业部适当的优惠举措；《1994 年协定》要求企业部的初期采矿业务以联合企业方式进行，此后管理局制定的勘探规章更进一步减轻了企业部的资金压力。在技术层面上，企业部获取技术的原则性规定则更加贴近市场化运作的需求。这些改变，尤其是联合企业安排对于企业部参与深海资源开发并获得资源收益具有现实意义。[13]

但这些法律规制也仅仅停留于原则性规定，并没有触及解决企业部获取资金和技术的关键问题，而这才是企业部迄今未能开展深海采矿业务的实质原因。即使在晚近开发规章草案的探讨中，企业部获取资金和技术的规制仍没有取得实质性进展，理事会和利益攸关方及学术界优先关注的问题都集中在国家、实体、私人的利益分享和环境保护方面[14]，对于事关公共利益的企业部缺少重视。审视现有条款下企业部获取资金技术的困难，将有助于认清当前企业部在现有法律框架下

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11 《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》附件第 5 节第 1 段。

12 《中华人民共和国政府关于〈“区域”内矿产资源开发规章草案〉的评论意见（2019 年 10 月 15 日）》第 3 页，ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/china-ch_0.pdf.

13 张辉：《国际海底区域法律制度基本框架及其发展》，载《法学杂志》2011 年第 4 期，第 12 页。

14 黄惠康：《国际海洋法前沿值得关注的十大问题》，载《边界与海洋研究》2019 年第 1 期，第 21 页；IISD Summary of the Twenty-fifth Annual Session of the International Seabed Authority (First Part): 25 February – 1 March 2019, ISA website (9 July 2020): https://www.isa.org.jm/index.php/news/iisd-summary-twenty-fifth-annual-session-international-seabed-authority-first-part-25-february-.

所处的困境，使管理局能据此有针对性地采取措施，完善规则、规章和程序。此外，掌握资金和技术国家在企业部中的角色有待深入探讨，如何促进这些国家在“区域”活动中的参与程度，提升其帮助实现企业部运作的意愿，同样值得关注。

二、资金与技术获取的现实困境

获取资金和技术的困难在企业部设想之初即已存在，发达国家和发展中国家在深海矿物资源开发中的诉求不同，遂使这一问题陷入争议。一方面，预期中的全球陆地矿物资源短缺乃至枯竭[15]促使发达国家把目光投向深海，以求通过深海矿物资源的商业化开采获得稳定可靠的矿物供应源。[16]另一方面，在国际经济新秩序理念的影响下，发展中国家反对发达国家凭借经济技术优势独占丰富的深海矿物资源，[17]主张通过对深海矿物资源的开发，使人类社会普遍受益，缩小与发达国家之间的发展差距并接触到前沿技术。因而，第三次联合国海洋法会议期间，涉及资金和技术等企业部运行细节的讨论充满了争议。这一争议导致了《1994 年协定》的产生，[18]但问题至今并未彻底解决，现有法律文件涉及企业部获取资金和技术的条款，仅仅是九十年代联合国非正式磋商期间双方妥协的产物。

其他相关的法律与学术文献也将获取资金和技术视为实现企业部运作的重要内容。例如 1980 年联合国秘书处法律办公室李世光（Roy S. Lee）撰文探讨企业部可行性时，即将资金和技术视为实现企业部运行的至关重要的两个方面。[19]常虹也认为，应认真对待企业部在财政方面的工作。[20]时隔近 40 年后，管理局秘书长企业部特别代表伊登•查尔斯（Eden Charles）等于 2019 年出版了企业部运行研究报告，认为为企业部提供资金和技术转让仍然是与企业部成立与运作密切相关的重要法律问题。[21]

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15 转引自 G. P. Glasby, *Deep Seabed Mining: Past Failures and Future Prospects*, Marine Georesources and Geotechnology, Vol. 20:2, p. 162 (2010)。

16 同前注 1, Isabel Feichtner, p. 608。

17 肖锋：《〈联合国海洋法公约〉第十一部分及其修改问题》，载《甘肃政法学院学报》1996 年第 2 期，第 55 页。

18 Micheal W. Lodge, *The Deep Seabed*, in Donald Rothwell, Alex Oude Elferink, Karen Scott & Tim Stephens eds., The Oxford Handbook of the Law of the Sea, Oxford University Press, 2015, p. 238.

19 同前注 4，Roy S. Lee, p. 65-68，这两部分分别为 availability of funds 和 access to technology.

20 常虹：《企业部之未来展望》，载《中国海洋法学评论》2017 年第 2 期，第 206 页。

21 A Study Related to Issues on the Operationalization of the Enterprise, ISA, Technical Report, January 2019, p. 13.

（一）资金来源的困境

企业部的资金来源，包括从管理局收到的款项、缔约国为企业部的活动筹资而提供自愿捐款，企业部借入款项，业务收入和为使企业部尽快开办业务和履行职能而向企业部提供的其他资金等五种途径[22]，实际上可归并为自愿捐款、借入款项和“区域”内活动收入三种。分摊会费和向补偿基金缴付的款项从其设立目的和用途上，并不适宜归入企业部资金筹措的途径。尽管《公约》为企业部设计了这些资金筹措的方式，但在实际运作中仍面临困难。

1. 自愿捐款

无论是对管理局或是企业部的自愿捐款，以此种方式获得资金完全取决于各缔约国的政治意愿。在现实当中，无论发展中国家还是发达国家均不情愿为企业部提供资金。一方面，发展中国家，尤其是非洲国家，受制于发展滞后缺少资金的现实，更倾向于关注回报及时的投资，以便更有效地改善国内发展状况，[23] 而企业部短期内并不能为发展中国家、最不发达国家、内陆国提供可观的回报。早在第三次联合国海洋法会议上，尼泊尔即主张最不发达国家和内陆国应当免于为企业部筹措资金。[24] 近年来，管理局一些发展中国家成员国尤其是最不发达国家拖欠预算会费的趋势，[25] 更使得以自愿捐赠方式获得资金的前景不容乐观。另一方面，被认为有丰富资金的发达国家出于自身经济利益的考量，缺乏资助动力。在 20 世纪 70 年代，发达国家首先开启了对深海矿物的探索，但并非这些国家都有意愿资助企业部。在一些发达国家看来，企业部是其他实体的竞争者，[26] 因为企业部会影响这些国家在国际海底事实上的垄断。[27] 管理局现有的基金在捐助国家数量和捐助资金数额上，都不甚理想，依靠缔约国的自愿捐款来实现企业部的运作并不现实。

2. 借入款项

《公约》对管理局和企业部的借款均做出了必要的授权。与管理局借款不同，企业部通过担保方式借入资金是《公约》中明示的权利，突出了市场主导的特征。借款权的行使溯其根本要由理事会决定，《公约》还设定了缔约国尽一切合理的努

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22 《联合国海洋法公约》附件四第 11 条。

23 Edwin Egede, *African States and Participation in Deep Seabed Mining: Problems and Prospects*, the International journal of Marine and Coastal Law, Vol. 24:4, p. 688 (2009).

24 Third United Nations Conference on the Law of the Sea, 136th Meeting of the Plenary, A/CONF.62/SR.136, 26 August 1980, p. 31, para. 1.

25 Report of the Secretary-General of the International Seabed Authority under Article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, ISA, ISBA/25/A/2, 3 May 2019, paras. 23-24.

26 同前注 4，Roy S. Lee, p. 64。

27 Third United Nations Conference on the Law of the Sea, A/CONF.62/SR.128, 128th Meeting of the Plenary, 3 April 1980, p. 48, para. 225.

力支持企业部借款的义务，[28] 但如何界定“尽一切合理的努力”尚需进一步探讨。此外，企业部能否以无息形式取得借款、无息借款的比例等问题，在第三次联合国海洋法会议上发达国家与 77 国集团发生过激烈的争执。在企业部运行初期，其是否能具备充分的担保物以获取借款，就曾受到疑问。提供借款的机构的关注点主要在于风险和收益，应当考虑客户所在行业的前景等因素。[29] 深海开采是新兴产业，受到诸如勘探、金属价格变动、成本不确定、技术变化、环境损害以及政策不确定的影响，[30] 整体行业风险较大。主张无息，无疑会使得提供借款的金融机构更加不情愿，发达国家提出企业部应依靠国家信誉背书，[31] 但并未得到发展中国家的认同。此外，对包括世界银行和国际货币基金组织在内的国际金融机构借款实践的研究结果表明，它们在各自协定中的限制性条款，也客观上使它们无法为企业部提供财政协助。[32]

3.“区域”内活动收入

从“区域”内活动获得的收入，包括管理局因“区域”内活动所得到的收益，从企业部净收入中分配给管理局的资金和企业部在“区域”内的业务收入三种。[33] 后两者以企业部的运作为前提，因而初始资金的筹措只能倚仗管理局的收益。

管理局因“区域”内活动所得到的收益，具体指核准勘探和开发计划的规费、开发活动所产生的特许权使用费和固定年费。[34] 在核准勘探和开发计划的规费方面，尽管当前管理局已签订了 30 份勘探合同，但如果管理局核准勘探和开发计划的行政开销少于申请人缴纳的规费，则余额仍需退还申请者。[35] 因此，这些收入虽然被囊括在管理局的资金当中，却不能为企业部提供有益帮助。在特许权使用费和固定年费方面，承包者应自商业生产开始之日起缴付已出售或已回收的含矿矿

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28 《联合国海洋法公约》附件四第 11 条第 2 款（b）项。

29 汪竹松：《关于行业分析和行业信用风险评级的思考》，载《新金融》2000 年 12 期，第 26 页。

30 Kris Van Nijen, et al, *The Development of a Payment Regime for Deep Sea Mining Activities in the Area through Stakeholder Participation*, The International Journal of Marine and Coastal Law, Vol. 34:4, p. 574 (2019).

31 Legislative History of the “Enterprise” under the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of Part XI of the Convention, p. 148, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/enterprise-ae.pdf.

32 同前注 4，Roy S. Lee, p. 66.

33 《联合国海洋法公约》第 171 条，附件四第 11 条。

34 《联合国海洋法公约》附件三第 13 条第 2 款；《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》附件第 8 节。向管理局缴费的主要形式最有可能是以特许权使用费形式：一方面，管理局正推动开发规章的通过，其中主要的收费形式为特许权使用费；另一方面，管理局秘书长 Michael Lodge 同样认为，收费最可能以特许权使用费的方式获得。参见 Michael W. Lodge, and Philomène A. Verlaan, *Deep-Sea Mining: International Regulatory Challenges and Responses*, Elements: An International Magazine of Mineralogy, Geochemistry, and Petrology, Vol. 14:5, p. 333 (2018).

35 《联合国海洋法公约》附件三第 13 条第 2 款。

石的特许权使用费，[36] 该费用可以用缴付的固定年费抵免。[37]

随着开发规章的推进，上述两项收入有希望成为企业部潜在丰富资金的来源，但仍需考虑两个问题。其一，所获资金的充足性。企业部需要充足的资金以满足自身运行需求，而根据已有的模型，管理局从一个多金属结核的开发项目获得的收入随缴费率和方式的变化产生较大差异，[38] 仅在部分情况下，管理局才能从开发项目中获得丰厚的现金流报酬。其二，获得资金的及时性。管理局如何使企业部应尽早获得足够的资金，实现其企业部运行。即使开发项目提供了足够的现金流报酬，仍这一数值是在 30 年完整生产周期内实现的，而在前期，因为存在财政鼓励等因素，管理局从开发项目中获得的收益是有限的。而且，特许权使用费和固定年费均属管理局资金，在管理局支付行政开支所余资金的使用上，《公约》并没有表明对分配、向企业部提供资金和补偿发展中国家三者之间的倾向性。因此，尽管特许权使用费和固定年费是企业部筹措资金的重要渠道，但仍会使得企业部的运作进程大大落后于其他实体。

综上可以看出，虽然《公约》和《1994 年协定》为企业部的资金筹措提供了完善的法律框架，企业部的运作仍然面临着严峻的资金压力。“区域”内活动收入是潜在可靠的资金来源，但其数量是否充足、获取是否及时，仍然是个问题。

（二）技术获取的困境

《公约》中技术转让条款的争议，也曾使得国际海底矿物的开发陷入困境。[39]《1994 年协定》即是针对这一问题，但迄今企业部仍未获得必要的技术支持。与资金筹措困境不同的是，企业部获取技术的困难根植于现代知识产权保护制度与人类共同继承财产原则的冲突之中。

1. 知识产权保护与人类共同继承财产原则的冲突

企业部获取深海采矿技术的困难，根源在于现代市场体系下知识产权制度与人类共同继承财产原则的冲突。深海采矿所需的技术往往为具备资金和技术优势的发达国家所掌握，并在现代知识产权体系下得到保护。在这一体系下，作为私权的知识产权以专有性为其特征。产权人依法独占知识产权，使用必须置于产权

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36 Draft Regulations on Exploitation of Mineral Resources in the Area, Prepared by the Legal and Technical Commission, ISA, ISBA/25/C/WP.1, 22 March 2019, Regulation 64.

37 《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》附件第 8 节第 1 段（c）项。

38 根据麻省理工大学的模型，在其提供的部分供选择的方案中，管理局从单一多金属结核项目最多收入为 6.5 亿美元，最少为 1.4 亿美元，参见 Financial Payment System Working Group Meeting, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/dec-analysis_0.pdf.

39 Manas Chatterji, *Technology Transfer in the Developing Countries*, Palgrave Macmillan, 2016, p. 267.

人控制之下。[40] 这种专有性的权利仅仅使技术的产权人受益，在特定情况下，对专有性权利的使用会造成市场垄断，通过对市场的主观调控，产权人可获取高额利润。但知识产权不属于反垄断法规范的对象，因而法学工作者将其视为一种法定垄断权。[41] 知识产权保护的强度与技术研发密切相关。知识产权保护的需求往往与技术研发投入成正比，而与研发速度成反比。[42] 技术研发存在着天然的不确定性，知识产权为技术研发提供了制度激励，[43] 研发成果最终使知识产权人受益。上世纪 70 年代至今，各国、商业公司等在深海采矿上前期投入巨大，在深海矿物领域的研究成果颇多，产业发展迅速，但是也付出了昂贵的代价，至今仍没有实现商业意义上的开采。因而，一旦实现商业化开采，深海开采过程中所采用的专有性技术必然伴生超强知识产权保护倾向，使得产权人能够从中获取高额利润。

与之相对，国际海底区域制度反映的则是公有产权制度设计理念。[44]“区域”内资源的讨论从“无主物”（res nullius）与“共有物”（res communis）的争论中产生，[45] 但最终确定的人类共同继承财产原则完全排除了这两个法律概念中开发利用深海资源绝对自由的立场，[46] 即任何国家、法人及个人不得通过先行开采的方式取得矿物资源的产权。这一产权经过法律界定被赋予了全人类，亦即人类共同继承财产，由管理局代表全人类行使。人类这一主体涵盖的内容超越一个国家或一个国际组织的范畴，从地理范围上指代地球上所有国家的人，从时间跨度上考虑了代际利益 [47]，受益者包括现时下和未来的人类，也就是迪普伊（Dupuy）所说的“跨时间”和“跨空间”特点。[48] 由此，人类共同继承财产原则中的人类，其数量上具有无限性的特征，并由其国家代为行使权利，履行义务。“共同”（common）则体现为对“区域”资源的共同拥有，对“区域”内的活动进行共同管理，共同参与“区域”

40 冯晓青：《论知识产权的专有性——以“垄断”为视角》，载《知识产权》2006 年第 5 期，第 26 页。

41 朱雪忠，贾辰君：《知识产权的垄断性及其与反垄断规制的关系研究》，载《知识产权》2016 年第 2 期，第 36-38 页。

42 王太平：《知识产权制度的未来》，载《法学研究》2011 年第 3 期，第 83-84 页。

43 董炳和：《论增强自主创新能力与我国知识产权制度的完善——从知识产权保护的制度功能入手进行分析》，载《苏州大学学报（哲学社会科学版）》2006 年第 3 期，第 28 页。

44 苏长河：《全球公共问题与国际合作：一种制度的分析》，上海：上海人民出版社 2000 版，第 272 页。

45 同前注 1，Isabel Feichtner, p. 606。

46 王明远，孙雪妍：《论国际海底矿产资源的法律地位》，载《中国人民大学学报》2019 年第 4 期，第 70-74 页。

47 Michael W. Lodge, Kathleen Segerson & Dale Squires, *Sharing and Preserving the Resources in the Deep Sea: Challenges for the International Seabed Authority*, The International Journal of Marine and Coastal Law, Vol. 32:3, p. 428 (2017).

48 转引自 Bourrel, Marie, Torsten Thiele & Duncan Currie, *The Common of Heritage of Mankind as a Means to Assess and Advance Equity in Deep Sea Mining*, Marine Policy, Vol. 95, p. 313 (2018).

内的活动并从活动中共享收益。[49] 因此，在人类共同继承财产原则的公有性设计理念之下，不应将深海技术产权界定给有限个人，而应当能使人类作为一个整体，共同拥有、共同管理并共享收益。

可见，相对于知识产权制度私权性的特征，人类共同继承财产原则体现了公有产权的特点。这一矛盾在“区域”活动上，表现为尽管“区域”内的活动应为全人类的利益进行，并促进发展中国家参与，但是依靠自有资金研发获得的深海技术享受的知识产权保护，使得能在“区域”内活动的实体数量有限，企业部和发展中国家则有可能长期被排除在严格法律保护建立起的专利围墙之外。在现代知识产权制度下，它们在“区域”内的发展将因此受到极大的制约，令人遗憾。

2.《1994 年协定》下的困境

依据《公约》附件三第 5 条，承包者对于企业部有强制技术转让的义务，但这一义务在《1994 年协定》中被删除。《1994 年协定》为企业部另行拟定了三条原则，即为按照公平合理的商业条件从公开市场或联合企业安排获取技术，在符合知识产权有效保护的情况下取得技术，以及通过促进国际技术和科学合作获得技术。[50]

《1994 年协定》附件第五节第 1 段 (a) 项调整的法律关系是企业部和发展中国家获取技术的方式。法律主体是企业部和发展中国家。在获取技术的途径上，仅有通过公开市场抑或是联合企业安排两种方式，而且还要求获取方式满足公平合理的商业条件。由撒切雅•南丹（Satya N. Nandan）主编的《联合国海洋法公约评注》认为，该条款是对公平合理的条款和条件的澄清性规定，[51] 但并没有对公平合理的商业条件做更深入的解释。一般来说，在交易市场上，掌握稀缺技术的一方往往具有较强的议价能力，无论是通过公开市场，还是联合企业方式，这种与技术相关的议价能力均会成为谈判的关键部分，最终影响技术获取方支付的价格。该条款中掌握技术的实体“应以公平合理的商业条件”向企业部和发展中国家提供技术这一表述，事实上允许了将技术作为商品交易；要求企业部与发展中国家有偿获取技术，有可能使企业部在获取技术时处于弱势地位。

《1994 年协定》附件第五节第 1 段 (b) 项设定了在无法取得相关技术的情况下，企业部可以采取的措施和当事国的义务。这种技术的获取不仅必须以公平合理的商业条件来实现，还得满足符合知识产权有效保护的条件，因此这一选项显然对企业部的技术获取提出了更加严苛的要求。诚然，知识产权制度有利于对于产权的保护，但它并非有利于每一个处在发展阶段的国家。依据权利限制理论，如果某种权利不受限制，则必然损害他人权利的存在或行使。[52] 企业部和发展中

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49 金永明：《人类共同继承财产法律性质研究》，载《社会科学》2005 年第 3 期，第 61 页。

50 《关于执行 1982 年 12 月 10 日〈联合国海洋法公约〉第十一部分的协定》附件第 5 节。

51 [斐济] 撒切雅•南丹：《1982 年〈联合国海洋法公约〉评注》，毛斌主编，北京：海洋出版社 2009 年第 1 版，第 163 页。

52 同前注 41，朱雪忠、贾辰君，第 42 页。

国家本身没有充足的知识储备和资金来实现技术的变革和更新，从而对知识产权加以制衡。发达国家通过知识产权对自身利益最大化的追求，也极易使权利被滥用，产生垄断，[53] 进而减损人类共同继承财产原则。

《1994 年协定》增加的三条原则是针对发达国家经巨额研发投入取得知识产权的妥协性解决方案，反映了新自由主义 [54] 自由化、私有化与市场化的特点。[55] 经《1994 年协定》调整后的条款，侧重于保护开发技术、拥有专利权的实体的权利。[56] 一方面，技术的研发过程是高风险的，失败的可能性大，企业部和发展中国家并没有分担研发风险，对于与知识产权相关的利益，自然难以要求发达国家予以无条件分享。另一方面，通过知识产权发达国家可以对“区域”内的矿物资源实现垄断，保障其矿物供应，同时可获得超额收益。这样的条款难以促进企业部运作的实现。

三、解决的对策

满足公平合理的商业条件前提下，使企业部能够有效地从资金和技术权利人处获得技术的策略，应该兼顾发展中国家和发达国家的利益、企业部和资金技术权利人的利益、以及代际和代间利益，从而发展和实践人类共同继承财产原则。

（一）法律价值上的“鼓励”与《公约》的实践

在现代法律规范中，肯定式后果通过正向促进、奖励等行为来弘扬法律追求的社会价值，[57] “鼓励 (incentive)”即是其中的一种方式。从经济学角度来说，鼓励是引起一个人做出某种行为的东西，人们之所以会对鼓励做出反应，是因为理性人决策的基础在于比较成本和收益，而鼓励恰恰改变了这两者原有的平衡，从而调整了人们的行为。[58] 这一方式普遍应用于各个法律领域，[59] 涵盖税法、环境法、公司法、知识产权法等。例如，《保护和促进文化表现形式多样性公约》第 14 条

53 同上注。

54 新自由主义是以古典自由主义为基础，建立起来的理论体系，强调以市场为导向。迈克杰尼斯认为，新自由主义使得相当一批私有者能够控制尽可能多的社会层面，进而获得最大的个人利益。中国社会科学院“新自由主义研究”课题组：《新自由主义研究》，载《马克思主义研究》2003 年第 6 期，第 18 页。

55 周勇：《国际海底“人类共同继承财产”原则的困境与原因》，载《国际论坛》2012 年第 1 期，第 11-12 页。

56 同前注 51，撒切雅•南丹书，第 163 页。

57 汪习根，滕锐：《论区域发展权法律激励机制的构建》，载《中南民族大学学报 (人文社会科学版)》2011 年第 2 期，第 113 页。

58 N. Gregory Mankiw, *Principles of Economics*, Cengage Learning, 2018, p. 7.

59 Kristen Underhill, *Money that Costs Too Much: Regulating Financial Incentives*, Indiana Law Journal, Vol. 93:2, p. 2 (2018).

第 3 款，要求“通过采取适当的鼓励措施来推动技术和专门知识的转让”，《关于持久性有机污染物的斯德哥尔摩公约》第 13 条第 1 款也要求“每一缔约方承诺根据其自身的能力，并依照其国家计划、优先目标和方案，为那些旨在实现本公约目标的国家活动提供资金支持和激励 (incentives)。”鼓励具有鲜明的目的性，可激发个体合法行为的发生，使个体受到鼓励去做出法律所要求和期望的行为，[60] 进而使得个人利益与集体利益最大程度相容，实现“激励相容”[61]，并最终达成鼓励旨在实现的法律目标。

“鼓励”作为一种促进实现特定目标的措施，在《公约》中列于附件三第 11 条和第 13 条合同的财政条款之下，其目标是鼓励承包者同企业部、发展中国家成立联合企业，并促进其在“区域”内活动的能力提升。在开发规章草案中，该条款具体要求向承包者提供包括财政鼓励在内的鼓励，以实现《公约》附件三第 13 条所列的目标。这些措施当前正随着开发规章草案的讨论而被一并考虑，包括但并不限于采用较低的初始阶段特许权使用费率和减免首批承包者的费用。

（二）促进企业部运作之鼓励措施

为了实现深海采矿业务的目标，通过财政和非财政措施，对向企业部提供必要的资金和技术进行鼓励，能够促进这一进程的早日实现。这种措施能为实体帮助企业部提供动力，突破现实困境。

1. 鼓励对象

应当对向企业部提供资金和技术的行为进行鼓励，因为这些行为促进了企业部运作的早日实现。但是具体措施应根据对象、程度的不同而提供差异化的鼓励政策。

受鼓励的对象，可分为直接参与深海采矿的主体和间接参与深海采矿的主体两类，这些主体是潜在的支持企业部的主体。前者基本与《公约》第 153 条勘探和开发制度的申请者一致，包括缔约国、国营企业、具有缔约国国籍或在这些国家或其国民有效控制下并由这些国家担保的自然人或法人，或以上各方的任一组合。而后者，包括金融机构、科研机构、大学、非直接参与“区域”活动的自然人或法人等。区分提供资金技术的主体是必要的，因为根据权利义务相一致的基本原理，前后两者能够享受到的潜在的特殊权利的方式并不相同。前者可以通过参与“区域”内的活动，并直接接受财政鼓励，而后者则不具有这样的途径。

受鼓励行为的程度，涉及是否以有偿方式提供。首先，对于尽一切可能为企

60 付子堂：《法律的行为激励功能论析》，载《法律科学（西北政法大学学报）》1999 年第 6 期，第 22 页。

61 袁达松，赵雨生：《论经济法的激励机制》，载《财经法学》2019 年第 5 期，第 110 页。

业部运作提供帮助的行为，无论是通过有偿方式，还是无偿方式，都有主观上促进企业部尽早运作的想法，客观上做出了一定的贡献，应给予一般性鼓励。其次，应当在有偿和无偿之间做区分。有偿和无偿方式向企业部提供资金和技术，对提供方而言负担不同。无偿方式使得实体丧失了资金、技术收益，若不与有偿方式相区分，会导致不公平和低效率。因而在一般性鼓励的基础上，实施差异化的鼓励措施是有必要的。参考相同条件下市场价值，用货币价值来衡量实际贡献，是具有操作性并能兼顾公平的区分方法。最后，鼓励应当是统一和非歧视的，即以相同方式提供相同价值的对象得到的鼓励应当是一致的。

受鼓励行为的时间，应为资助企业部行为发生的时间。《1994 年协定》要求企业部初期的深海采矿业务应以联合企业方式进行，但并未考虑联合企业结束后，企业部仍没有充足资金技术以进行独立深海采矿业务的情况。因而，为避免这些情况发生，这个时间点应当以企业部获得在“区域”中独立进行深海采矿业务的能力之时为截止时间。

2. 鼓励方式

这些鼓励可以从一般性鼓励和差异性鼓励方面考虑，鼓励的性质上则存在财政鼓励和非财政鼓励。财政鼓励方面，主要可以从承包者利益方面着手，而非财政方面，则可以考虑实体在企业部中的权利。但这些鼓励应当是有限的，不应使得受鼓励对象相对于陆上采矿者处于人为的竞争优势。

一般性鼓励应当使得所有为企业部提供帮助的实体获益，但这种鼓励设定应当是基础性的。从性质上考虑，财政鼓励方面，适当减免一定阶段年费，如减免开发计划第一年的年费，可以成为鼓励直接参与“区域”的实体的考虑。至于间接参与“区域”的实体，赋予其向管理局申请研究基金的优先权等的非财政鼓励，能更好的满足其需求。

差异性鼓励在推动各实体积极帮助企业部实现运作方面具有重要作用。这一鼓励应当基于市场价值，并可以设定绝对或相对的门槛，并从财政差异性与非财政差异性两方面予以实施。

财政差异性鼓励。第一，特许权使用费的减免可以作为财政差异性鼓励的手段。建立基于年限、按承包合同减免或是按矿物产量的特许权使用费减免鼓励，可以弥补实体向企业部提供资金技术时的利益损失，保证其在向企业部提供支持的同时不会受到严重的利益损害。额度的设定应当以向企业部提供资金和技术的价值为基础，并考虑货币时间价值的影响。考虑到直接和间接参与“区域”实体间存在的差异。对于间接参与“区域”的实体而言，仅仅给予直接减免和约束性条款的放松并不能起到赋予差异化权利的效果，因为这些实体不在“区域”内进行活动，并不能直接享受到减免的好处，但允许这种减免额度进行交易，则可以实现对那些间接参与“区域”活动的实体的有效补偿。第二，特别矿址。对于做出重大贡献的直接参与“区域”活动的实体，在其他条款不受影响的情况下，允许其申请有限

数量的特别矿址。这种特殊矿址不受反垄断条款的约束。第三，专项科学研究基金。对于做出重大贡献的间接参与“区域”活动的实体，在企业部实现运行之后，可向企业部申请专项科学研究基金，进行海洋科学技术研究。

非财政差异性鼓励。企业部的人员任命在妥为顾及公平地区分配原则[62]的基础上，可以特别考虑来自这些实体的代表。《公约》附件四企业部章程设定了与企业部相关的权利和义务。一方面，《公约》要求企业部的 15 名董事会成员应在各有关领域具备胜任条件。[63]而来自这些实体的人员，尤其是那些提供技术的实体，具有相关的专业背景，能够妥善地应对企业部出现的财务、技术等状况，促进企业部的良好运行。另一方面，总干事在任命工作人员时，出于同样的原因，如果来自这些实体的工作人员更加具有竞争力，可以优先考虑。

四、余 论

我国在促进国际海底管理局企业部运作的进程中发挥了积极作用。在制度规范方面，我国努力推动企业部问题在开发规章草案中的细化和完善，并特别关注企业部从联合企业中获得股份、独立运作等问题。[64]在实践中，我国支持管理局在能力建设上的工作，包括捐款、提供实习机会、向管理局博物馆捐赠模型等。2019 年，我国在管理局缴纳的年费已超越日本，成为缴纳会费最多的成员国。同年，我国自然资源部与管理局在青岛建立联合培训和研究中心，为“区域”活动能力建设、海洋技术转让、发展中国家参与提供了新平台。

我们应当认识到，随着我国经济的迅猛发展，我国在企业部中的利益与第三次联合国海洋法会议时期对比，已不尽相同。一方面，我国仍是发展中国家。从资金和技术上支持企业部运作，能推动落实人类共同继承财产原则，完善全球海洋治理体系，促进国际经济新秩序的形成，我国也将在这个进程中受益。另一方面，我国又很难简单地把自身定位为发展中国家。[65]我国既是先驱投资者，又是迄今唯一就三种矿物资源勘探与管理局签订了五个合同的国家，相对于广大发展中国家，资金较为充足、技术储备较为完善，在资金和技术方面支持企业部运作责无旁贷。基于这些原因，推动开发规章草案中对于支持企业部运作行为的识别和确认，并相应地鼓励这些行为，对维护我国在国际海底矿物资源开发中的利益具有重要

62 《联合国海洋法公约》附件四第 5 条。

63 同上注。

64 同前注 13，第 2-4 页；《中华人民共和国政府关于〈“区域”内矿产资源开发规章草案〉的评论意见（2018 年 9 月 28 日）》，第 3-4 页，ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/documents/EN/Regs/2018/Comments/China.pdf.

65 杨泽伟：《新时代中国深度参与全球海洋治理体系的变革：理念与路径》，载《法律科学（西北政法大学学报）》2019 年第 6 期，第 180 页。

意义。

企业部要成为真正可在“区域”内直接从事活动的机构，仍然有很长的路要走。为应对与企业部运作相关的困难和挑战，管理局依托企业部特别代表对企业部运作的相关问题进行了研究，通过了 2019 年至 2023 年期间高级别行动计划。多年来，管理局还通过承包者按照勘探合同履行对发展中国家人员的培训义务、海洋科学研究捐赠基金资助、以及到秘书处实习三种重要方式，[66] 尽其所能促进、鼓励海洋科学研究，并帮助发展中国家和最不发达国家加强能力建设，并取得了一定成果。管理局理事会财务问题特设工作组会议 [67] 中提出的一个概念——“货币的时间价值（Time Value of Money）”，即现在的 1 块钱比未来的 1 块钱更有价值，应该能给企业部以启示。这是一个经济学概念，对于企业部和发展中国家的启示是，越早使企业部参与到“区域”的活动当中，企业部和发展中国家便可以越早获得来自“区域”的收益，从而使得人类共同继承财产原则得到落实，造福世界人民，特别是发展中国家和最不发达国家的人民。

66 同前注 25, paras. 67-78。

67 Decision Analysis Framework and Review of Cash Flow Approach, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/cost_workshop-ppt.pdf.

The Plight of Funding and Technology Accessing Facing the Operationalization of the Enterprise of the International Seabed Authority and Solutions

ZHANG Kening LYU Xinnan*

Abstract: While gradually evolving from a concept to reality, the Enterprise of the International Seabed Authority is facing two crucial issues crying for urgent solutions: funding and technology accessing. Albeit existing international legal instruments that provide several mechanisms to facilitate funding and technology access for the Enterprise, obstacles stay on the way. Namely, on one hand, the sufficiency and timely availability of funds generated from activities in the Area remains problematic; on the other hand, under modern intellectual property regime, developed countries are reluctant to transfer technology to the Enterprise without compensation. Based on the experience of the International Seabed Authority, an incentive scheme is hereby designed to encourage and stimulate such countries to do so, in hope that the operationalization of the Enterprise can be sped up.

Key Words: International Seabed Authority; the Enterprise; Funding; Technology accessing

The international seabed area (hereinafter "the Area") is rich in mineral resources. Polymetallic nodules, polymetallic sulfides and cobalt-rich ferromanganese crusts are the mineral resources with commercial exploitation prospects in the Area. Their potential role in reducing inequality, generating

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revenue, and promoting access[1] to raw materials should not be underestimated. The United Nations Convention on the Law of the Sea (hereinafter "the Convention") has established a basic legal framework featured with the International Seabed Authority (hereinafter "the Authority") governing the exploration and exploitation of mineral resources in the Area, including the exploration, exploitation, transportation, processing and sales of minerals in the Area directly undertaken by the Enterprise subordinated thereto.[2] Due to the rejection of certain elements of Part XI under the Convention thus the non-acceptance of the Convention as a whole by some major developed countries, the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 concluded in 1994 (hereinafter "the 1994 Agreement"), aimed at a broadest possible participation of the Convention, has temporarily frozen the Enterprise, and mandated the Secretariat of the Authority to perform the functions of the Enterprise until it operates independently of the Secretariat.[3] Till today, the Enterprise has not yet realized such independent operation.

For the past decade, the international community has paid more and more attention to the international seabed mineral resources. Countries and entities have increased their investment in deep-sea exploration and exploitation technology and equipment, which has gradually increased the feasibility of exploitation and utilization of these minerals. As a result, the operationalization of the Enterprise has become increasingly necessary and urgent. According to Section 2, paragraph 2, of the Annex to the 1994 Agreement, "the Enterprise shall conduct its initial deep seabed mining operations through joint ventures. Upon the approval of a plan of work for exploitation for an entity other than the Enterprise, or receipt by the Council of an application for a joint-venture operation with the Enterprise, the Council shall take up the issue of the functioning of the Enterprise independently of the Secretariat of the Authority. If joint-venture operations with the Enterprise accord with sound commercial principles, the Council shall issue a directive according to Article 170, paragraph 2, of the Convention providing for such independent functioning." Since 2012, Nautilus Minerals and Poland have respectively submitted proposals to form a joint venture with the Enterprise, which

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1 Isabel Feichtner, *Sharing the Riches of the Sea: The Redistributive and Fiscal Dimension of Deep Seabed Exploitation*, European Journal of International Law, Vol. 30:2, p. 603 (2019).

2 Art. 170 of the United Nations Convention on the Law of the Sea.

3 Section 2, paragraph 1 of the Annex to the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

has triggered discussions by the Council on the independent functioning of the Enterprise. The Enterprise, exploring and exploiting mineral resources in the Area on behalf of mankind as a whole, will take into account benefits sharing pursued by developing countries and access to raw materials sought for by developed countries. To operationalize the Enterprise relates to the implementation of the principle of common heritage of mankind (hereinafter "CHM"), and the interest of mankind.

The key to the Enterprise's direct conduct of mining operations in the Area lies in funds and technology. Based on the draft regulations on exploitation and the existing discussions on the joint venture, this article summarizes the legal instruments on funding and technology accessing, briefly discusses the pros and cons of these provisions, analyzes the plights in funding and technology accessing of the Enterprise, and tries to put forward suggestions for overcoming the existing plights according to the incentive mechanisms accepted by the Authority. It also discusses the interests and standpoint of China in the operationalization of the Enterprise.

I. Regulations Concerning Funding and Technology Accessing of the Enterprise in International Legal Instruments

The concept of the Enterprise can be traced back to the report submitted by 13 Latin American countries to *the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction* in 1971.[4] Since then, it has been continuously enriched and perfected. At the Third United Nations Conference on the Law of the Sea (hereinafter "UNCLOS III"), countries expressed their views on the establishment of international institutions for seabed resources exploration and exploitation, including the Enterprise, and had discussion centering on the organizational framework, exploitation model, fund, technology and other issues, intending to take into account the interests of the environment and various stakeholders, especially the needs of developing countries, while seeking effective exploitation. The UNCLOS III culminated in the conclusion of the Convention. The international community has thereafter adopted several legal instruments, setting

4 Cited in Roy S. Lee, *The Enterprise-Operational Aspects and Implications*, Columbia Journal of World Business, Vol. 15:4, p. 62 (1980).

up fundamental rights and obligations for the Enterprise. These legal instruments include the 1994 Agreement and the rules, regulations and procedures established by the Authority within its terms of reference as mandated by the Convention.

A. Regulations Concerning Funding and Technology Accessing of the Enterprise

In terms of funds, the Convention enumerates the sources of funds of the Enterprise and provides that States Parties shall make every reasonable effort to support applications by the Enterprise for loans on capital markets and from international financial institutions.[5] The Convention shall also exempt the Enterprise from the payments made to the Authority during the period of the Enterprise to become self-supporting (not exceeding 10 years from the commencement of commercial production by it) and leave all of the net income of the Enterprise in its reserves.[6]

Based on the Convention, the Authority has successively formulated three regulations on prospecting and exploration for three main mineral resources: polymetallic nodules, polymetallic sulfides and cobalt-rich ferromanganese crusts. Among them, the regulations on polymetallic sulfides and cobalt-rich ferromanganese crusts creatively empower an applicant to elect contributing a reserved area to the Authority or offering the Enterprise an equity interest in a joint venture arrangement.[7] In the light of the regulations, in case the applicant opts to offer the Enterprise an equity interest shares in a joint venture arrangement (subject to the principle of "parallel system"), the Enterprise shall obtain at least 20% of the shares, half of which acquired free of charge. The Enterprise shall be under no obligation to provide funds or guarantees for the joint venture unless otherwise agreed, and the applicant shall also provide the Enterprise with the right to increase share participation.[8]

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5 Art. 11 of Annex IV to the United Nations Convention on the Law of the Sea.

6 Art. 10 of Annex IV to the United Nations Convention on the Law of the Sea.

7 Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Polymetallic Sulfides in the Area, ISA, ISBA/16/A/12/Rev.1, 15 November 2010, Regulation 16; Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, ISA, ISBA/18/A/11, 22 October 2012, Regulation 16.

8 Supra note, ISBA/16/A/12/Rev.1, Regulation 19; supra note, ISBA/18/A/11, Regulation 19.

In terms of technology, the Convention provides that, in principle, the Authority and State Parties shall cooperate in promoting the transfer of technology relating to activities in the Area. In particular, they shall facilitate access of the Enterprise and developing States to the relevant technology under fair and reasonable terms and conditions, and promote personnel from the Enterprise and developing States to receive training in marine science and technology and participate in activities in the Area.[9] The 1994 Agreement further sets out three other legal principles governing the transfer of technology to ensure that the Enterprise has access to technology, that is, acquiring such technology on the open market or through joint-venture arrangements under fair and reasonable commercial terms and conditions, obtaining such technology in accord with the effective protection of intellectual property rights, and gaining such technology through the promotion of international technological and scientific cooperation.[10]

B. Draft Regulations on Exploitation in the Area

Regulations on the exploitation are still being negotiated in an orderly manner for the moment. Reviewed by stakeholders and revised by the Council several times, the draft text has been increasingly perfect and has entered the final phase of discussion on substantive matters. However, the norms of the Enterprise in the draft regulations are still far too general and only limited to the fundamental provisions. In its comments on the draft regulations on exploitation, China also expressed its hope to enrich and specify the relevant norms of the Enterprise.[11]

C. Evaluation of the Pros and Cons of Existing Regulations

Evolving from the Convention to the 1994 Agreement, and then to the rules, regulations and procedures formulated under the framework of the Authority, the existing legal instruments present a more pragmatic cognition towards the Enterprise. Concerning funds, the Convention stipulates the sources of funds

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9 Arts. 144 & 273 of the United Nations Convention on the Law of the Sea.

10 Section 5, paragraph 1 of the Annex to the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

11 Comments by the Government of the People's Republic of China on the Draft Regulations on Exploitation of Mineral Resources in the Area (15 October 2019), p. 3, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/china-en_1.pdf.

for the Enterprise, and gives the Enterprise appropriate preferential treatment in consideration of the difficulties facing the establishment and initial operation of the Enterprise. Since the 1994 Agreement requires the initial mining operations of the Enterprise to be carried out in the form of joint ventures, the regulations on exploration formulated by the Authority have further lightened the funds burden on the Enterprise. In respect of technology, the provisions on technology accessing of the Enterprise are closer to the needs of the market-oriented operation. These changes, especially joint-venture arrangements, are of practical significance for the Enterprise to involve in the exploitation of deep-sea resources and reap the benefits of resources.[12]

However, these legal regulations only remain in principle provisions and do not address the key issues of funding and technology accessing of the Enterprise, which is the essential reason why the Enterprise has so far failed to conduct deep seabed mining operations. Even during the discussions of the draft regulations on exploitation in recent years, no substantial progress has been made in the regulations on funding and technology accessing of the Enterprise. The Council, stakeholders and scholars mainly give priority to the interests sharing of the States, entities and individuals and environmental protection[13], with less attention to the Enterprise that matters the public interest. A review of the difficulties facing the Enterprise in funding and technology accessing under the existing provisions will be conducive to recognizing the plight of the Enterprise under the existing legal framework, and enabling the Authority to take targeted measures to improve its rules, regulations and procedures accordingly. Besides, the role of countries with funds and technology in the Enterprise remains to be further explored. Promoting the participation of these countries in activities in the Area and their willingness to contribute to the operationalization of the Enterprise also require attention.

II. The Plight of Funding and Technology Accessing

12 ZHANG Hui, *Analysis about the Basic Legal Systematic Framework of International Sea-Bed Areas and Its Development*, Law Science Magazine, Vol. 4, 2011, p. 12. (in Chinese)

13 HUANG Huikang, *Ten Frontier Issues Relating to Recent Development in the Law of the Sea*, Journal of Boundary and Ocean Studies, Vol. 1, 2019, p. 21 (in Chinese); IISD Summary of the Twenty-fifth Annual Session of the International Seabed Authority (First Part): 25 February – 1 March 2019, ISA website (9 July 2020): https://www.isa.org.jm/index.php/news/iisd-summary-twenty-fifth-annual-session-international-seabed-authority-first-part-25-february-.

The difficulty of funding and technology accessing has existed since early discussions of the Enterprise. The varied demands of developed and developing countries in the exploitation of deep seabed mineral resources aroused ongoing controversy. On the one hand, the shortage and even depletion of global land mineral resources[14] casts developed countries' eyes over the deep sea for stable and reliable mineral supply through the commercial exploitation of deep seabed mineral resources.[15] On the other hand, under the influence of the concept of a new international economic order, developing countries opposed developed countries' monopolization of rich deep seabed mineral resources by virtue of their economic and technological advantages,[16] and advocated that the exploitation of deep seabed mineral resources could benefit human society, narrow their development gap with developed countries and bring about access to frontier technologies. As a result, the UNCLOS III saw the controversy in the discussions on the operationalization details of the Enterprise, such as funding and technology accessing. This controversy, along with others, led to the conclusion of the 1994 Agreement.[17] But the issues have not yet been completely resolved so far. The existing legal instruments are merely the products of compromises made during the informal consultations at the United Nations in the 1990s.

Other relevant legal and academic works also regard funding and technology accessing as a vital piece of the operationalization of the Enterprise. For example, in 1980, Roy S. Lee of the Office of Legal Affairs of the United Nations Secretariat wrote an article regarding funding and technology accessing as two vital conditions for the operationalization of the Enterprise.[18] Chang Hong also emphasized that the Authority should pay more attention to the issue of funding the Enterprise.[19] Eden Charles, Special Representative of the Secretary-General for the Enterprise, et al. insisted in their 2019 report that the provision of funds and transfer of technology

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14 Cited in G. P. Glasby, *Deep Seabed Mining: Past Failures and Future Prospects*, Marine Georesources and Geotechnology, Vol. 20:2, p. 162 (2010).

15 Supra note 1, Isabel Feichtner, p. 608.

16 XIAO Feng, *Part XI of the United Nations Convention on the Law of the Sea and Its Revision*, Journal of Gansu Political Science and Law Institute, Vol. 2, 1996, p. 55. (in Chinese)

17 Micheal W. Lodge, *The Deep Seabed*, in Donald Rothwell, Alex Oude Elferink, Karen Scott & Tim Stephens eds., The Oxford Handbook of the Law of the Sea, Oxford University Press, 2015, p. 238.

18 Supra note 4, Roy S. Lee, p. 65-68. The two parts are the "availability of funds" and "access to technology".

19 Chang Hong, *The Future for the Enterprise*, China Oceans Law Review, Vol. 13:2, p. 206 (2017).

to the Enterprise was an important legal issue closely related to the establishment and operationalization of the Enterprise.[20]

A. The Plight of Sources of Funds

The funds of the Enterprise shall include: (a) amounts received from the Authority pursuant to article 173, paragraph 2(b); (b) voluntary contributions made by States Parties for financing activities of the Enterprise; (c) amounts borrowed by the Enterprise under paragraphs 2 and 3; (d) income of the Enterprise from its operations; (e) other funds made available to the Enterprise to enable it to commence operations as soon as possible and to carry out its functions.[21] In fact, they can be grouped into three kinds: voluntary contributions, borrowings, and funds generated from activities in the Area. Assessed contributions and payments to the compensation fund are not appropriate to be included in the financing channels of the Enterprise in terms of the intents and purpose of their establishment. Despite the Convention has designed these financing methods for the Enterprise, difficulties remain in actual operation.

1. Voluntary Contributions

Voluntary contributions, whether to the Authority or the Enterprise, depend entirely on the political will of States Parties. In reality, both developing and developed countries are reluctant to provide funds for the Enterprise. On one hand, developing countries, especially African countries with lagging development, focus more on short term investment, in order to meet their immediate developmental needs.[22] However, the Enterprise is incapable of providing considerable returns to developing countries, least developed countries and landlocked countries in the near future. Nepal advocates that the least developed countries and landlocked countries should be exempted from raising funds for the Enterprise.[23] Developing countries, especially the least developed countries, have been in increasingly

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20 A Study Related to Issues on the Operationalization of the Enterprise, ISA, Technical Report, January 2019, p. 13.

21 Art. 11 of Annex IV to the United Nations Convention on the Law of the Sea.

22 Edwin Egede, *African States and Participation in Deep Seabed Mining: Problems and Prospects*, The International Journal of Marine and Coastal Law, Vol. 24:4, p. 688 (2009).

23 Third United Nations Conference on the Law of the Sea, 136th meeting of the Plenary, A/CONF. 62/SR. 136, 26 August 1980, p. 31, para. 1.

serious arrears in their contributions to the regular budget,[24] with unoptimistic prospects for voluntary contributions. On the other hand, the developed countries, which are considered to be rich in funds, have little incentive to do so for the sake of their economic interests. Developed countries first launched the exploration of deep seabed minerals in the 1970s, but not all of them are willing to finance the Enterprise, which they believe is a competitor[25] that will affect the *de facto* monopoly of these countries on the international seabed.[26] As a result, the number of donor countries and the amount of funding received by the Authority are not ideal, and it is not realistic to rely on voluntary contributions from States Parties to achieve the operationalization of the Enterprise.

2. Borrowings

The Convention gives necessary authorization of borrowings powers to both the Authority and the Enterprise, which clearly states that the Enterprise is entitled to borrow funds by way of guarantee, highlighting the characteristics of market-orientation. The exercise of the borrowing power should be determined by the Council. The Convention also sets the obligation of State Parties to make every reasonable effort to support the borrowing of the Enterprise,[27] but how to define "make every reasonable effort" needs further discussion. Besides, there was a heated dispute between developed countries and the Group of 77 at the UNCLOS III on the question of whether the Enterprise could obtain loans in interest-free form and the proportion of interest-free loans. Whether the Enterprise can have sufficient collateral to obtain loans was also questioned. Loaners are mainly concerned with risks and returns, in a consideration of the industry prospects of their clients.[28] Deep seabed mining is an emerging industry, featuring a relatively high risk in the overall industry due to exploration, metal price changes, cost uncertainties, technological changes, environmental damage and policy uncertainties.[29] Therefore, the interest-

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24 Report of the Secretary-General of the International Seabed Authority under Article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, ISA, ISBA/25/A/2, 3 May 2019, paras. 23-24.

25 Supra note 4, Roy S. Lee, p. 64.

26 Third United Nations Conference on the Law of the Sea, A/CONF.62/SR.128, 128th Meeting of the Plenary, 3 April 1980, p. 48, para. 225.

27 Art. 11, paragraph 2 (b), of Annex IV to the United Nations Convention on the Law of the Sea.

28 WANG Zhusong, *Thoughts on Industry Analysis and Industry Credit Risk Rating*, New Finance, Vol. 11:12, p. 26. (in Chinese)

29 Kris Van Nijen, et al., *The Development of a Payment Regime for Deep Sea Mining Activities in the Area through* Stakeholder *Participation*, The International Journal of Marine and Coastal Law, Vol. 34:4, p. 574 (2019).

free proposition will undoubtedly make financial institutions more reluctant, and the endorsement of relying on national credibility proposed by developed countries has not been recognized by developing countries.[30] The restrictive provisions under the respective agreements of the World Bank and the International Monetary Fund have also matter-of-factly disabled such institutes to provide financial assistance to the Enterprise.[31]

3. Funds Generated from Activities in the Area

Funds generated from activities in the Area include income received by the Authority arising from activities in the Area, funds allocated to the Authority from the net income of the Enterprise, and income of the Enterprise in the Area.[32] The latter two are based on the operationalization of the Enterprise, so the initial financing can only rely on the income of the Authority.

The income received by the Authority arising from activities in the Area refers specifically to the fee levied for the administrative cost of processing an application for approval of an exploration or exploitation plan of work, royalty and annual fixed fee arising from exploitation activities.[33] Concerning the aforementioned fee for processing an application for approval of a plan of work, in spite of the fact that 30 exploration contracts have been issued so far by the Authority, the difference in the income will still have to be refunded to the applicants if such administrative cost incurred by the Authority in processing an application is less than the fixed amount.[34] As a result, the Enterprise cannot count on such fees as a reliable source of income. In respect of royalty and annual fixed fee, the contractor shall pay the royalty for ore-bearing ores sold or recovered from the date of the commencement

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30 Legislative History of the "Enterprise" under the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of Part XI of the Convention, p. 148, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/enterprise-ae.pdf.

31 Supra note 4, Roy S. Lee, p. 66.

32 Art. 171 & 11 of Annex IV to the United Nations Convention on the Law of the Sea.

33 Arts. 33 of Annex III to the United Nations Convention on the Law of the Sea; Section 8 of the Annex to the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. Payment to the Authority is most likely made in the form of royalty: on the one hand, the Authority is promoting the adoption of regulations on exploitation, the main charge form of which is royalty; on the other hand, Michael Lodge, Secretary-General of the Authority, agrees that fee is most likely come in the form of royalty. See Michael W. Lodge, and Philomène A. Verlaan, *Deep-sea Mining: International Rgulatory Challenges and Responses*, Elements: An International Magazine of Mineralogy, Geochemistry, and Petrology, Vol. 14:5, p. 333 (2018).

34 Art. 13, paragraph 2, of Annex III to the United Nations Convention on the Law of the Sea.

of commercial production,[35] which may be deducted by the annual fixed fee paid.[36]

Despite that the above two items of income are expected to become potential sources of funds for the Enterprise as the exploitation progresses, there still exist problems of insufficient funds and lagging. First, the sufficiency of the funds received. According to existing models, the income received by the Authority from an exploitation project for polymetallic nodules varies significantly with changes in contribution rates and forms.[37] Only in some cases can the Authority receive substantial cash flow compensation. Second, the timeliness of obtaining funds. The cash flow reward provided by the exploitation project is realized in the complete production cycle of 30 years, while the income from the exploitation project in the early stage is limited. Moreover, both royalty and annual fixed fees are the funds of the Authority. Concerning the use of the remaining funds for administrative expenses paid by the Authority, the Convention does not indicate a preference among distribution of income, funding to the Enterprise and compensation to developing countries. Consequently, the operationalization of Enterprise will still lag far behind other entities.

To sum up, the operationalization of the Enterprise is still facing severe financial pressure despite the sound legal framework provided by the Convention and the 1994 Agreement for the financing of the Enterprise. Funds generated from activities in the Area are a potentially reliable source of funding, but its sufficiency and timely availability are what matter.

B. The Plight of Technology Accessing

The dispute over the provisions on transfer of technology under the Convention has also ever messed up the international seabed mineral exploitation.[38] The 1994 Agreement came out intending to address this issue, but so far the Enterprise has not received the necessary technical support. Different from the

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35 Draft Regulations on Exploitation of Mineral Resources in the Area, Prepared by the Legal and Technical Commission, ISA, ISBA/25/C/WP.1, 22 March 2019, Regulation 64.

36 Section 8, paragraph 1(c) of the Annex to the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

37 As per the MIT model, among some of the options it offers, the Authority earns up to $650 million and at least $140 million from a single polymetallic nodule project. See Financial Payment System Working Group Meeting, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/dec-analysis_0.pdf.

38 Manas Chatterji, *Technology Transfer in the Developing Countries*, Palgrave Macmillan, 2016, p. 267.

funding plight, what challenges the technology accessing of the Enterprise lies in the collision between the modern intellectual property protection system and the principle of CHM.

1. The Collision between Intellectual Property Protection and the Principle of CHM

In most cases, the technology required for deep seabed mining is mastered by developed countries with financial and technological advantages and protected under the modern intellectual property system, which is characterized by exclusiveness as a private right. As the property owner shall exclusively possess the intellectual property, the use thereof must be under the control of the owner.[39] Such exclusive right only benefits the owner of the technology. Under certain circumstances, the use of exclusive rights will lead to market monopoly, enabling the property owner to obtain high profits through the subjective control of the market, which is regarded by legal workers as a kind of legal monopoly right.[40] The demand for intellectual property protection has positive relationship with the investment in technology R&D, while negative relationship with the R&D speed.[41] Viewing the inherent uncertainty in technology R&D, intellectual property rights bring about institutional incentives for technology R&D,[42] and the achievements of R&D ultimately benefit intellectual property owners. Various countries and commercial companies have invested heavily and paid a high price in deep seabed mining since the 1970s. But so far, commercial exploitation has not been realized. Hence, in the case of commercial mining, the exclusive technology used in the deep seabed mining process will inevitably be accompanied by strong intellectual property rights protection, which enables the property owners to get high profits therefrom.

In contrast, the regime of international seabed area reflects the design concept

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39 FENG Xiaoqing, *The Specialization of Intellectual Property Based on the View of Monopoly*, Intellectual Property, Vol. 20:5, p. 26 (2006). (in Chinese)

40 ZHU Xuezhong & JIA Chenjun, *Research on the Monopoly of Intellectual Property and Its Relationship with Anti-monopoly Regulation*, Intellectual Property, Vol. 30:2, p. 36-38. (in Chinese)

41 WANG Taiping, *The Future of Intellectual Property System*, Chinese Journal of Law, Vol. 46:3, p. 83-84 (2001). (in Chinese)

42 DONG Binghe, *On the Enhancement of the Ability of Self-innovation and the Perfection of China's Intellectual Property System*, Journal of Soochow University (Philosophy & Social Science Edition), Vol. 27:3, p. 28 (2006). (in Chinese)

of public property rights system.[43] The discussion of resources in the Area arises from the dispute between "*res nullius*" and "*res communis*",[44] but the principle of CHM completely excludes the absolute freedom of exploitation and utilization of deep-sea resources in these two legal concepts,[45] that is, no country, juridical person or individual may acquire the property right of mineral resources through prior exploitation. This property right, upon defined by law, is granted to all mankind, that is, the CHM, which is exercised by the Authority on behalf of all mankind. It goes beyond the scope of a country or an international organization, and takes into account the intergenerational interests[46], which is what Dupuy called "intertemporal" and "interspatial" characteristics.[47] Under the public design concept of the principle of the CHM, the property rights of deep-sea technology should not be defined to limited individuals, but should be commonly owned and managed by mankind as a whole, with benefits shared.[48]

This shows that compared with the characteristics of private rights in the intellectual property regimes, the principle of the CHM emphasizes on public property rights. This contradiction is manifested in activities in the Area. Despite that the activities in the Area ought to be carried out for the benefit of mankind, with developing countries' participation, the intellectual property protection enjoyed by deep-sea technology obtained by self-funded research and development limits the number of entities that can operate in the Area, while the Enterprise and developing countries may be excluded from the strict patent wall for a long period. Their development in the Area will be greatly restricted as a result.

2. The Plight under 1994 Agreement

It is stipulated in Article 5 of Annex III to the Convention that the contractor is legally obliged to compulsorily transfer to the Enterprise any technology, but this obligation was no longer applicable in the 1994 Agreement. The 1994

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43 SU Changhe, *Global Public Issues and International Cooperation: Analysis of the System*, Shanghai People's Publishing House, 2000, p. 272. (in Chinese)

44 Supra note 1, Isabel Feichtner, p. 606.

45 WANG Mingyuan & SUN Xueyan, *On the Legal Status of International Seabed Mineral Resources*, Journal of Renmin University of China, Vol. 33:4, p. 70-74 (2009). (in Chinese)

46 Michael W. Lodge, Kathleen Segerson & Dale Squires, *Sharing and Preserving the Resources in the Deep Sea: Challenges for the International Seabed Authority*, The International Journal of Marine and Coastal Law, Vol. 32:3, p. 428 (2017).

47 Cited in Bourrel, Marie, Torsten Thiele & Duncan Currie, *The Common of Heritage of Mankind as a Means to Assess and Advance Equity in Deep-sea Mining*, Marine Policy, Vol. 95, p. 313 (2018).

48 JIN Yongming, *A Study on the Legal Nature of the Common Heritage of Mankind*, Journal of Social Sciences, Vol.27:3, p. 61 (2005). (in Chinese)

Agreement sets out three additional principles for the Enterprise, that is, acquiring such technology on the open market or through joint-venture arrangements under fair and reasonable commercial terms and conditions, obtaining such technology in accord with the effective protection of intellectual property rights, and gaining such technology through the promotion of international technological and scientific cooperation.[49]

The legal relationship adjusted in Section 5, paragraph 1(a), of the annex to the 1994 Agreement, is the way in which the Enterprise and developing countries obtain technology. The legal subjects are the Enterprise and the developing countries. The technology can only be obtained on the open market or through a joint-venture arrangement, on the premise of meeting fair and reasonable commercial terms and conditions. Generally speaking, those with scarce technology often have strong bargaining power in the market. Whether through the open market or joint-venture arrangement, this technology-related bargaining power will constitute a key piece of the negotiation and ultimately affect the price paid by the technology acquirer. The provision that entities mastering technology shall provide technology to the Enterprise and developing countries "on fair and reasonable commercial terms and conditions" in fact allows the trading of technology as a commodity and requires paid access to technology by the Enterprise and developing countries, which may put the Enterprise in a weak position.

Section 5, paragraph 1(b), of the annex to the 1994 Agreement sets out the measures that the Enterprise may take and the obligations of States Parties in the event that the relevant technology cannot be acquired. The acquisition of such technology requires not only meeting fair and reasonable commercial terms and conditions, but also meeting the conditions for the effective protection of intellectual property rights. As a result, this option obviously imposes more stringent requirements for the technology accessing of the Enterprise. The intellectual property regimes are indeed conducive to the protection of property rights, but it is not beneficial to every country at the stage of development. As per the theory of limitation of rights, a certain right without limitation is bound to damage the existence or exercise of the rights of others.[50] The Enterprise and the developing countries have no sufficient knowledge reserves and funds to achieve

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49 Section 5 of the Annex to the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

50 Supra note 41, ZHU Xuezhong & JIA Chenjun, p. 42.

technological change and upgrading, which thus exercises checks and balances on intellectual property rights. In the pursuit of maximizing their interests through intellectual property rights, developed countries can also easily end up in abuse of rights and even monopoly,[51] consequently undermining the principle of CHM.

The three principles added to the 1994 Agreement are compromise solutions to intellectual property rights acquired by developed countries through huge R&D investments, reflecting the characteristics of deregulation, privatization and free trade of Neoliberalism[52]. These principles emphasize protecting the rights of patented entities that develop technology, [53]which is difficult to facilitate the operationalization of the Enterprise. On one hand, the Enterprise and developing countries do not share R&D risks. This leads to the difficulty of requesting developed countries to unconditionally share the benefits related to intellectual property rights. On the other hand, developed countries with intellectual property rights can monopolize the mineral resources in the Area and obtain excess earnings at the same time.

III. Solutions

Under the premise of meeting fair and reasonable commercial terms and conditions, the strategy of enabling the Enterprise to effectively obtain technology from the holders of funds and technology should take into account the interests of developing and developed countries, the interests of the Enterprise and the holders of funds and technology, as well as interests of present generation and future generation, so as to develop and practice the principle of CHM.

A. The Legal Value of Incentive and Practices under the Convention

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51 Ibid.

52 ZHOU Yong, *The Plight and Causes of the Principle of Common Heritage of Mankind of International Seabed*, International Forum, Vol. 26:1, p. 11-12 (2012). (in Chinese) As for Neoliberalism, Neoliberalism is a theoretical system established based on classical liberalism, which emphasizes market-oriented. Michael Janis believes that Neoliberalism enables a considerable number of private owners to control as many social aspects as possible, so as to maximize personal interests. Neoliberalism Research Group of the Chinese Academy of Social Sciences, *Neoliberalism Study*, Studies on Marxism, Vol. 21:6, p. 18 (2003). (in Chinese)

53 Myron H. Nordquist, United Nations Convention on the Law of the Sea 1982, Volume VI: A Commentary, Brill Nijhoff, 2003, p. 189.

In modern legal norms, affirmative consequences carry forward the social value pursued by law through positive promotion, reward, etc.,[54] and "incentive" is one of the actions. This method finds wide application in various legal fields,[55] including tax law, environmental law, company law, and intellectual property law. For example, Article 14, paragraph 3, of the Convention on the Protection and Promotion of the Diversity of Cultural Expressions requires "technology transfer through the introduction of appropriate incentive measures for the transfer of technology and know-how", and Article 13, paragraph 1, of the Stockholm Convention on Persistent Organic Pollutants also requires "Each Party undertakes to provide, within its capabilities, financial support and incentives in respect of those national activities that are intended to achieve the objective of this Convention following its national plans, priorities and programmes." Incentive features a distinct purpose, which can stimulate the occurrence of legal behavior of the individual, make the individual be encouraged to behave as required and expected by the law,[56] thereby maximizing the compatibility between the individual interest and the collective interest, realizing "incentive compatibility"[57], and consequently achieving the legal goal that the incentive aims to achieve.

"Incentive", a measure contributing to achieving specific objectives that are listed in Article 11, Article 13 Financial terms of contracts, of Annex III to the Convention, aims to encourage contractors to establish joint ventures with the Enterprise and developing countries, and to promote the enhancement of their capacity to operate in the Area. In the draft regulations on exploitation, this provision specifically requires that contractors be provided with incentives, including financial incentives, to achieve the objectives set out in Article 13 of Annex III to the Convention. These measures are currently being considered in conjunction with the discussion of the draft regulations on exploitation, including but not limited to the introduction of lower royalty rate at the initial stage and fee reductions for the first batch of contractors.

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54 WANG Xigen & TENG Rui, *On Construction of Legal Incentive Mechanism for Regional Development Rights*, Journal of South-Central University for Nationalities (Humanities and Social Sciences), Vol. 21:2, p. 113 (2011). (in Chinese)

55 Kristen Underhill, *Money that Costs Too Much: Regulating Financial Incentives*, Indiana Law Journal, Vol. 93:2, p. 2 (2018).

56 FU Zitang, *Analysis of the Behavioral Incentive Function of Law*, Science of Law (Journal of Northwest University of Political Science and Law), Vol. 17:6, p. 22 (1999). (in Chinese)

57 YUAN Dasong & ZHAO Yusheng, *On the Incentive Mechanism of Economic Law*, Law and Economy, Vol. 5:5, p. 110 (2019). (in Chinese)

B. The Incentive to Facilitate the Operationalization of the Enterprise

To achieve the objectives of deep seabed mining operations, financial and non-financial measures are adopted to offer an incentive for the provision of the necessary funds and technology to the Enterprise, so as to provide entities with the impetus to help the Enterprise to overcome real difficulties.

1. Object of Incentive

Incentives should be offered for the behavior of providing funds and technology to the Enterprise, and specific measures should be varied with the object and degree.

The objects of incentive can be divided into two categories: those who are directly involved in deep seabed mining and those who are indirectly involved in deep seabed mining, who are potential subjects to support the Enterprise. The former is basically consistent with applicants for the system of exploration and exploitation under Article 153 of the Convention, including States Parties, or state enterprises or natural or juridical persons with the nationality of States Parties or under the effective control of those States or their nationals and guaranteed by those States, or any combination of the above. The latter includes financial institutions, scientific research institutions, universities, natural or juridical persons indirectly involved in activities in the Area. It is necessary to distinguish between the subjects who provide funds and technology, because according to the basic principle of consistency of rights and obligations, the way in which the two enjoy potential special rights varies. The former can receive financial incentives directly through participation in activities in the Area, while the latter cannot.

The degree of incentive for behaviors relates to whether it is provided on a paid basis. First of all, for the behavior of doing everything possible to help the operationalization of the Enterprise, whether through the paid or free way, there is the intention of subjectively promoting the operationalization of the Enterprise, and has objectively made a certain contribution, which should be offered the general incentive. Second, there should be a distinction between paid way and free way. The provision of funds and technology to the Enterprise in a paid way or free way brings about a different burden on the provider. The free way keeps the entity from the funds and technology income, which will lead to unfairness and inefficiency if not distinguished from the paid way. Therefore, it is necessary to implement differentiated incentive measures based on general incentives. Concerning the market value under the same conditions, it is an operational and fair method to

measure the actual contribution by monetary value. Third, incentives should be uniform and non-discriminatory, that is, those who provide the same value in the same way should be offered the equal incentive.

The behavior offered with incentive shall take place at the same time as the act of funding the Enterprise. The 1994 Agreement requires the Enterprise to conduct its initial deep seabed mining operations in the form of joint ventures, which, however, fails to take into account the fact that the Enterprise still has no sufficient funding and technology to conduct independent deep seabed mining operations after the end of the joint venture. Therefore, in order to avoid these situations, the deadline should be the time when the Enterprise acquires the capacity to conduct deep seabed mining operations independently in the Area.

2. Ways of Incentive

These incentives can be considered in terms of general incentives and differentiated incentives, which include financial and non-financial incentives in nature. Concerning financial incentives, we can mainly start with the interests of the contractor; concerning non-financial incentives, we can consider the rights of the entity in the Enterprise. However, these incentives should be limited, which should not give the objects an artificial competitive advantage over land-based miners.

The general incentive should benefit all entities that assist the Enterprise, but such incentives should be fundamental. Appropriate reduction and exemption of a certain period of annual fees can be exercised for financial incentives. For entities indirectly involved in activities in the Area, non-financial incentives, such as the priority of applying to the Authority for research funds, would better meet their needs.

Differentiated incentive plays a great part in promoting entities to actively help the Enterprise to achieve its operationalization. This incentive should be based on market value and can be set with absolute or relative thresholds and implemented in terms of both financial and non-financial differences.

Financial differentiated incentive. First, the reduction of royalty can be used as a means of financial differentiated incentive. Establishing royalty reduction incentives based on year, contract or mineral production can make up for the loss of benefits incurred by the entity in providing funds and technology to the Enterprise, to ensure that it will not suffer serious damage to its interests while providing support to the Enterprise. The quota should be set based on the value of the funds and technology provided to the Enterprise, and the impact of the time value should be taken into account. The differences between entities directly and

indirectly involved in activities in the Area should be under consideration. For entities indirectly involved in activities in the Area, only giving direct reduction and relaxing the binding provisions cannot have the effect of granting differentiation rights, as these entities do not operate in the Area and do not directly enjoy the benefits of a reduction. However, allowing such a reduction amount to trade can effectively compensate those entities that indirectly participate in the activities in the Area. Second, special mine sites. Entities directly involved in the activities in the Area that have made significant contributions are allowed to apply for a limited number of special mine sites, provided that other provisions are not affected. This special mine site is not bound by the anti-monopoly clause. Third, special scientific research fund. For entities indirectly involved in the activities in the Area that have made significant contributions can, after the implementation of the operationalization of the Enterprise, apply to the Enterprise for a special scientific research fund to carry out marine scientific and technological research.

Non-financial differentiated incentive. The appointments of the Enterprise may give special consideration to representatives from these entities with due regard to the principle of equitable geographical distribution[58]. The regulations of the Enterprise in Annex IV to the Convention set out the rights and obligations related to the Enterprise. On one hand, the Convention requires the 15 board members of the Enterprise to be competent in all relevant fields.[59] The personnel from these entities, especially those that provide technology, have the relevant professional background and can properly deal with the financial and technical situation of the Enterprise, so as to promote the good operation of the Enterprise. On the other hand, when appointing staff, the Director-General, for the same reason, could give priority to staff from these entities if they are more competitive.

IV. Other Discussions

China has played an active role in promoting the operationalization of the Enterprise of the Authority. In terms of regulations, China has made great efforts in promoting the enrichment and specification of provisions concerning the Enterprise in the draft regulations on exploitation. It has also paid special attention to the

58 Art. 5 of Annex IV to the United Nations Convention on the Law of the Sea.
59 Ibid.

Enterprise's obtaining shares from joint ventures and its independent operation.[60] In practice, China supports the Authority through capacity-building, including a monetary donation to Funds, internship opportunities, donation of deep sea-exploration exhibition models to the Authority's Gallery, etc. In 2019, China surpassed Japan to become the number one contributor to the regular budget of the Authority. In the same year, the Ministry of Natural Resources of China and the Authority established a joint training and research centre in Qingdao, China, in order to provide a new platform for developing countries' capacity-building, marine technology transfer and participation in the international seabed activities.

With the rapid economic development of China, its interests in the Enterprise are no longer the same as those during the UNCLOS III. On one hand, as a developing country, China considers that financial and technical support for the operationalization of the Enterprise will promote the implementation of the principle of CHM, improve the global ocean governance, and promote the formation of a new international economic order. China will also benefit from this process. On the other hand, it is difficult for China to simply position itself as a developing country,[61] because it is not only a pioneer investor, but also the only country so far that has concluded five exploration contracts with the Authority on all the three kinds of mineral resources. Compared with other developing countries, China is better equipped financially and technically, thus unavoidably expected to render its support to the operationalization of the Enterprise in terms of funds and technology. Based on these reasons, it would be of great significance to promote recognition and encouragement of such contributions to facilitating the operationalization of the Enterprise in the draft regulations on exploitation, which would in turn safeguard its interests in the exploitation of deep seabed mineral resources.

There is still a long way to go for the Enterprise to become a real organ of the Authority that can directly engage in activities in the Area. To cope with difficulties and challenges related to the operationalization of the Enterprise, the Authority recently entrusted a couple of experts represented by Special Representative of the

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60 Supra note 12, p. 2-4. Comments by the Government of the People's Republic of China on the Draft Regulations on Exploitation of Mineral Resources in the Area (28 September 2018), p. 5-6, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/documents/EN/Regs/2018/Comments/China.pdf.

61 YANG Zewei, *China's Deep Participation in the Reform of the Global Marine Governance System in the New Era: Ideas and Approaches*, Science of Law (Journal of Northwest University of Political Science and Law), Vol. 37:6, p. 180 (2019). (in Chinese)

Secretary-General for the Enterprise to carry out a study on the operationalization of the Enterprise, and adopted a high-level action plan for the period from 2019 to 2023. Over the years, the Authority has also done its best to promote and encourage marine scientific research and help developing countries and least developed countries to strengthen capacity-building through three important ways, namely, contractor training programme, an endowment fund for marine scientific research in the Area, and internships.[62] A concept of "time value of money"[63] was introduced at the meeting of an open-ended informal working group of the Council in respect of financial terms of a contract. It means that a dollar today is more valuable than a dollar in the future and should give enlightenment to the Enterprise. While this is an economic concept, the author trusts that, for the Enterprise and the developing countries, the earlier the Enterprise is involved in the activities in the Area, the earlier the Enterprise and the developing countries will obtain benefits therefrom, so as to implement the principle of CHM and benefit mankind as a whole, especially the people of developing countries and least developed countries.

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Editor (English): HUANG Rui

62 Supra note 25, paras. 67-78.

63 Decision Analysis Framework & Review of Cash Flow Approach, ISA website (9 July 2020): https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/cost_workshop-ppt.pdf.

公海保护区选划标准探析

李　创 *

内容摘要: 如何在公海确定海洋保护区已逐渐引起国际社会的普遍关注。选划标准在保护区确定过程中发挥着指引性和稳定性作用。在建立公海保护区的选划标准时，可以充分借鉴现有保护区域所建立的选划标准和考量因素，发挥土著人民传统知识的积极作用，以制定统一标准和适用机制。同时考虑到海洋保护的复杂性，应加强有关法律文书、框架以及相关全球、区域和部门机构在建立海洋保护区方面的合作，最终实现生物多样性养护和可持续利用的目标。

关键词: 公海保护区　选划标准　土著人民

如何保护公海和国际海底区域的生物多样性和解决资源的可持续利用问题已经成为全球社会面临的最严峻挑战之一。[1] 海洋生态环境在人类活动的影响下逐渐恶化，海洋原有的生物环境和生态平衡难以维持。为实现海洋环境保护、生物多样性可持续利用等目的，国际社会注意到，应根据《联合国海洋法公约》（以下简称《公约》）的规定，就国家管辖范围以外区域海洋生物多样性的养护和可持续利用（Marine Biological Diversity of Areas Beyond National Jurisdiction，以下简称“BBNJ”）问题，拟订一份具有法律约束力的国际文书（以下简称“BBNJ 国际协定”）。建立包括海洋保护区在内的划区管理工具，是该国际文书四个重大议题之一。

在最近召开的第一次政府间谈判会议中，各方代表对海洋保护区议题进行了激烈讨论，如何确定海洋保护区的选划标准，如何对相关国际、区域和部门机构使用的现行准则进行兼顾，成为亟待解决的问题。[2] 海洋保护区选划的标准，主要是

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1 Lora L. Nordtvedt Reeve, Anna Rulska-Domino & Kristina M. Gjerde, *Future of High Seas Marine Protected Areas*, Ocean Yearbook, Vol. 26:1, p. 265, 266 (2012).

2 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, 2018, p. 10.

指通过包括生态、环境、资源等在内的科学数据或标准，确定某一区域的海洋环境和生物多样性水平，建立一套设立海洋保护区的准则和考量因素。本文基于现有保护区设立的选划标准，结合 BBNJ 国际协定谈判的报告内容，探索公海保护区的选划标准和考量因素，从而更好地实现 BBNJ 国际协定的宗旨和目标。

一、公海保护区的现状和发展

国家管辖范围以外的区域包括公海和国际海底区域（又称“区域”）。随着海洋环境的恶化和人类活动的增加，海洋生物多样性的养护和可持续利用问题日渐重要。在公海建立海洋保护区，符合《公约》和BBNJ 国际协定的目标和宗旨。然而，现行有效的国际条约并不能为建立公海保护区提供法律基础，已建海洋保护区的选划标准也尚未统一，所以有必要对现有保护区设立的选划标准进行分析、总结和评估。

（一）现有的公海保护区

海洋保护区被视为保护海洋生物多样性的重要工具。世界自然保护联盟（International Union for Conservation of Nature）将海洋保护区定义为“任何通过法律或其他有效方式建立的，对其中部分或全部环境进行封闭保护的潮间带或潮下带陆架区域，包括其上覆水体及相关的动植物群落、历史及文化属性。”[3] 现在世界范围内共有 12 处公海海洋保护区（High Seas Maritime Protected Areas），包括根据南极海洋生物资源保护委员会（Commission For the Conservation of Antarctic Marine Living Resource, 以下简称“CCAMLR”）《南极海洋生物资源养护公约》，在环绕南极洲的南大洋建立的 2 个公海保护区；[4] 根据《保护东北大西洋海洋环境公约》（Convention for the Protection of the Marine Environment of the North-East Atlantic, 以下简称 “OSPAR”）和东北大西洋渔业委员会（North East Atlantic Fisheries Commission, 以下简称 “NEAFC”）文件，在东北大西洋建立了 10 个公海保护区。[5] 从选划标准来看，2 个南大洋的海洋保护区在建立过程中，因为利益协调的考虑，选划标准和实施方案并不具体详实。相比之下，东北大西

3 IUCN, Guidelines for Applying Protected Area Management Categories, IUCN website (12 December 2018), https://portals.iucn.org/library/node/30018.pdf.

4 David Freestone, *The Limits of Sectoral and Regional Efforts to Designate High Seas Marine Protected Areas*, American Journal of International Law, Vol. 112: 3, p. 129, 132 (2018).

5 Elizabeth M. De Santo, *Implementation Challenges of Area-based Management Tools(ABMTs) for Biodiversity beyond National Jurisdiction(BBNJ)*, Marine Policy, Vol. 9:1, p. 34, 35 (2018).

洋的 10 个海洋保护区，以科学数据为支撑，首先集中分析了选划标准的类别，其次就标准适用中的考量因素进行总结，最后对每项选划标准所包含的内容进行量化，这对于完善 BBNJ 国际协定中的海洋保护区选划标准具有重要参考价值。此外，法国、意大利和摩纳哥根据《建立地中海海洋哺乳动物保护区协议》共同建立的地中海派格拉斯海洋保护区（Pelagos Sanctuary），是第一个覆盖公海水域的海洋保护区，因其部分覆盖法国、意大利和摩纳哥的水域，暂不在本文定性的纯粹意义上的公海保护区。

（二）建立公海保护区的法律基础

目前，有关公海保护区的法律制度是高度碎片化的，缺乏系统性，没有形成一个和谐统一的整体。此外，也缺乏一个综合的条约或法律制度专门处理公海保护区的建立问题，已有的这类保护区均是根据区域性，而非全球性法律制度建立的。[6]《公约》第七部分第二节强调了促进公海生物资源养护和管理的重要性，但是并未规定建立海洋保护区的法律机制。《生物多样性公约》（Convention on Biological Diversity, 以下简称 “CBD”）提供了一个主要适用于国家管辖范围以内的机制，并不适用于国家管辖范围以外区域即公海和“区域”。其第四条管辖范围规定，除非本公约另有明文规定，本公约规定应按下列情形对每一缔约国适用：（a）生物多样性组成部分位于该国管辖范围的地区内；（b）在该国管辖或控制下开展的过程和活动，不论其影响发生在何处，此种过程和活动可位于该国管辖区内，也可在国家管辖区外。[7] CBD 虽给缔约国施加了不在国家管辖范围以外区域破坏生物多样性的义务，而建立公海保护区仍然存在法律基础缺失的问题。因此，国际社会急需通过政府间谈判，尝试拟订一份在《公约》框架下的关于 BBNJ 问题的国际文书，就建立公海海洋保护区的相关问题建立一个法律机制，为各方活动提供一份具有法律约束力的规范性文件。

还有一些区域性或机构性条约，也为海洋保护区之外需要加以保护的海域，提供了一定的法律框架。以国际海事组织（International Maritime Organization, 以下简称 “IMO”）和国际海底管理局（International Seabed Authority, 以下简称 “ISA”）为例，IMO 通过确定“特别敏感海域”（Particularly Sensitive Sea Areas, 以下简称 “PPSAs”）来保护在生态环境、社会经济和科学研究方面具有特别重要性的区域，以防止其受到不合理海洋活动的损害。PSSAs 目标定位于因海运相关活动所影响的海域，IMO 可以要求采取特别强制方法以防止污染。迄今为止尚

6 段文：《国家管辖范围外海洋保护区的第三方效力——以南极海洋生物资源养护委员会建立的海洋保护区为例》，载《中国海洋法学评论》2018 年卷第 1 期，第 77 页。

7 《生物多样性公约》第 4 条。

无完全建立在国家管辖范围以外的特别敏感海域，其中只有两块位于南极地区和地中海海域的“特别区域”（Special Areas）覆盖了部分国家管辖范围外区域。

出于管理国际海底采矿并保护海洋环境免受其有害影响的目的，国际海底管理局可以确定“特别环境利益区”（Areas of Particular Environmental Interest, 以下简称 “APEI”），APEI 应涵盖整个管理区域内的所有栖息地，发挥生物多样性和生态系统保护的功能。虽然 APEI 强调有效保护海洋环境，维护生物多样性，但是 APEI 局限于《公约》下的特定“区域”范围，并与采矿作用相联系。纵观全球基于各种目的所建立的不同保护区域，这些具有特定目标的保护区域在选划标准上虽有不同，却仍然可以为公海保护区构建自己的选划标准提供借鉴之处。

二、现有涉公海保护区域选划标准的评估

在 BBNJ 国际协定谈判会议上，各方代表就文书中拟定的包括公海海洋保护区在内的划区管理工具议题，进行了激烈的讨论。与会者指出，该文书实施和加强《公约》中促进国家管辖范围以外区域海洋生物多样性养护和可持续利用的规定，不应影响《公约》所规定的各国权利、管辖权和义务，也不应损及现有全球、区域和部门相关法律文书、框架及其相互协调合作。[8] 在确定需要保护的区域时，多数代表表示应利用最佳的科学技术，在现行的国际准则和国际标准基础上确定标准。[9] 如何确定公海保护区的选划标准，并能考虑到全球气候变化、土著人民传统知识及遗传资源等自然、社会因素，成为促进文书形成、实现文书目标的重中之重。

（一）现有代表性的公海保护区的选划标准

1. 东北大西洋海洋保护区选划标准

东北大西洋海洋保护区位于国家管辖范围外海域，其养护和管理措施较为完善，包括交换标准数据、环境评估和数据监测等，并且存在定期审查机制。在对海洋保护区进行选划时，其选划标准基于科学数据并考量现实因素，为公海保护区制定科学有效的选划标准提供了可行性经验。

OSPAR 将海洋保护区定性为“该区域为保护和养护物种、栖息地和生态系统或者海洋环境的生态发展而采取的具有保护性、养护性、恢复性和预防性的措

8 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, 2018, p. 10.

9 同上注。

施”。[10] 从 1998 年开始 OSPAR 委员会促进成员国在东北大西洋海域建立海洋保护区网络（“OSPAR MPA Network”），以实现保护生物多样性和生态系统的目标。该保护区网络目标主要包括三个方面：（1）保护、养护和恢复已经被人类活动严重破坏的物种、栖息地和生态系统；（2）根据预警原则阻止或者减轻对物种、栖息地和生态系统的损害和破坏；（3）保护和养护最具有物种、栖息地和生态系统代表性的海洋区域。[11] OSPAR 委员会在选划海洋保护区的过程中，考虑到海洋生态环境的复杂性和海洋物种的多样性，指出并非所有被人类活动影响的海域都要建立海洋保护区，因此委员会将选划过程分为两个步骤并且综合考虑保护区网络的目标。

第一步，确定备选区域是否满足所列以下七项的生态标准或考量因素但不要求满足所有的因素：（1）受威胁的或正在减少的物种、栖息地或者群落生境，并考虑其紧迫性；（2）重要的物种、栖息地或者群落生境；（3）生态系统的重要性；（4）具有高度自然生态的生物多样性；（5）在自然特性上具有代表性；（6）具有脆弱性；（7）具有高度的自然属性。[12] 可见，该组织所关注的客体集中在物种、栖息地和群落生态环境等方面，所关注的特点集中在该区域的重要性、代表性、自然属性和紧迫性等特征，且特征之间相辅相成。由于各区域间所满足的标准数量和程度也有所不同，有必要对各标准和考量因素进行优先顺序的确定，以便在各区域间进行综合考虑时确定海洋保护区的最终位置。

第二步，根据以下六项实践性标准和考量因素确定各备选区域的优先顺序：（1）区域的大小；（2）潜在的恢复能力；（3）利益攸关方的接受程度；（4）区域管理措施成功实施的可能性，如法规、相关管理机构、基金和科学知识应用等；（5）因人类活动所造成的潜在危害；（6）具有科学研究和监控价值。[13] 上述六项实践性标准不同于生态标准，主要关注在区域内建立海洋保护区的可行性和必要性。在公海建立海洋保护区时，可以考虑将实践性标准纳入选划标准中，尤其是利益攸关方的接受程度和管理措施成功实施的可能性等。BBNJ 国际协定涉及各方复杂利益，纳入实践性标准可能减轻建立海洋保护区的阻力。

最后，OSPAR 委员会在文件中阐明，针对建立海洋保护区网络的不同宗旨，

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10 OSPAR Commission, Marine Protected Areas, OSPAR Commission website (12 December 2018), https://www.ospar.org/work-areas/bdc/marine-protected-areas.

11 OSPAR Commission, Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area, OSPAR Commission website (12 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

12 同上注。

13 同上注。

建立海洋保护区所适用的标准也会存在差异。[14] 值得一提的是，OSPAR 委员会又发布一份《保护和方法适用中确定物种和栖息地的标准》，[15] 来对海洋保护区选划标准所包含的内容和范围进行细化，包括对具体概念的界定和方案提交程序的设计等，为东北大西洋海洋保护区的建立提供了详实具体的路径。

2.CCAMLR 海洋保护区选划标准

CCAMLR 海洋保护区网络不仅保护了南大洋诸多独特生态系统之间的联系，而且还促进了全球海洋保护目标的实现。但 CCAMLR 海洋保护区的选划标准存在内容含糊和实施方案缺失的瑕疵，公海保护区可以从中吸取有益经验。

CCAMLR 已经建立了两个海洋保护区：2010 年建立的南奥克尼群岛南大陆架海洋保护区（South Orkney Islands Southern Shelf Marine Protected Area），2017 年建立的世界上最大的罗斯海地区海洋保护区（Ross Sea Region Marine Protected Area）。[16] 2011 年 CCAMLR 针对海洋保护区通过了具有法律约束力的《关于建立 CCAMLR 海洋保护区的总体框架》，并将其列为第 91-04 号养护措施。该措施呼吁 CCAMLR 海洋保护区建立在最佳科学证据基础上，指出该海洋保护区的设立应包括以下六项目标：（1）在合理范围内保护有代表性的海洋生态系统、生物多样性和栖息地，并维持其长期生存能力和完整性；（2）保护关键生态进程、栖息地和物种；（3）建立科学参照区，以便监测自然变量及长期变化或捕捞行为，以及其他人类行为对南极海洋生物资源及其所属生态系统的影响；（4）保护易受人类活动影响的脆弱区域；（5）保护对当地生态系统功能具有关键作用的特征；（6）保护维持（生态系统）恢复能力或适应气候变化效应的区域。[17] 因为该“框架”通过时各国对建立公海保护区相关问题尚未达成高度的一致认识，其所设定的六个具体目标流于空泛，未明确界定其中的内涵和外延，无具体的科学衡量标准，难以贯彻落实《南极海洋生物资源养护公约》第二条第 3 款设定的目标和原则。[18] 即使在罗斯海地区海洋保护区的养护措施文件中，也只规定根据《南极海洋生物资源养护公约》第二条目标对海洋保护区选划标准进行确定，并没有涉及对目标的

14 参见 Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area, OSPAR Commission website (12 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

15 OSPAR Commission, Criteria for the Identification of Species and Habitats in need of Protection and their Method of Application, OSPAR Commission website (12 December 2018),https://www.ospar.org/convention/agreements?q=Identification.pdf.

16 David Freestone, *The Limits of Sectoral and Regional Efforts to Designate High Seas Marine Protected Areas*, American Journal of International Law, Vol. 112:3, p. 129, 130 (2018).

17 CCAMLR, Conservation Measure 91-04(2011) General Framework for the Establishment of CCAMLR Marine Protected Areas, CCAMLR website (12 December 2018), https://www.ccamlr.org/en/measure-91-04-2011.pdf.

18 参见杨雷、韩紫轩、陈丹红、龙威、房丽君、李春雷：《关于建立 CCAMLR 海洋保护区的总体框架有关问题分析》，载《极地研究》2014 年第 4 期，第 527 页。

具体细化和操作方案。[19] 因此，有必要在 BBNJ国际协定谈判中吸取已有教训和不足之处。

（二）CBD 和绿色和平组织制定的选划标准

1. CBD 的选划标准

CBD 框架下的具有重要生态和生物意义的区域（Ecologically or Biologically Significant Marine Areas, 以下简称 “EBSAs”）旨在解决国家管辖范围以外区域海洋生物多样性问题，有助于加快公海保护区建立的进程，并为将来在国家管辖范围外选划公海保护区提供科学基础。[20]

2008 年 CBD 缔约方大会第九次会议，采纳了在公海水域和深海生境中需要加以保护的、具有生态和生物意义海域的七项科学准则：（1）独特和稀缺性；（2）对物种生命各阶段具有特殊重要性；（3）对受威胁、濒危或衰落物种或生境具有重要性；（4）易受伤害、脆弱、敏感或恢复缓慢；（5）生物生产力；（6）生物多样性；（7）自然状态。[21] 这七项与东北大西洋海洋保护区选划标准相类似，缔约方对该七项的具体含义、拟定理由和应用时应考虑的因素进行了阐释，方便缔约方更有针对性地确定 EBSAs 区域。此外，缔约方通过了海洋保护区网络选址的科学指导意见，建立海洋保护区网络是从单一海洋保护区的划分向更加系统更加完整的方向迈进，也是更好地实现海洋环境保护和生物多样性养护的重要管理措施。大会所确定的海洋保护区网络可以为 BBNJ 国际协定的形成提供参考方案，具体特性和构成部分如下：（1）具有重要生态和生物意义的地区；（2）代表性；（3）关联性；（4）生态特征重复出现；（5）适当和有活力的保护点。[22] 在第十次缔约方大会上，缔约方主要就海洋和沿岸生物多样性议题进行讨论，着眼于 EBSAs、公海保护区的位置确定和气候变化对海洋环境的影响等。[23]

考虑到 CBD 在海洋生物多样性养护和可持续利用方面的权威性，以及 CBD 缔约国的广泛性，未来有可能将 EBSAs 作为公海保护区的选划基础。[24] 目前

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19 CCAMLR, Conservation Measure 91-05(2016) Ross Sea region marine protected area, CCAMLR website (15 December 2018), https://www.ccamlr.org/en/measure-91-05-2016.

20 参见郑苗壮、刘岩、徐靖：《〈生物多样性公约〉与国家管辖范围以外海洋生物多样性问题研究》，载《中国海洋大学学报（社会科学版）》2015 年第 2 期，第 40 页。

21 CBD, COP 9 Decisions Ninth meeting of the Conference of the Parties to the Convention on Biological Diversity, CBD website (15 December 2018), https://www.cbd.int/doc/decisions/cop-09/cop-09-dec-20-en.pdf.

22 同上注。

23 Elizabeth M. De Santo, *Implication of the Tenth Conference of Parties to the UN Convention on Biological Diversity for Coastal Management and Marine Protected Areas*, Ocean Yearbook, Vol. 26:1, p. 250, 249 (2012).

24 参见郑苗壮、刘岩、徐靖：《〈生物多样性公约〉与国家管辖范围以外海洋生物多样性问题研究》，载《中国海洋大学学报（社会科学版）》2015 年第 2 期，第 44 页。

BBNJ 国际协定的谈判还在进行中，虽然在前三届政府间会议的国际文书中尚未明确提及以 EBSAs 为参考建立公海保护区，但是文书中拟定的选划标准似乎对 EBSAs 的选划标准已多有借鉴。

2. 绿色和平组织制定的选划标准

绿色和平组织作为非政府间国际组织，旨在促进保护一个更为绿色、和平和可持续发展的地球，这与海洋保护区的建立初衷相吻合。在绿色和平组织发布的《恢复路线图：一个全球海洋保护区网络》文件中，提出建立海洋保护区网络的五个原则，包括：（1）具有代表性的生物多样性；（2）该生境可在不同的海洋保护区中复制；（3）确保种群可在不同的生境中相互影响和互相支撑；（4）范围足够大，以确保物种、生境、生态过程长时间维持；（5）基于可获取的最佳科学、地方和传统知识。[25] 不难发现，上述五个原则的核心内容与前文所讨论的各方方案的选划标准具有高度相似性。世界自然保护联盟和世界自然基金会在世界保护联盟第 5 届世界公园大会上联合提出的公海保护区的选划标准，[26] 也印证了目前国际社会就海洋保护区选划标准的认识上具有高度的共识性，为公海保护区选划标准的确定提供了有力的科学支撑。

三、公海保护区选划标准的制定和适用

在 BBNJ国际协定政府间谈判第一届会议中，与会者倡导各方在划区管理工具方面加强合作和协调，履行现有的义务，尤其是《公约》规定的义务。利益攸关方同时提及了爱知生物多样性目标和可持续发展目标，也提议了建立互联互通的海洋保护区网络，以确保长期养护和可持续利用的构想。[27] 如何制定选划标准，成为建立公海海洋保护区并提供可实施性方案的重要环节。

（一）公海保护区选划标准的制定

1. 公海保护区选划标准的范围

政府间第一届会议中提出，公海保护区选划标准的制定，应当根据现有的最佳科学知识，包括现行的国际标准和准则，以筹备委员会报告第三节内容中所载的指示性标准清单为基础，进行综合考虑。指示性标准清单第一条阐明，海洋保

25 范晓婷：《公海保护区的法律与实践》，北京：海洋出版社 2015 年版，第 94 页。
26 同上注。
27 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, p. 9.

护区一般性的标准，应建立在既存的已被广泛认可的标准之上。国际海事组织下的 PSSAs 目标侧重于因海运相关活动所影响海域的保护，且要求该海域在生态、社会经济和科学研究等方面具有重要意义。[28] 该组织将标准分为生态标准、社会经济文化标准和科学教育标准，其中生态标准与 EBASs 选划标准具有相似性。考虑到现在 BBNJ 政府间会议拟定的国际文书目标偏重于国家管辖范围以外区域生物多样性的养护和可持续利用，有必要在确定公海保护区选划标准时，借鉴 PSSAs 标准中的人文因素。

值得注意的是，土著人民传统知识，可以更好地保护海洋生物多样性，促进其可持续利用，同时在气候变化、灾害风险等方面因地制宜地应对自然灾害和气候相关问题。[29] 土著人民和地方社区的传统知识，在海洋保护和环境治理中发挥着重要作用，具体包括海洋生物多样性的养护和可持续利用、气候变化评估和适应、减少灾害风险和生态破坏等。经过最近几十年世界范围内人权运动的发展，土著人民的权利逐渐得到国际环境法领域有关文件的支持，同时随着国际社会对环境保护和可持续发展问题关注度的上升，土著人民和地方社区的传统知识在海洋保护中的作用也逐渐得到认可和重视。诸如《里约环境与发展宣言》[30]、《21 世纪进程》[31]、《地球宪章》[32] 和国际自然保护联盟的《海洋自然保护区指南》[33] 等国际文件，也都强调了自然环境可持续发展与土著人民的文化、社会、经济和物质福利的相互关系，重视土著人民和地方社区在保护环境方面的作用。

政府间第一届会议讨论期间提出的标准还包括气候变化的不利影响、海洋酸化以及传统知识。在此之前，国际社会面对气候变化的不利影响和人类活动造成的新型海洋问题已有关注，世界自然保护联盟（IUCN）曾就海洋保护区和气候变化之间的关系作出重要阐述，指出海洋保护区网络对于维持气候变化下生态重建和社会复原具有关键作用。[34] 由于科技的发展、人类环境保护意识的增强以及国

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28 IMO, Resolution A.982(24), Revised Guideline for the Identification and Designation of Particularly Sensitive Sea Areas, IMO webstie (10 January 2019), http://www.imo.org/en/OurWork/Environment/PSSAs/Documents/A24-Res.982.pdf.

29 UNGA, A/74/70, Oceans and the law of the sea, UN webstie (25 May 2020), https://www.un.org/Depts/los/general_assembly/general_assembly_reports.htm,.

30 CBD, Rio Declaration on Environment and Development, CBD website (15 December 2018), https://www.cbd.int/doc/ref/rio-declaration.shtml.

31 United Nations Conference on Environment & Development, Agenda 21, UNSDGS website (15 December 2018), https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf.

32 UNESCO Earth Charter, Cool Australia website (15 December 2018), https://coolaustralia.org/wp-content/uploads/2014/04/The-Earth-Charter.pdf.

33 IUCN, Guidelines for Marine Protected Areas, IUCN website (10 January 2019), https://www.iucn.org/sites/dev/files/import/downloads/mpaguid.pdf.

34 IUCN, IUCN Issues Brief: Marine Protected Area and Climate Change, IUCN website (6 December 2018) https://www.iucn.org/resources/issues-briefs/marine-protected-areas-and-climate.

际社会热点问题等因素的影响，国际组织或者多边机构在促进国际文书形成时，所考虑的选划标准和考量因素也发生着改变，与会者普遍认识到需要保留审查和更新标准的机制，以确保准则不断适应环境问题和科学知识的发展。[35] 因此，公海保护区在确定选划标准的范围时，也应保留审查和更新标准的灵活性，更好地适应生物多样性保护的目标。

2. 公海保护区选划标准的详细程度

各利益攸关方在考虑选划标准的详细程度时，可以借鉴 OSPAR 委员会《保护和方法适用中确定物种和栖息地的标准》来对各项标准进行细化，包括对具体概念的界定和方案提交程序的设计等。[36] OSPAR 委员会对每个重要的概念进行了多种可能性的阐释，对可以进行量化的概念进行了界定，为海洋保护区的建立提供了具体详细的执行标准。以选划标准中的“具有脆弱性”（sensitivity）为例，对“具有脆弱性”概念中的“高度”（a high proportion）和“脆弱的”（sensitive），尝试提供了多种可能的解释，以使其在实践中具有操作性和可预测性。比如，物种在一定区域内超过 75% 或者在方圆 50 公里小区域内物种占比超过 90%，都被视为“高度聚集”。栖息地是否具有脆弱性，被分为两种情况进行区分，包括具有较低的抵抗性、比较容易地被人类活动所影响，和具有较低的抵抗性、在被人类活动影响后只有经过很长一段时间才可恢复。上述“标准”对海洋保护区选划标准的概念界定和量化分析，可以很好地减少因为概念模糊或者定义缺失而产生的争议，促进了海洋保护区的设立进程。OSPAR 委员会下建立的海洋保护区所取得的重大进展，也可以佐证此方法的科学性。对比 CCAMLR 在南大洋建立的海洋保护区，由于 CCAMLR 在《关于建立 CCAMLR 海洋保护区的总体框架》中对建立海洋保护区的六项目标规定模糊，总体框架目标没有明确的实施方案，同时该框架也没有规定妥善处理分歧的方式，在海洋保护区建立维护过程中难免遇到诸多问题，空洞的目标宗旨在建立公海保护区的过程中难以进行切实有效的评估监测。当然，BBNJ 国际文书的谈判进程又涉及着多方利益，在建立海洋保护区之初可以考虑不制定过于具体的标准，建立海洋保护区之后再对选划标准进行合理量化，使之明确。

（二）公海保护区选划标准的适用

35 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, p. 11.

36 OSPAR, Criteria for the Identification of Species and Habitats in Need of Protection and their Method of Application, OSPAR website (4 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

1. 分步骤适用

在对海洋保护区选划标准进行确定之后，如何分步骤适用标准成为保护区建立过程中所无法避免的问题。面对多个备选区域，每个区域所能满足的既定标准和准则不尽相同，并且每个备选区域所包含的生态、环境和栖息地等因素的程度也不同。OSPAR 委员会在分步骤适用海洋保护区的标准中提供了建设性方案，第一步先确定目标区域是否满足所列的生态标准或考量因素，但不必要满足所有的因素；第二步根据标准的优先性，确定区域的优先性。公海保护区在比较选划标准的优先顺序时，可以考虑第一届政府间会议中利益攸关方的观点和国际文书的宗旨即生物多样性的养护和可持续利用。每个海洋保护区可能保护的侧重点有所不同，需要根据具体的海洋生态环境和周围的社会环境而确定。分步骤适用选划标准，可以使备选区域更好地符合框架所确定的目标，同时减小选择的难度。

正如上文所提及的，根据优先性的标准，可以把该保护区的恢复潜力、成功实施管理措施的可能性和利益攸关方的接受程度等，放在优先考量位置。保护区的恢复潜力直接关乎公海保护区目标能否实现，重要性不言而喻。利益攸关方的接受程度属于社会现实因素，从实践来看，建立海洋保护区涉及多方利益集团，能否让利益攸关方最大可能地接受海洋保护区方案，直接关系海洋保护区的建立。成功实施管理措施的可能性，属于实践因素，确定选划标准的优先性，不仅有利于目标的实现，更是从实践的层面促进 BBNJ 国际协定的谈判进程。

2. 推动土著人民参与标准的适用

在 2013 年召开的世界土著网络（World Indigenous Network）大会中，澳大利亚和赤道促进中心（Equator Initiative）组织在促进土著社区参与环境治理和实现可持续发展中扮演着重要的角色。大会推动了 Dhimurru 土著保护区域海洋国家管理计划（Dhimurru Indigenous Protected Area Sea Country Management Plan，以下简称“DIPASCMP”）的实施，在该计划的联邦海洋保护网络（Strategy 6 of North Commonwealth Marine Reserve Network）中特别强调土著人民应参与到保护区网络建设过程中。具体措施如下：（1）借鉴作为澳大利亚国家海洋规划一部分而建立的重要知识体系机构，并与相关组织代表协商，进行整合、传达有关北联邦海洋保护的文化价值信息；（2）在具有可行性的条件下，为土著人民提供参与管理联邦海洋保护区的机会；（3）和对海洋保护区网络感兴趣的土著社区、组织建立有效的伙伴关系。[37]

位于夏威夷的 Papahanaumokuakea MNM（Marine National Monument）[38]，

37 Dhimurru Indigenous Protected Area Sea Country Management Plan, Dhimurru website (10 January 2019), http://www.dhimurru.com.au/ouripa.html.

38 Achinthi Vithanage, *Marine Protected Areas: The Chagos Case and the Need to Marry International Environmental Law with Indigenous Rights*, The Yearbook of Polar Law Online, Vol. 4:1, p. 647 (2012).

通过广泛的咨询程序，确保了夏威夷土著人民参与管理海域保护。具体措施包括修正文件中夏威夷土著人民文化和历史行动计划，明确支持该群体的文化实践和研究，阐明夏威夷土著人民社区参与管理援助、社区的监管磋商和传统活动研究的重要性。[39] 这些计划和制度，为土著人民积极参与公海保护区提供了可实施的举措。在 BBNJ 国际协定谈判中，与会者可以思考土著人民及其所掌握的传统知识如何具体参与到谈判进程中，提高对传统知识的关注度。

区域渔业管理组织也努力通过传统知识掌握人参与研究、培训和外联计划，在海洋科学和自然资源管理等方式更广泛地吸纳土著和地方社区的传统知识。在“联合国海洋和海洋法问题不限成员名额非正式协商进程第二十次会议”（Twentieth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea）中指出，需要在各级开展包容各利益攸关方对话和打造知识交流平台，还需要共同努力生成知识，包括开展培训和能力建设，以促进科学家、传统知识掌管人和决策者之间的协作。[40] 在 BBNJ 国际协定谈判中，可以进一步就传统知识如何更好地纳入到选划标准中提出实施方案，以便协调与其他标准和考量因素之间的关系，充分发挥传统知识的力量。

四、结　论

通过评估、分析现有的代表性海洋保护区和特别敏感海域等其他保护区域的设立与管理实践，发现公约框架下现有保护区域的选划标准对于未来公海保护区的建设有诸多可以吸收借鉴的地方。

第一，就标准的类型而言，可以考虑以东北大西洋海域的海洋保护区选划标准为蓝本，并且以生态标准为基础。至于 IMO 下的 PSSAs 中确定的科学文化标准可以因地制宜作为考量因素。

第二，就标准的范围而言，政府间第一届会议与会者提出一系列可以考虑的选划标准，诸如气候变化的不利影响、海洋酸化，以及传统知识等。在 BBNJ 国际协定草案制定中，可以组织专门工作小组研究国际社会普遍关心的海洋问题，将其纳入到标准和考量因素中。在制度设计上，可以通过立法技巧保留审查和更新标准的灵活性。

第三，就标准的概念界定而言，可以充分借鉴 OSPAR 委员会《保护和方法适

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39 Papahanaumokuakea Marine National Monument, Papahanaumokuakea Marine National Monument Management Plan Volume III Appendices: Supporting Documents and References, PMNM website (10 January 2019), http://www.fws.gov/midway/Volume 0 oIIIof200P/2oPlan.pdf.

40 UNGA, A/74/70, Oceans and the law of the sea, UN website (7 October 2019), https://www.un.org/Depts/los/general_assembly/general_assembly_reports.htm.

用中确定物种和栖息地的标准》中的良好经验如对各项标准的细化和阐释、对方案提交程序的设计等。

第四，就标准的适用而言，可以通过两步走的方法，确定备选区域的优先顺序，以便达成广泛共识，减小谈判和实施的阻力。

第五，就传统知识纳入标准的方式而言，可以借鉴既存的土著人民参与机制，从区域性模式如澳大利亚的 DIPASCMP、夏威夷的 Papahanaumokuakea MNM 海洋保护方案中汲取经验，保护土著人民权利的同时，推动其积极参与海洋保护区建设，更好地实现海洋保护区的目标和宗旨。

BBNJ 国际协定中公海保护区选划标准的建立需要以现行国际标准和准则为基础，同时兼顾现有有关法律文书、框架以及相关全球、区域和部门机构，发挥传统知识在公海保护区建立中的作用，更好地实现国家管辖范围以外区域海洋生物多样性的养护和可持续利用的目标。

On the Selection Criteria of High Seas Marine Protected Areas

LI Chuang*

Abstract: This paper explores the international community's interest in determining identification criteria for the marine protected areas (MPAs) on the high seas. In the process of identifying such an area the selection criteria play a guiding and a stabilizing role. Therefore, in articulating the criteria for prospective MPAs it is important to critically consider the criteria already deployed to identify the existing protected areas, as well as the indigenous people's traditional knowledge on building MPAs. This will ensure articulation of a unified set of criteria and applicable mechanisms for MPAs. As MPAs are designed to conserve and induce sustainable use of biodiversity on a location, their nature is complex. For this reason, it is important to maintain mutual compatibility of legal instruments and frameworks implemented to regulate MPAs on the one hand, and include relevant global, regional and sectoral bodies in the defining process on the other.

Key Words: High Seas Marine Protected Areas; Selection criteria; Indigenous people

Conservation of biodiversity and sustainable use of resources in the high seas and deep seabed area are among the most important challenges facing the global community.[1] Meanwhile, the marine ecological environment has gradually deteriorated under the impacts of human activities, with the original marine biological environment and its ecological balance becoming increasingly

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1 Lora L. Nordtvedt Reeve, Anna Rulska-Domino & Kristina M. Gjerde, *Future of High Seas Marine Protected Areas*, Ocean Yearbook, Vol. 26:1, p. 265, 266 (2012).

difficult to maintain. In order to achieve marine environmental protection and sustainable use of marine biological diversity, the international community has noted that it is necessary to scheme out an international legally binding instrument under the United Nations Convention on the Law of the Sea (the Convention) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (hereinafter "BBNJ International Instrument). The establishment of area-based management tools, including marine protected areas (MPAs), is one of the four major topics of the BBNJ international legally binding instrument.

In the First Session of Intergovernmental Conference on 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 (hereinafter "Intergovernmental Conference"), delegations engaged in the conference had heated discussions on the topic of MPAs. The debates revolved around the selection criteria for MPAs and articulated the need to consider the existing internationally acknowledged criteria and standards used by relevant global, regional, and sectoral bodies.[2] The criteria of MPAs mainly refer to a set of scientific (ecological, biological, etc.) standards and considerations designed to evaluate the marine environment and, possibly, help set up protected areas in accordance with the level of its biodiversity. Based on the selection criteria for the existing protected areas and the negotiation content of Intergovernmental Conference, this article focuses on exploring the criteria and factors for consideration of high seas MPAs so as to achieve the purpose and objectives of this instrument.

I. The Situation and Development of High Seas MPAs

Areas beyond national jurisdiction (ABNJ) refer to the high seas and international seabed area (the Area). With deterioration of the marine environment and increase of human activities, the conservation and sustainable use of marine biodiversity has become increasingly important. The establishment of MPAs on the high seas is in accord with the objectives of the Convention and BBNJ International

2 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, 2018, p. 10.

Instrument. Nevertheless, current international treaties fail to provide legal basis for the establishment of prospective high seas MPAs on the one hand, or articulate a unified set of selection criteria for existing MPAs on the other. In order to address this analytical lacuna, in the sections below I offer my analysis and interpretation of what counts – and why – as a valid and valuable feature of a MPA.

A. The Existing High Seas MPAs

MPAs are best understood as essential tools for protecting marine biodiversity. International Union for Conservation of Nature (IUCN) defines an MPA as "any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment".[3] There are currently twelve high seas MPAs in the world: two in the Southern Ocean surrounding Antarctica, under the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR),[4] and ten in the North-East Atlantic, under the jurisdiction of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and the North-East Atlantic Fisheries Commission (NEAFC).[5] Selection criteria for and the implementation of the two MPAs in Southern Ocean fail to stipulate legal ways in which the involved Parties can coordinate the benefits. By contrast, the ten MPAs in the North-East Atlantic were established on the basis of scientific dataThe categories of selection criteria were analyzed first. Then the considerations of the application of predefined criteria was summarized. Finally, the content of each criterion was specified, which is of great reference value for optimizing the criteria for MPAs within the BBNJ International Instrument. In addition, Pelagos Sanctuary in the Mediterranean Sea around Corsica established in 2002 by Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean among France, Italy and Monaco was the first MPA covering the waters of the high seas. However, as part of

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3 IUCN, Guidelines for Applying Protected Area Management Categories, IUCN website (12 December 2018), https://portals.iucn.org/library/node/30018.pdf.

4 David Freestone, *The Limits of Sectoral and Regional Efforts to Designate High Seas Marine Protected Areas*, American Journal of International Law, Vol. 112: 3, p. 129, 132 (2018).

5 Elizabeth M. De Santo, *Implementation Challenges of Area-based Management Tools (ABMTs) for Biodiversity beyond National Jurisdiction (BBNJ)*, Marine Policy, Vol. 9:1, p. 34, 35 (2018).

its coverage of the waters of France, Italy and Monaco, it is not, for the time being, classified as a high seas MPA in the purest sense.

B. Legal Basis for High Seas MPA

The existing legal regimes of high seas MPAs are highly fragmented. There is, at present, no comprehensive treaty or regime that can deal with the establishment of high seas MPAs, and all existing high seas MPAs are based on regional rather than global regimes.[6] Although Section II of the Part VII of the Convention emphasizes the importance of promoting the conservation and management of living resources of the high seas, it does not provide legal mechanisms for the establishment of MPAs. The Convention on Biological Diversity (CBD) provides a mechanism that applies to an area within national jurisdiction rather than to the one which lies beyond national jurisdiction including the high seas and "the Area". Article 4 of the CBD on Jurisdiction Scope stipulates that, except when specified otherwise, the provisions of this Convention apply to each Contracting Party: (a) in the case of components of biological diversity, in areas within the limits of its national jurisdiction; and (b) in the case of processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction.[7] While CBD imposes an obligation on Contracting Parties not to destroy biodiversity in ABNJ, it cannot provides the legal basis for establishment of high seas MPAs. Therefore, based on the provisions of the Convention on BBNJ, there is an urgent need for the international community to develop an instrument which will establish legally binding mechanism for all parties involved regarding the founding of the new MPAs. Preferably, this can and will be achieved thought intergovernmental negotiations.

Some regional and sectoral bodies rely on treaties that provide a rough legal framework for protected areas based on measures other than those used for establishing MPAs. Such are the International Maritime Organization (IMO) and the International Seabed Authority (ISA). IMO can designate Particularly Sensitive Sea Areas (PSSAs) as an instrument designed to protect areas of special ecological,

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6 DUAN Wen, *A Case Study on the Third Party Effects of Marine Protected Areas Established by the Commission for the Conservation of Antarctic Marine Living Resources*, China Oceans Law Review, Vol. 14: 1, p. 91 (2018).

7 Art. 4 of the Convention on Biological Diversity.

socio-economic or scientific importance that may be damaged by certain maritime activities. PSSAs are aimed at protecting those sea areas which are affected by maritime-related activities, as IMO may require a number of mandatory methods for pollution prevention. To date, no PSSAs have been declared in ABNJ, however, two Special Areas (one in Antarctic area and one in the Mediterranean Sea) include some ABNJ.

For the purpose of managing international seabed mining and protecting the marine environment from harmful effects, ISA may designate Areas of Particular Environmental Interest (APEIs) which are aimed at protecting different regional types of natural habitats, thus preserving their biodiversity and ecosystem. While APEI emphasizes the effective protection of the marine environment and preservation of biodiversity, it is limited to specific "Areas" under the Convention, which is closely related to mining.

Protected areas around the world are divided into different types depending on their objectives. These protected areas, in spite of differences in their selection criteria, can provide reference for high seas MPAs to construct its own criteria.

II. Assessment of Selection Criteria for High Seas-Related Protected Areas

At the First Session of Intergovernmental Conference, delegations discussed the topic of area-based management tools, including MPAs. At the occasion, a number of delegates noted that such instruments should operationalize and strengthen the provisions of the Convention for the conservation and sustainable use of BBNJ, and that it should not prejudice the rights, jurisdiction and duties of States under the Convention or undermine existing relevant legal instruments and frameworks coordinating between global, regional and sectoral bodies.[8] With regard to the process of identifying areas within which protection may be required, most delegations seemed to agree that standards and criteria should be developed on the basis of the best available scientific knowledge, including existing international criteria and standards for high seas-related protected areas.[9] Determining the

8 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, 2018, p. 10.

9 Ibid.

selection criteria for high seas MPAs while taking into account natural and social factors such as global climate change, traditional knowledge of indigenous people and genetic resources should be among top priorities for the formation of this instrument and the achievement of its objectives.

A. Selection Criteria for Existing Representative High Seas MPAs

1. Selection Criteria for OSPAR MPAs

The OSPAR MPAs lie beyond national jurisdiction. There is a regular review mechanism and its conservation and management measures are relatively developed including the exchange of standard data, environment assessment and data monitoring. When selecting MPAs, its selection criteria can provide feasible experience for high seas MPAs to identify scientific and effective selection criteria based on scientific data and practical considerations.

OSPAR defines MPAs as "areas for which protective, conservation, restorative or precautionary measures have been instituted for the purpose of protecting or conserving species, habitats, ecosystems or ecological processes of the marine environment".[10] The Commission has promoted the establishment of a network of MPAs within the OSPAR area (hereinafter referred to as "OSPAR MPA Network") since 1998 with the aim of ensuring the sustainable use, protection and conservation of marine biological diversity and its ecosystems. Specifically, the aims of the OSPAR MPA Network are threefold: (1) to protect, conserve and restore species, habitats and ecological processes which have been adversely affected by human activities; (2) to prevent degradation of, and damage to, species, habitats and ecological processes, following the precautionary principle; and (3) to protect and conserve areas that best represent the range of species, habitats and ecological processes in the maritime area.[11] In the process of determining selection criteria for MPAs, the OSPAR Commission pointed out that it may not be possible to establish them all as MPAs and that the process of identification and selection of MPAs can be divided into two steps designed to meet the objectives of OSPAR MPA Network on the basis of complexity of the marine ecological environment and the diversity

10 OSPAR Commission, Marine Protected Areas, OSPAR Commission website (12 December 2018), http:// https://www.ospar.org/work-areas/bdc/marine-protected-areas.

11 OSPAR Commission, Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area, OSPAR Commission website (12 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

of marine species.

At first stage, it is important to establish whether an area may qualify as an MPA by meeting several, but not necessarily all, of the following criteria. The ecological criteria or considerations include the following seven items: (1) threatened or declining species and habitats/biotopes; (2) important species and habitats/biotopes; (3) ecological significance; (4) high natural biological diversity; (5) representativity; (6) sensitivity; (7) high degree of naturalness.[12] Evidently, the OSPAR Commission focuses mainly on species, types of habitat and biotopes, especially concentrating on features of the area such as importance, representativity, naturalness and urgency. Considering the differences in numbers and degree of criteria among regions, it is necessary to prioritize the criteria and considerations so as to identify comprehensively the final location of the MPA among a number of possible sites.

At second stage, practical criteria or considerations are taken into account in developing a prioritized list of sites. Practical criteria of possible sites include following six items: (1) size; (2) potential for restoration; (3) degree of acceptance; (4) potential for designing measures for a successful management of such sites, which rely on legislation, relevant authorities, funding and scientific knowledge; (5) evaluation of potential damage to the area by human activities; (6) value for scientific research and monitoring.[13] These practical criteria are different from ecological criteria and mainly focus on the feasibility and necessity of establishing MPAs in the possible sites. When establishing a high seas MPA, delegations can consider bringing practical criteria into selection, especially degree of acceptance and potential for success of management measures, etc. The BBNJ international instrument which involves complex interests of all parties may reduce the difficulties of the establishment of MPAs by including practical standards.

Finally, OSPAR Commission stated that the table of criteria in Appendix 3 provides guidance on criteria which should be used to select certain areas as potential components of the OSPAR Network in relation to the identified aims given.[14] It is worth mentioning that the OSPAR Commission issued Criteria for the Identification of Species and Habitats in Need of Protection and their Method of

12 Ibid.

13 Ibid.

14 See Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area, OSPAR Commission website (12 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

Application to refine the percentages of applicants.[15] These include definitions of specific concepts and proposed procedures for assessing which species and habitats need to be protected, with a detailed and specific path for the establishment of an OSPAR MPA.

2. Selection Criteria for CCAMLR MPAs

The CCAMLR MPAs Network not only protects the inter-connectedness of many unique ecosystems of the Southern Ocean, but also promotes the achievement of global marine protection goals. However, the Network has yet to provide an implementation program and detailed content of selection criteria for CCAMLR MPAs. Once provided, these details will offer a pool of assessment material which can be used in defining the high seas MPAs.

In the Southern Ocean, CCAMLR has established two huge MPAs: in 2010, the South Orkney Islands and in 2017, the world's largest MPA in the Ross Sea.[16] In 2011, CCAMLR adopted the General Framework for the Establishment of CCAMLR Marine Protected Areas and regarded it as Conservation Measure 91-04. The Measure stipulates that CCAMLR MPAs are established on the basis of the best available scientific evidence and contribute to the achievement of the following objectives: (1) the protection of representative examples of marine ecosystems, biodiversity and habitats at an appropriate scale to maintain their viability and integrity in the long term; (2) the protection of key ecosystem processes, habitats and species; (3) the establishment of scientific reference areas for monitoring natural variability and long-term change or for monitoring the effects of harvesting and other human activities on Antarctic marine living resources and on the ecosystems of which they form part; (4) the protection of areas vulnerable to impact caused by human activities; (5) the protection of features critical to the functioning of local ecosystems; (6) the protection of areas to maintain resilience or the ability to adapt to the effects of climate change.[17] When this General Framework was first adopted, the Parties involved had yet to reach a consensus on

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15 OSPAR Commission, Criteria for the Identification of Species and Habitats in Need of Protection and their Method of Application, OSPAR Commission website (12 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

16 David Freestone, *The Limits of Sectoral and Regional Efforts to Designate High Seas Marine Protected Areas*, American Journal of International Law, Vol. 112:3, p. 129, 132 (2018).

17 CCAMLR, Conservation Measure 91-04 (2011) General Framework for the Establishment of CCAMLR Marine Protected Areas, CCAMLR website (12 December 2018), https://www.ccamlr.org/en/measure-91-04-2011.

the issues related to the establishment of high seas MPAs. The six objectives listed above are roughly articulated and devoid of clear definition of the document's connotation, its extension and specific scientific standards. Therefore, it is difficult to achieve the goals and principles laid out in Article 2, paragraph 3 of the Convention on Conservation of Antarctic Marine Living Resources.[18] Furthermore, the Conservation Measure 91-05 of the Ross Sea region MPA stipulates only that this MPA is in line with Article II of the CAMLR Convention and does not refer to any specific criteria and operation plans for the achievement of these objectives.[19] Therefore, it is necessary to draw lessons from such shortcomings in the negotiation of Intergovernmental Conference.

B. Selection Criteria for CBD and Greenpeace

1. Selection Criteria for CBD

The Ecologically or Biologically Significant Marine Areas under the CBD are designed to solve problems in relation to the ABNJ marine biodiversity and can provide scientific basis for the establishment of high seas MPAs in the future.[20]

In 2008, the Ninth Conference of the Parties to the Convention on Biological Diversity adopted seven scientific criteria for identifying ecologically or biologically significant marine areas in need of protection in open-ocean waters and deep-sea habitats. The criteria must indicate such area's: (1) uniqueness or rarity; (2) special importance for life-history stages of species; (3) importance for threatened, endangered or declining species and/or habitats; (4) vulnerability, fragility, sensitivity, or slow recovery; (5) biological productivity; (6) biological diversity; (7) naturalness.[21] Incidentally, these criteria are similar to the selection criteria for OSPAR MPA. Detailed interpretation of the definition, rationale and factors to be considered in application of the criteria were given by the Parties

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18 YANG Lei, HAN Zixuan & CHEN Danhong, *Analysis On The Problems with "the General Framework For the Establishment of CCAMLR Marine Protected Areas"*, China Journal of Polar Research, Vol. 26:4, p. 527 (2014). (in Chinese)

19 CCAMLR, Conservation Measure 91-05 (2016) Ross Sea region marine protected area, CCAMLR website (15 December 2018), https://www.ccamlr.org/en/measure-91-05-2016.

20 ZHENG Miaozhuang, LIU Yan & XU Jing, *Convention on Biological Diversity and Marine Biological Diversity in the Areas beyond National Jurisdiction*, Journal of Ocean University of China (Social Sciences Edition), Vol. 28:2 p. 40 (2015). (in Chinese)

21 CBD, COP 9 Decisions, Ninth meeting of the Conference of the Parties to the Convention on Biological Diversity, CBD website (15 December 2018), https://www.cbd.int/doc/decisions/cop-09/cop-09-dec-20-en.pdf.

in order to facilitate more targeted identification of the EBSAs. In addition, the Parties adopted the scientific guidance in selecting areas deemed appropriate for establishing a representative network of MPAs. The strategy shifts from the earlier considering of each MPA separately to subliming them into a more systematic network of such areas deemed more manageable and protectable in terms of the conservation of marine environment and biodiversity. Ideally, the MPA network will provide a reference plan for the formation of the BBNJ international instrument. Required network properties and elements are as follows: (1) ecologically and biologically significant areas; (2) representativity; (3) connectivity; (4) replicated ecological features; (5) adequate and viable sites.[22]

COP's thematic work on marine and coastal biodiversity focused on the proposed establishment of ecologically and biologically significant areas (EBSAs), the designation of high seas MPAs and issues related to addressing climate change in the marine environment.[23] Taking into account the authority of the CBD in the sphere of conservation and sustainable use of marine biodiversity, as well as the extensiveness of CBD Contracting Parties, it seems possible to use EBSAs as the basis for the selection of high seas protected areas in the future.[24] The negotiation of the BBNJ International Instrument is still in progress. Although the international instruments of the previous three intergovernmental meetings had not explicitly mentioned the establishment of the high seas MPA with EBSAs as the reference, the selection criteria outlined in the instrument seem to replicate the selection criteria of EBSAs.

2. Selection Criteria for Greenpeace

As an international non-governmental organization, Greenpeace aims to promote the protection of a greener, peaceful and sustainable planet, which is consistent with the original objectives of the establishment of MPAs. Document entitled "Roadmap for Restoration: A Global Marine Protected Area Network" issued by Greenpeace lists five guiding principles for a network of MPAs: (1) representative biodiversity; (2) a habitat which can be replicated in different MPAs; (3) species which can influence and support each other in different biotopes; (4) the range is large enough to ensure that species, biotopes and ecological processes are

22 Ibid.

23 Elizabeth M. De Santo, *Implication of the Tenth Conference of Parties to the UN Convention on Biological Diversity for Coastal Management and Marine Protected Areas*, Ocean Yearbook, Vol. 26:1, p. 249, 250 (2012).

24 Supra note 20, ZHENG Miaozhuang et al., p. 40.

maintained for a long time; (5) is based on the best scientific, local and traditional knowledge available.[25] It is not difficult to find that these five principles display a high degree of similarity with the various selection criteria discussed above. The selection criteria for high seas MPAs jointly proposed by the International Union for Conservation of Nature and the World Wildlife Fund at the Fifth IUCN World Parks Congress also confirm that the international community has a high degree of understanding of the selection criteria for MPAs,[26] which provides strong scientific support for the identification of the selection criteria for high seas MPAs.

III. Development and Application of Selection Criteria for High Seas MPAs

During the First Session of the Intergovernmental Conference, some delegates advocated in favor of stronger cooperation in applying area-based management tools, including MPAs, through implementation of existing obligations, in particular under the United Nations Convention on the Law of the Sea. On the occasion, stakeholders mentioned the Aichi Biodiversity Targets and Sustainable Development Goal 14. The objective of establishing connected networks of MPAs to ensure long-term conservation and sustainable use was also proposed.[27] Defining selection criteria for high seas MPAs has become an important initial step in the process of establishing marine protection areas and providing implementable solutions.

A. Development of Selection Criteria for High Seas MPAs

1. Scope of Selection Criteria for High Seas MPAs

In the first session of the Intergovernmental Conference, it was proposed that the development of the selection criteria for high seas MPAs should be based on the best available scientific knowledge, including the existing international standards

25 FAN Xiaoting, *Laws and Practices of High Seas Marine Protected Areas*, Beijing: Ocean Press, 2015, p. 94. (in Chinese)

26 Ibid.

27 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, p. 9.

and criteria, along with the indicative list of criteria included in the Section III of the Report of the Preparatory Committee, which still await a comprehensive consideration. Indeed, Article 1 of the indicative list of criteria notes that the general criteria of MPAs should be based on the existing criteria that have been widely recognized. The objective of PSSAs under IMO focuses on the protection of sea areas that are vulnerable to damage by international shipping activities and appears to be of value for ecological, socio-economic and scientific research.[28] IMO divides the criteria into ecological criteria, socio-economic and cultural criteria. Evidently, scientific, educational and ecological criteria are similar to EBASs' selection criteria. Considering that the objectives of the BBNJ international instruments focus on the conservation and sustainable use of marine biological diversity of ABNJ, it is necessary to draw lessons from the human factors in the PSSAs criteria when identifying the selection criteria for the high seas MPAs.

It is worth noting that the traditional knowledge of indigenous peoples can better protect marine biodiversity and promote sustainable use while responding to natural disaster and climate-related issues in accordance with local conditions in terms of climate change and disaster risk.[29] The traditional knowledge held by indigenous peoples and local communities plays an important role in marine protection and environmental governance including the conservation and sustainable use of marine biodiversity, climate change assessment and adaptation, disaster risk reduction and ecological damage. With decades of development of human rights movements in the world, the rights of indigenous peoples have gradually earned protection, as provided by relevant documents in the field of international environmental law. At the same time, as the international community's interest in the environmental protection and sustainable development issues has increased, the traditional knowledge of indigenous peoples and local communities regarding the marine protection has gradually come to be widely recognized

28 IMO, Resolution A.982(24), Revised Guideline for the Identification and Designation of Particularly Sensitive Sea Areas, IMO webstie (10 January 2019), http://www.imo.org/en/OurWork/Environment/PSSAs/Documents/A24-Res.982.pdf.

29 UNGA, A/74/70, Oceans and the law of the sea, UN webstie (25 May 2020) , https://www.un.org/Depts/los/general_assembly/general_assembly_reports.htm.

and globally valued. The Rio Declaration,[30] Agenda 21,[31] the Earth Charter,[32] the Guidelines for Marine Protected Areas published by IUCN[33] and other international documents all emphasize the interrelatedness between the sustainable development of natural environment and the cultural, social, economic and material welfare of indigenous peoples, attaching great importance to the role of indigenous peoples and local communities in protecting the environment.

Criteria proposed during the first session of the Intergovernmental Conference included the adverse impact of climate change and ocean acidification, as well as the traditional knowledge. Prior to this, the international community had been concerned about the adverse effects of climate change and the new ocean problems caused by human activities. IUCN had made an important elaboration on the relationship between MPAs and climate change where it is noted that MPA networks is critical to maintaining climate change resilience while building ecological and social resilience.[34] Due to the development of science and technology and the enhancement of human awareness about environmental protection and international hot issues, international organizations or multilateral bodies can also change the selection criteria and considerations when negotiating BBNJ international instruments. Delegations generally recognize the need to retain the flexibility and review or update standards and criteria as environmental issues and scientific knowledge develop.[35] Therefore, when identifying the scope of the selection criteria, high seas MPAs need to retain the flexibility to review and update criteria in order to better adapt to the requirements of the biodiversity conservation procedure.

2. The Level of Detail of Selection Criteria for High Seas MPAs

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30 CBD, Rio Declaration on Environment and Development, CBD website (15 December 2018), https://www.cbd.int/doc/ref/rio-declaration.shtml.

31 United Nations Conference on Environment & Development, Agenda 21, UNSDGS website (15 December 2018), https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf.

32 UNESCO Earth Charter, Cool Australia website (15 December 2018), https://coolaustralia.org/wp-content/uploads/2014/04/The-Earth-Charter.pdf.

33 IUCN, Guidelines for Marine Protected Areas, IUCN website (10 January 2019), https://www.iucn.org/sites/dev/files/import/downloads/mpaguid.pdf.

34 IUCN, IUCN Issues Brief: Marine Protected Area and Climate Change, IUCN website (6 December 2018), https://www.iucn.org/resources/issues-briefs/marine-protected-areas-and-climate.

35 Intergovernmental Conference on 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, Statement by the President of the Conference at the Closing of the First Session, 2018, p. 11.

When considering the level of detail of the selection criteria, stakeholders can draw on Criteria for the Identification of Species and Habitats in need of Protection and their Method of Application made by OSPAR Commission to refine the criteria including definition of specific concepts and designs of procedure for applying the criteria.[36] The OSPAR Commission explains various possibilities for every important concept, defines the concepts that can be quantified and provides specific and detailed implementation standards for the establishment of MPAs. For example, the criterion of sensitivity tries to provide a variety of possible explanations about "a high proportion" and "sensitive" in order to make it practical and predictable. "High proportion" is considered to include more than 75% and up to 90% of the population in a small number of locations of 50 square kilometers' grid squares. In turn, a habitat is "sensitive" when it has low resistance and is easily adversely affected by human activity or when it has low resilience with the recovery likely to be achieved only over a long period after an adverse effect from human activity. The above criteria define and quantify the concept of MPAs selection criteria. This can reduce disputes caused by ambiguous concepts or simplistic definitions, and ultimately promote the establishment of MPAs. For instance, the objectives of CCAMLR MPAs in the General Framework for the Establishment of CCAMLR Marine Protected Areas are ambiguous with no clear implementation plan and no proper solution to dispute in the General Framework. Many problems are unavoidable during the establishment and maintenance of CCAMLR MPAs in the Southern Ocean. Empty objectives are at disadvantage in carrying out effective evaluation and monitoring in the process of establishing high seas MPAs. Of course, the negotiation process of BBNJ international instruments is affected by multiple interests. At the beginning of the establishment of MPAs, the selection criteria may be not too specific. In contrast, selection criteria should be detailed and clear after the establishment of MPAs.

B. Application of Selection Criteria for High Seas MPAs

1. Stages of Application Procedure

After identifying the selection criteria for MPAs, their application in the

36 OSPAR, Criteria for the Identification of Species and Habitats in Need of Protection and their Method of Application, OSPAR website (4 December 2018), https://www.ospar.org/convention/agreements?q=Identification.pdf.

process of establishing protected areas has become problematic. Different sites may meet different number(s) of criteria, while each potentially protected site contains different levels of ecological, environmental and habitat-related factors. The OSPAR commission provides a constructive plan in the application of selection criteria for MPA. The first stage of this plan is aimed at determining whether the possible sites meet most—though not all—ecological criteria or considerations listed in the Guidelines. In the second stage of the process, the ecological and the practical considerations should be reapplied to help prioritize the identified sites. In the process of establishment of high seas MPAs, the opinions of stakeholders at the first session of the Intergovernmental Conference and the objective of conservation and sustainable use of biodiversity should be taken into account in developing a prioritized list of sites. Each MPA may has a different aim that needs to be determined according to the specific marine ecological environment and the surrounding social environment. Applying the selection criteria through successive stages can make possible sites better meet the goals set by the General Framework while reducing difficulties in identifying MPAs.

As mentioned above, based on priority degree of criteria, the potential for restoration, the potential for successful management measures and degree of acceptance from stakeholders can all be prioritized. The potential to return to a more natural state is directly related to whether the goal of the high seas MPAs can be achieved. The potential level of support from stakeholders and political acceptability is a social factor. From a practical perspective, the establishment of MPAs involves multiple interest groups and the acceptance of stakeholders to the greatest possible extent is directly related to the establishment of MPAs. The potential for successful management measures is a practical factor. Determining the priority of selection criteria not only helps to achieve the goals, but also promotes the negotiation process of BBNJ international instrument from a practical level.

2. Promoting Indigenous People's Participation in the Application of Selection Criteria

In the 2013 World Indigenous Network Conference, Australia and the Equator Initiative played an important role in promoting the participation of indigenous communities in environmental governance and sustainable development. The conference promoted the implementation of the Dhimurru Indigenous Protected Area Sea Country Management Plan (DIPASCMP). The Strategy 6 of North Commonwealth Marine Reserve Network emphasizes the participation of indigenous people in the process of building protected area networks. To the process

related specific measures ought to: (1) draw on the significant body of knowledge built as part of sea country planning across Australia, and in consultation with relevant representative organizations, as well as to consolidate and communicate information about cultural values protected in the North Commonwealth marine reserves; (2) identify and, where feasible, support opportunities for indigenous people to engage in the management of sea country in Commonwealth marine reserves; (3) build effective partnerships with indigenous communities and organizations that have an interest in the Marine Reserves Network.[37]

There are similar examples from across the globe. Thus, Papahanaumokuakea Marine National Monument through an extensive consultation process[38] ensured that indigenous communities participated in the environmental management of protected areas in Hawaii. Specific measures included amending Native Hawaiian culture and history action plan, supporting the community cultural practices and research and clarifying the importance of Native Hawaiian community participation in management assistance, holding community regulatory consultations and researching traditional activities.[39] These plans and systems provide implementable measures for indigenous people to actively participate in the high seas MPAs. During the negotiation of BBNJ international instruments, delegates can explore the way to motivate indigenous people to get involved in the negotiation process and take advantage of their traditional knowledge of maritime and other natural conservation in terms of increasing wider public attention.

At the regional level, efforts to incorporate the traditional knowledge of indigenous and local communities are also under way within regional fisheries management organizations, where the traditional knowledge holders are encouraged to take part in research, training and outreach programs and, more generally, with regard to the conduct of ocean science and natural resource management. Accordingly, the Twentieth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, encouraged inclusive

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37 Dhimurru Indigenous Protected Area Sea Country Management Plan, Dhimurru website (10 January 2019), http://www.dhimurru.com.au/ouripa.html.

38 Achinthi Vithanage, *Marine Protected Areas: The Chagos Case and the Need to Marry International Environmental Law with Indigenous Rights*, The Yearbook of Polar Law Online, Vol. 4:1, p. 647(2012).

39 Papahanaumokuakea Marine National Monument, Papahanaumokuakea Marine National Monument Management Plan Volume III Appendices: Supporting Documents and References, PMNM website (10 January 2019), https://nmspapahanaumokuakea.blob.core.windows.net/papahanaumokuakea-prod/media/archive/management/mp/vol3_appen_mmp08.pdf.

multi-stakeholder dialogues and knowledge exchange platforms at all levels, along with different efforts towards the co-production of knowledge. The latter included training and capacity-building initiatives to facilitate such collaborative efforts among scientists, traditional knowledge holders and policymakers.[40] In the forthcoming negotiation of the BBNJ international instruments, it is hopefully possible to further propose an implementation plan on how to better incorporate traditional knowledge into the selection criteria so as to coordinate the relationship with other criteria and considerations on the one hand and give full play to the power of traditional knowledge on the other.

IV. Conclusion

My evaluation and analysis of the existing representative MPAs and other protected areas, such as PSSAs, has revealed that the selection criteria of existing protected areas under the "Convention" may play a useful role in the future establishment of high seas MPAs. Firstly, I would recommend that the process of negotiation of BBNJ international instruments for the management of BBNJ includes a serious consideration of the selection criteria of MPAs in the Northeast Atlantic Ocean as a blueprint based on ecological criteria. The scientific and cultural criteria identified in PSSAs under IMO should also be taken into consideration in specific situations. Secondly, as far as the scope of criteria is concerned, the delegates taking part in the First Session of the Intergovernmental Conference proposed a consideration of a series of selection criteria, such as the adverse effects of climate change, ocean acidification and inclusion of traditional knowledge of maritime protection. In the draft of BBNJ international instruments, a special working group can be organized to study the marine issues of general concern to the international community. In terms of system design, legislative techniques may entail flexibility deployed to review and update the selection criteria. Thirdly, as far as the definition of criteria is concerned, it is possible to draw on the excellent experience of the Criteria for the Identification of Species and Habitats in Need of Protection and their Method of Application made by OSPAR Commission in 2003 such as the refinement and reinterpretation of various criteria and designs of project submission. Fourthly, as far as the application of

40 UNGA, A/74/70, Oceans and the law of the sea, UN website (7 October 2019), https://www.un.org/Depts/los/general_assembly/general_assembly_reports.htm.

the criteria is concerned, the priority of the target areas can be identified by a two-stage approach in order to reach an extensive consensus and reduce the resistance to negotiations and implementation. Fifthly, in terms of the way to incorporate traditional maritime protection-related knowledge into selection criteria, it is possible to draw on the existing indigenous people's participation mechanisms deployed in the marine protection projects such as Australia's DIPASCMP and Hawaii's Papahanaumokuakea MNM. Meanwhile, it is necessary to promote the indigenous people's active participation in the construction of MPAs to ensure the achievement of the latter's goals.

The selection criteria in the BBNJ international instruments need to be based on the existing international criteria and standards and take into account the relevant legal instruments and frameworks, as well as the relevant global, regional and sectoral bodies. At the same time, the delegates need to insist on the incorporation of traditional knowledge in the establishment of MPAs to achieve the goal of conservation and sustainable use of marine biological diversity of ABNJ.

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台湾海峡水下文化遗产的法律保护

钟 慧 *

内容摘要：学者普遍呼吁两岸应搁置政治分歧，构建一套合作机制，以共同保护台湾海峡的水下文化遗产。目前的研究主要集中合作目标、原则、内容和机构等实际操作层面，很少从法律的角度论证两岸合作保护水下文化遗产的基础。本文拟从两个层面分析两岸合作保护的法律基础，即两岸是否对台湾海峡水下文化遗产具有管辖权，以及两岸的相关规定是否为合作提供了法律依据。两岸合作保护海峡内水下文化遗产存在坚实的法律基础和清晰的合作路径，应积极利用这一法律机制，合作保护海峡内的水下文化遗产，通过文化遗产的保护和交流，加强两岸之间的政治互信。

关键词：《联合国海洋法公约》 《保护水下文化遗产公约》 台湾海峡 水下文化遗产 保护和管理

台湾海峡自古以来就是我国对外贸易的重要通道，蕴藏着十分丰富的水下文化遗产，对研究历史上海上贸易和文化交往具有重要的价值。然而，海峡内的水下文化遗产却面临着非法盗捞、破坏的威胁。例如，2005 年福建平潭海域的清代沉船“碗礁一号”，一经发现即被大肆盗捞，船体和装载的青花瓷器都遭到了严重的破坏。[1] 面对这一问题，两岸迫切需要采取积极的措施保护海峡内的水下文化遗产，尤其是打击在这一海域内潜在或现实的盗捞活动。然而，此类措施是否符合《联合国海洋法公约》（以下简称《海洋法公约》）的相关规定？是否间接扩大了沿海国的管辖权从而受到国际社会的反对？如果两岸合作保护海峡内的水下文化遗产，是否可能导致两岸关系的分歧与摩擦？具体而言，两岸是否都认同水下文物本质上是“文化遗产”，而非“商品”，从而采取措施保护水下文物的文化、历史和考古价值，而非鼓励商业组织打捞水下文物，以实现对其商业价值的开发和利

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本文系福建省社科研究基地重大项目“台湾海峡水下文化遗产保护法律体制”(No. 2018JDZ040) 的阶段性成果。

1 刘斌：《台湾海峡水下文物保护合作研讨会综述》，载《中国海洋法评论》2010 年第 2 期，第 133-134 页。

用？本文将首先分析台湾海峡的法律性质，明确其包含的海域，在此基础上进一步论证两岸保护海峡内水下文化遗产的法律基础，以及合作基础与可能路径。

一、台湾海峡水域的法律性质

要讨论台湾海峡的水下文化遗产保护，首先需要明确台湾海峡包括哪些海域及其法律性质。其原因在于，根据《海洋法公约》，沿海国在不同的海域内享有不同的权利内容。对于发生在领海内涉及水下文化遗产的活动，沿海国一般有权对相关活动采取措施，包括制定法律，阻止未经批准的打捞和发掘活动。[2] 而在大多数的海域内，比如专属经济区和大陆架上，沿海国的管辖权是非常有限，是否包括水下文化遗产也有待商榷。如果打捞活动发生在公海的话，此类活动仅受船旗国的管辖，除非船旗国禁止本国船只或公民从事水下文物的打捞，或者规定从事该类活动必须事先获得批准，水下文物的打捞活动理论上属于公海自由的范畴。简而言之，沿海国对于发生在不同海域内的水下文物的打捞行为，可以采取的措施和管辖空间是不同的。因此，分析台湾海峡的法律性质，是讨论两岸合作保护海峡内水下文化遗产的基础。

《海洋法公约》第三章专门规定了“用于国际航行的海峡”，并对此类海峡的通行制度，以及沿海国的权利和义务进行了详细的规定。台湾海峡是否符合其中规定的情形，将决定着两岸是否需要遵循其规定。如果单纯文意解释的角度看，台湾海峡的北端和南端的确连接专属经济区的两个部分，并且实际上也用于国际航行，满足《海洋法公约》有关“用于国际航行的海峡”的要件。但是，台湾海峡的特殊之处在于，该海峡的宽度为 70 至 350 海里，而依据《海洋法公约》领海不超过 12 海里的规定，台湾海峡内必然会存在相当宽度的专属经济区，并且其航行和水文特征与靠近海岸的水域同样便利。因此，台湾海峡的这一特殊性决定了在该海峡内不适用“过境通行制”，而是应依据领海、专属经济区和大陆架、公海等不同水域的法律性质，讨论大陆和台湾对该海域内水下文化遗产的保护和管理可采取的措施。[3]

由于台湾海峡最大宽度不超过 350 海里，台湾海峡实际上两个部分：第一，海峡两侧沿岸 12 海里的中国领海，由大陆和台湾分别管辖。第二，12 海里之外的中国专属经济区和大陆架。而就遗产保护而言，对于位于领海部分的水下文化遗产，两岸完全可以依据各自的相关规定，保护和管理该海域内的水下文化处遗产。而两岸面临的

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2 对于领海内水下文化遗产的保护，存在争议的问题是沉没的军舰和其他国有沉船是否继续享有国家豁免。相关讨论参见 David J. Bederman, *Rethinking the Legal Status of Sunken Warships*, Ocean Development and International Law, Vol. 31:1, p. 97 (2000); Craig Forrest, *An International Perspective on Sunken State Vessels as Underwater Cultural Heritage*, Ocean Development & International Law, Vol. 34:1, p. 41 (2003).

3 傅崐成、刘先鸣：《台湾海峡船源污染法律问题刍议》，载《中国海洋法学评论》2006 年第 1 期，第 143-148 页； ZOU Keyuan, *Redefining the Legal Status of the Taiwan Strait*, The International Journal of Marine and Coastal Law, Vol. 15:2, p. 245 (2000).

共同挑战在于如何保护领海之外的专属经济区和大陆架上的水下文化遗产。对此，应在现有国际法框架下讨论两岸可以采取的管理措施，以保护位于该水域内的水下文化遗产。

二、国际法对沿海国水下文化遗产管辖权的不明确规定

（一）《海洋法公约》不能提供有效保护

《海洋法公约》作为统筹海洋事务的基本法，第十一部分“区域”的 149 条和第十六部分“一般规定”的 303 条专门针对水下文化遗产的保护，但其规定是不完善的，并不足以保护专属经济区和大陆架上的水下文化遗产。

对于领海以外的毗连区海域，虽然其本身是专属经济区的一部分，但《海洋法公约》第 303（2）条又将其作为一个特殊区域，赋予了沿海国更多的权利。具体而言，如果未经沿海国同意擅自将水下文化遗产移出毗连区海床，则沿海国可以推定该行为违反了相关法律规定，从而有权采取相关措施阻止该行为。

对于毗连区以外专属经济区和大陆架水下文化遗产，《海洋法公约》第 149 条和第 303 条都没有作出特别的规定。但是如果参考《海洋法公约》有关专属经济区和大陆架的专门章节，则可以发现沿海国在专属经济区和大陆架的管辖权主要涉及自然资源的主权权利，以及有关“人工岛屿、设施和结构的建造和使用；海洋科学研究；以及海洋环境的保护和保全”的管辖权。[4] 而沉船、瓷器、水下遗址等水下文化遗产，是由于人类参与完成的，因此并不属于自然资源。[5] 这就是意味着，对于发生在这一海域内水下文物搜寻、打捞、甚至破坏行为，仅限于船旗国的专属管辖，沿海国并不对此享有管辖权。除非船旗国对此行为进行限制，比如规定水下考古必须事先获得政府批准等，不然该国的个人或组织完全可以在他国的专属经济区内从事水下文物的发掘和打捞活动。但问题在于，并非每一个国家都对水下考古采取限制的态度，甚至美国、印尼、马来西亚等国都是鼓励商业打捞。除此之外，船旗国通常会因为相关遗址距离其水域遥远，无视其船舶和公民的活动，从而导致位于他国专属经济区和大陆架上的水下文化遗产的保护工作变得极其困难。

可见，《海洋法公约》并没有明确赋予沿海国对专属经济区和大陆架内水下文物管辖权。但是，值得注意的是，《海洋法公约》也没有禁止沿海国采取单边措施来禁止或授权开发本国专属经济区内或大陆架上的文化遗产，这就导致了越来越多的沿海国通过采取单边措施，主张对位于专属经济区和 / 或大陆架上的水下文化遗产享有管

4 《联合国海洋法公约》第 56、77 条。.

5 Janet Blake, *International Cultural Heritage Law*, Oxford University Press, 2015, p. 74.

辖权。[6]

（二）中国尚未加入《保护水下文化遗产公约》

由于《海洋法公约》没有为领海外的水下文化遗产的保护提供有效的保护，联合国教科文组织于 2001 年颁布了针对水下文化遗产保护的专门性公约，即《保护水下文化遗产公约》（以下简称“《水下文化遗产公约》”）。该公约颁布的目的之一，就是为水下文化遗产提供全面的保护，无论其所处何处，以打击日益增多的掠夺和破坏水下文化遗产的行为。[7]

对于专属经济区和大陆架上的水下文化遗产，鉴于各国对海域的管辖权无法扩大，而如果一国对某处遗址没有管辖权就不能阻止对它的干预和掠夺行为，《水下文化遗产公约》提供了一个包括报告和协商在内的国际合作方案，以解决上述困境。该方案的原理是，即使沿海国对于其专属经济区和大陆架上的遗址没有管辖权，仍然可以通过与身为掠夺船只的船旗国或寻宝者所属的缔约国开展合作，从而采取法律行动履行其对本国国民或船舶的管辖权，以确保实施恰当的保护。虽然这一合作体系的可行性颇受质疑，但《水下文化遗产公约》的重要突破在于第 10 条第 2 款，即沿海国可以在“国际合作”的框架下，“为保护其主权权利和管辖权不受干涉而禁止或授权开发本国专属经济区内或大陆架上的文化遗产”。[8] 换而言之，《水下文化遗产公约》虽然宣称与《海洋法公约》保持一致，但在某种程度上其实扩大了沿海国在专属经济区和大陆架上的管辖权，沿海国可以依据第 10 条第 2 款采取单边措施阻止发生在本国专属经济区或大陆架上涉及水下文化遗产的打捞和发掘活动。[9]

虽然如此，但目前该公约并没有被国际社会广泛接受，亚洲国家仅柬埔寨和伊朗加入了该公约。中国学者虽然一直在呼吁中国加入《水下文化遗产公约》，以打击对水下遗产的掠夺、非法贩运和开发，促进公众对水下遗产的认识，但目前中国尚未加入该公约。[10] 这也就意味着，大陆和台湾不能援引该公约第 10 条第 2 款采取单边措施阻止外国船只打捞海峡内的水下文化遗产。

（三）国际习惯法尚未最终确立

鉴于国际法公约并不能有效保护领海外的水下文化遗产，越来越多国家都通过颁

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6 详见第二部分第三节。
7 赵亚娟：《水下文化遗产保护的国际法制》，载《武大国际法评论》2007 年第 1 期，第 102 页。
8 《水下文化遗产公约》第 10 条第 2 款。
9 Sarah Dromgoole, *Underwater Cultural Heritage and International Law,* Cambridge University Press, 2013, p. 290.
10 张亮、赵亚娟：《论中国应尽快批准〈保护水下文化遗产公约〉》，载《武汉大学学报 (哲学社会科学版)》2011 年第 4 期，第 43-44 页。

布国内法的方式将管辖权延伸至本国领海外，以阻止对水下文化遗产的掠夺和不科学开发。举例而言，越南声称其拥有位于其大陆架和专属经济区内的所有水下文化遗产的所有权。[11] 印度尼西亚也主张保护大陆架和专属经济区内的水下沉船，但附加条件是该沉船已经在水下沉没了至少 50 年。[12] 泰国主张位于其专属经济区内的水下文物为国有财产。[13] 澳大利亚 [14]、爱尔兰 [15] 以及西班牙 [16] 颁布国内法律声明对于位于其大陆架上的水下文化遗产具有管辖权。塞尔维亚主张其大陆架上的所有具有考古性质的物体都享有主权权利。[17] 马来西亚则规定在其行使主权或管辖权的海域内发现的具有考古和历史性质的物体，需要通过申请并获得授权才能将其移走。[18] 葡萄牙规定位于其大陆架和专属经济区范围内的水下文物都具有管辖权。[19] 英国也将保护范围扩大到国际水域中含有人类遗骸的某些军事战争的遗址。[20]

基于相关国家纷纷通过实施国内法将管辖权延伸至本国领海外，有学者曾指出这是否意味着新的国际习惯法规则的出现。这项拟议的国际习惯法将规定，沿海国可以采取单边的措施将其管辖区延伸至本国领海以外的水域。[21] 对于该规则是否能最终成为国际习惯法，取决于利益受到该规则影响的国家的态度，包括沿海国、水下文化遗产大国，以及主张航行自由的航运大国。[22] 在目前阶段，虽然已经有一定数量的利益受影响国家通过单边措施，主张对专属经济区和大陆架内水下文化遗产进行管辖，但并没有获得“利益受到特别影响”国家的全面支持。这一点也体现在《水下文化遗产公约》的起草过程中，沿海国和文物大国曾积极主张将对水下文物的管辖权延伸到专属经济区和大陆架，但受到了英美等国的反对。后者担心沿海国通过水下文化遗产的

11 2001 Vietnam Law on Cultural Heritage, No: 28/2001/QH10; 2005 Vietnam Decree on the Management and Protection of Underwater Cultural.

12 Indonesia’s 2010 Law concerning Cultural Conservation; Indonesia’s 2007 Presidential Decree on the National Committee and Utilization of Valuable Cargo from Sunken Ships.

13 Section 24 of Thailand’s 1961 Act on Ancient Monuments, Antiques, Objects of Art and National Museums. Section 24 of the 1992 Amendment states that “UCH buried in, concealed or abandoned within Thailand’s EEZ that that no one could claim to be their owners shall become the State property”.

14 Australian Historic Shipwreck Act 1976.

15 Ireland’s National Monuments (Amendment) Act No. 17 of 1987.

16 Spain’s Law No 16 of 25 June 1985 on the Spanish Historical Heritage.

17 Act Concerning the Coastal Sea and the Continental Shelf of 23 July 1987.

18 Declaration upon Ratification of the LOSC, 14 October 1996.

19 Law Decree No. 117 of 14 May 1997.

20 Protection of Military Remains Act in 1986.

21 Robyn Frost, *Underwater Cultural Heritage Protection*, Australian Year Book of International Law, Vol. 23, p. 25 (2004).

22 在北海大陆架案中，国际法院指出，国家实践，特别是那些利益“受到特别影响”的国家，必须“在所援引的条款意义上既广泛又几乎一致”。也就是说，这不仅是有多少个国家支持创造的问题，而是哪个国家支持创造的问题。一项新的、提议的习惯规则不需要在世界范围内被接受，但它必须被那些利益受到特别影响的国家所接受。

管理，最终会限制航行自由。[23] 因此，可以总结认为该习惯法的形成有一定国家实践的支持，但并没有获得受该规则影响国家的一致支持，因而尚未确立。

依据上述分析，对于台湾海峡内的水下文化遗产，尤其是位于专属经济区和大陆架上的沉船遗址，大陆和台湾是否对其享有管辖权在国际法上没有明确的规定。其原因在于，目前对大陆和台湾有约束力的《海洋法公约》虽然没有明确赋予沿海国就保护和管理专属经济区和大陆架内水下遗产享有管辖权，但也没有禁止沿海国采取单边措施来禁止或授权开发本国专属经济区内或大陆架上的文化遗产。实际上，越来越多的沿海国都通过采取单边措施，主张对专属经济区和大陆架内水下文化遗产进行管辖。此类国家的单边措施实践，为两岸就保护专属经济区和大陆架上的水下文化遗产提供了参考，这也就意味着台湾海峡内的水下遗产保护更加依赖海峡两岸的相关规定。

三、两岸有关水下文化遗产保护规定的一致性

大陆和台湾都非常重视水下文化遗产的保护，并通过颁布相关规定，主张对其水下文化遗产的管辖权。

（一）大陆

《中华人民共和国文物保护法》作为文物保护的基本法，也适用于水下文物。此外，有关水下文物的保护，另有 1989 年颁布的《中华人民共和国水下文物保护管理条例》（以下简称《水下文物条例》）予以规范。[24] 在判断中国政府对位于不同海域的水下遗址是否享有管辖权，该条例设定了两个标准，即水下文物所处位置以及来源国。具体而言，（1）对于内水、领海内的水下文物，中国政府不区分来源国，一律主张享有所有权和管辖权。（2）对于遗存于专属经济区（包括毗连区）和大陆架的水下文化遗产，中国根据其所处位置和来源国不同享有不同的权利，对源自中国或来源国不明的水下文物享有专属性所有权和管辖权，任何单位和个人要向文物主管部门及时报告或上缴上述相关的水下文物。[25]（3）遗存于外国专属经济区（包括毗连区）和大陆架以及公

23 Sarah Dromgoole ed., *Legal Protection for the UCH: National Perspectives in Light of the UNESCO Convention 2001*, Martinus Nijhoff, 2006, p. 467.

24 ZHAO Hongye, *Recent Developments in the Legal Protection of Historic Shipwrecks in China*, Ocean Development & International Law, Vol. 23:4, p.305 (2009); LU Bingbin & ZHOU Shichao , *China's State-led Working Model on Protection of Underwater Cultural Heritage: Practice, Challenges, and Possible Solutions*, Marine Policy, Vol. 65, p. 39 (2016).

25 《中华人民共和国水下文物保护管理条例》第 2 条第 2 款仅规定“中国领海以外依据中国法律由中国管辖的其他海域”，从而并没有将毗连区作为专属经济区的一个特别海域而区别对待。

海区域内的起源于中国的文物，中国“享有辨认器物物主的权利”。[26]

由此可见，中国政府显然希望尽可能保护每一处起源于中国的水下文化遗址，无论其所处何处。但这种立法方式却受到了国外学者的批评，认为该法律规定旨在为其采取排他性的管理措施提供依据，从而违背了《水下文化遗产公约》和《海洋法公约》的主旨，特别是在涉及水下文物保护的国际合作方面。[27] 但这种批评是没有依据的。首先，虽然《水下文化遗产公约》已经得到 50 多个国家的批准，但中国并不是该公约的缔约国。因此，该公约对中国还没有法律约束力。第二，虽然《海洋法公约》第 303(1) 条确实将保护和合作列为当务之急，指出“各国有义务保护在海上发现的具有考古和历史性质的物品，并应为此进行合作”，但这是一个非常含糊的规定，并没有就一个国家如何履行其义务提供任何具体指导。虽然仍可以从这个一般性义务中推论得出一些可能的法律后果，例如，如果一个国家一再无视或拒绝其他国家在遗产保护方面的合作请求，可能会被追究违反国际规则的责任。[28] 然而，即使在这种情况下，也很难指证中国政府对其文化遗产管辖权的规定将拒绝或无视其他国家在水下文化遗产保护问题上的合作请求。事实上，《水下文物条例》对不同来源的水下文化遗产做出了不同的规定，区别并尊重与水下文物有文化或历史联系的其他国家的权利。[29] 第三，中国在文化遗产保护方面始终积极寻求双边或多边合作，共同建设 21 世纪海上丝绸之路的倡议就是一个重要例子，通过政策沟通、设施联通、贸易畅通、资金融通、民心相通五方面的合作，打造政治互信、经济融合、文化包容的利益共同体、命运共同体和责任共同体。水下文物在推动区域合作，尤其是促进民心相通方面发挥着重要的作用，中国积极通过各种合作机制和项目，支持沿线国家地方、民间挖掘“一带一路”历史文化遗产。2016 年 12 月，中国和沙特阿拉伯签署了一项双边协议，共同开展为期五年的塞林港水下考古项目，正体现了大陆积极通过双边合作来加强水下遗产的保护。

（二）台湾

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26 《中华人民共和国水下文物保护管理条例》第 2、3 条。

27 Elena Perez-Alvaro & Craig Forrest, *Maritime Archaeology and Underwater Cultural Heritage in the Disputed South China Sea*, International Journal of Cultural Property, Vol. 25:3, p. 375 (2018); Jeremy Page, *Chinese Territorial Strife Hits Archaeology*, The Wall Street Journal (Dec. 2, 2013), https://www.wsj.com/articles/chinese-territorial-strife-hits-archaeology-1385954351; Nguyen Hong Thao, *Is China's Silk Road Initiative an Interest in the East Sea?*, Vietnam Net (Sept. 9 2014), https://english.vietnamnet.vn/fms/special-reports/111436/is-china-s-silk-road-initiative-an-interest-in-the-east-sea-.html.

28 Tullio Scovazzi, *Law of the Sea and Underwater Cultural Heritage,* The International Journal of Marine and Coastal Law, Vol. 27:4, p. 754; Moritaka Hayashi, *Archaeological and Historical Objects under the United Nations Convention on the Law of the Sea, Marine Policy*, Vol. 20, p. 291 (1996).

29 《中华人民共和国水下文物保护管理条例》第 2 条。

台湾地区四面环海，自古人类在其周边海域频繁的活动和航行，因而遗留了丰富的水下文化资产。[30] 台湾地区分别于 2015 年和 2016 年颁布了“《水下文化资产保存法》”（以下简称“《水下文资法》“）及其“《水下文化资产保存法施行细则》”，以打击对水下遗产的掠夺、非法贩运和商业开发。《水下文资法》全文共 7 章 46 条，主要针对水下文化资产的界定、所有权和管辖权主张，以及保护等方面进行了全面的规制。

《水下文资法》的一大亮点是针对不同的水域明确了台湾当局享有的权利和管辖空间，为台湾保护和管理位于不同区域内的水下文化遗产提供了依据。就台湾海峡而言，《水下文资法》第 16 条规定台湾拥有规范、授权或许可、禁止于其邻接区内、专属经济海域内及大陆礁层上以水下文化资产为标的活动的专属排他管辖权”。[31] 虽然台湾对其大陆架和专属经济区内的水下文化资产主张专属排他管辖权，但相关部门就这一水域内的水下文化资产进行考古时，应与依相关国际公约提出声明之国家，共同谘商保护该水下文化资产之最佳方式；并且，作为协调方时，应实施包括台湾地区在内的所有谘商方一致同意之保护措施、实施符合前款规定及相关国际公约规定之保护措施、对水下文化资产进行必要初步研究并得即时通知相关国际组织。[32]

台湾地区关于这大陆架和专属经济区的文物保护规定，明显参考了《水下文化遗产公约》的相关规定，即通过合作模式来实现对水下文物的管理。[33] 具体而言，公约首先禁止其公民和船舶从事掠夺水下文化遗产的活动，都要求他们报告此类活动，并在此基础上通知联合国教科文组织和其他存在利益关系的各方，从而通过合作的方式来保护水下文化遗产。[34]《水下文化遗产公约》是在目前《海洋法公约》无法有效保护领海以外水下文物的情况下，国际社会希望通过国际合作的模式，以打击在沿海国领海以外的发掘和打捞水下文物的活动。虽然这样的合作机制是非常复杂和繁琐的，实际执行效果也是有待商榷，但《水下文化遗产公约》所提倡的国际合作的模式，为各国合作保护水下文化遗产提供了解决策略。而台湾地区的《水下文资法》也通过借鉴《水下文化遗产公约》的合作模式来加强对专属经济区和大陆架内的水下文物的保护和管理。

综上所述，大陆和台湾的相关法规都主张对专属经济区和大陆架内的水下文物的管辖权，两岸也都在支持和欢迎有关水下文化遗产的合作。两岸在有关水下遗产管辖权的问题上存在一致性，这也为两岸合作保护海峡内的水下文化遗产奠定了重要的基础。

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30 邱文彦：《国家公园内水下文化资产之保存与挑战》，载《海洋及水下科技》2018 年第 19 期，第 12 页。

31 台湾地区《水下文化资产保存法》第 16 条。

32 台湾地区《水下文化资产保存法》第 16 条。

33 HU Nien-Tsu Alfred, *The 2001 UNESCO Underwater Cultural Heritage Convention and Taiwan's Domestic Legal Regime*, Ocean Development & International Law, Vol. 39:4, p. 372 (2008).

34 《水下文化遗产公约》第 10 条。

四、两岸就台湾海峡内开展水下文化遗产保护合作的可行性

（一）两岸合作的法律基础

两岸要合作保护台湾海峡内的水下遗产，必须存在一致的法律基础。现两岸都分别颁布了专门针对水下遗产的相关规定，在很多关键方面都是一致，为两岸合作保护水下文化遗产奠定了基础。

第一，保护对象的内涵与外延基本一致。大陆和台湾的法律分别采用了“水下文物”和“水下文化资产”的措辞，含义大致相同。 具体而言，依据《水下文资法》，水下文化资产是指“以全部或一部且周期性或连续性位于水下，具有历史、文化、考古、艺术或科学等价值，并与人类生活有关的相关资产”，例如场址、建筑物、器物及人类遗骸。[35]《水下文物条例》规定受保护的水下文物为所有“具有历史、艺术和科学价值的人类文化遗产”，唯一的例外是“一九一一年以后的与重大历史事件、革命运动以及著名人物无关的水下遗存”。[36] 由此可见，台湾和大陆的立法模式其实是传统文物大国通常采用的“地毯式”的立法模式，即通过一个非常宽泛的定义将大部分的水下文物纳入其保护范畴，并且规定这样的法律保护在水下遗址被发现之前就已经自然存在了。[37]

第二，都规定从事水下文物的考古勘探和发掘活动，应首先获得主管部门批准。中国国家文物局主管全国的水下文物的登记注册、保护管理以及有关考古勘探和发掘工作的审批工作，未经其批准，任何单位或个人不得以任何方式私自勘探或发掘。[38] 因此，任何个人或组织机会从事水下文物的勘探和发掘活动，都应首先向国家文物局提出申请，并在得到其批准后才能进行。[39] 台湾当局也规定，针对水下文化资产所进行之实地调查、研究、发掘及其他可能干扰或破坏水下文化资产之活动，应向主管机构申请核准。[40] 同时，在活动进行期间，相关人员应依照计划书定期制作活动内容报告送主管机关备查，并接受主管机关的监督。[41]

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35 台湾地区《水下文化资产保存法》第 3 条。
36 《中华人民共和国水下文物保护管理条例》第 2 条。
37 有关文化遗产的保护，英美等普通法系的国家一般采取选择性的做法，即仅对那些经过评估被认为具有特殊意义的水下遗址进行保护。大陆法系国家则倾向采取排他和专属性的保护做法，即对超过一定年限的所有文化遗产提供保护，并主张国家应该在文化遗产保护过程中起主导作用。Dromgoole, *UCH and International Law,* p. 32.; Alessandro Chechi, *The Settlement of International Cultural Heritage Disputes,* Oxford University Press, 2014, p. 7.
38 《中华人民共和国水下文物保护管理条例》第 4 条。
39 《中华人民共和国水下文物保护管理条例》第 7 条。
40 台湾地区《水下文化资产保存法》第 22 条。
41 台湾地区《水下文化资产保存法》第 23 条。

第三，都规定了发现报告制度，对水下遗产排除打捞法或发现物法的适用。《水下文物条例》规定对于由国家所有并行使管辖权的那部分水下文物，发现者应当及时报告和上缴国家文物局或地方文物行政管理部门。[42] 而台湾方面，《水下文资法》则也明确规定任何人发现疑似水下文化资产时，应即停止该影响疑似水下文化资产之活动，维持现场完整性，并立即通报主管机关处理。[43] 因此，两岸都采取相同的法律规定，即认为涉及水下文化遗产的打捞或权利主张时，民法中有关无主物、遗失物、埋藏物、拾得漂流物或沉没品的规定，或其他海商法、海事法等有关物的发现、打捞的相关法令，并不适用于水下文化遗产，从而排除了发现物法或打捞法的适用。

第四，都反对水下遗产的商业性开发和非法流转。这里所指的商业性开发是特指利用水下文化遗产牟利，以追求商业利益为导向，从而对水下文化遗产造成严重破坏，并导致发掘品无可挽回地失散。[44] 而非法流转更是严重违背水下文物的保护原则。针对这类问题，《水下文物条例》规定对于破坏水下文物，私自勘探、发掘、打捞水下文物，或者隐匿、私分、贩运、非法出售、非法出口水下文物的行为，应当追究行政或刑事责任。[45] 而台湾方面的《水下文资法》也明确规定“不得以营利为目的所为买卖、互易或其他方式交易水下文化资产，或进行之打捞及其他行为”。[46] 因此，两岸可以在此基础上，共享非法发掘品信息，加强海关检查，防止非法盗掘的沉船沉物进人其管辖范围并进行交易；对于已经入境的非法发掘品，应予以扣押。

第五，都支持通过合作的模式保护水下文化遗产。正如前章所论，大陆和台湾都不反对通过双边或多边的合作模式来加强对水下文化遗产的保护。在《水下文化遗产公约》所构建的合作框架下，台湾的《水下文资法》本身就与该公约有高度的契合性，尤其规定在文物开发过程中要与相关国家或地区进行协商。而中国虽然尚未加入《水下文化遗产公约》，但其主管部门一直在积极准备加入该公约，并且其立法和保护实践都已经在积极探索文物合作保护的可行模式。

但是，不能否认的是，两岸在有关水下遗产保护方面的法律规定也存在一些冲突，尤其是在涉及非以水下文化遗产为主要标的的活动，比如海底管道铺设、港口疏浚等。由于这些活动通常都是合法活动，只是可能会对遗产带来干扰或破坏，故台湾《水下文资法》的规定比较宽松，台湾当局的主管机关应就其他非以水下文化资产为标的之活动，召开水下文化资产审议会，与其他主管部门协调保护和管理事项。[47] 同时，政府机关或公营事业在计划水域开发时，应进行环境影响评估项目，应先行调查所涉水域

42 《中华人民共和国水下文物保护管理条例》第 6 条
43 台湾地区《水下文化资产保存法》第 13 条。
44 此类商业开发活动与保护和妥善管理文化遗产的精神格格不入，要区别于为协助公众亲近、教育宣导的活动，比如付费博物馆的水下文物展览。
45 《中华人民共和国水下文物保护管理条例》第 10 条。
46 台湾地区《水下文化资产保存法》第 3 条。
47 台湾地区《水下文化资产保存法》第 8 条。

有无水下文化资产或疑似水下文化资产，如有发现，应即通报主管机关处理。[48] 鉴于大陆的《水下文物条例》曾规定，任何单位或者个人实施水下文物考古勘探或者发掘活动时，不得妨碍交通运输、渔业生产、军事训练以及其他正常的水面、水下作业活动，[49] 水下文化遗产的保护被放在了比较次要的位置。2019 年 3 月大陆新颁布的《实施条例》修订草案（征求意见稿）删除了该不恰当的规定，并重新规定在有可能遗存水下文物的水域进行大型基本建设工程时，应事前进行考古调查，从而将水下文物保护放在了一个更加重要的位置，为两岸合作保护台湾海峡的水下文化遗产扫清了障碍。[50]

综上所述，虽然两岸都分别颁布了专门针对水下文化遗产的法律，但在很多关键问题上的立法目的和法律规定都是一致。因此，两岸合作保护水下文化遗产是具有法律基础的，也为未来两岸文物保护相关的公权力部门开展相关合作奠定了基础。

（二）合作保护的可行性

虽然两岸在水下文物保护方面存在明显的共同点，但不能否认的是，两岸对水下文物的保护和合作之成败与否，在很大程度上取决于两岸关系的状况。相对于其他领域的合作而言，水下文物遗产的保护与合作问题又有其特殊性，即海峡两岸对水下文物的保护，实际上是保护两岸中国人的共同财富和文化根源。有效的保护台湾海峡内水下文化遗产，需要大陆与台湾共同携手，行使《海洋法公约》赋予沿海国的权利，一致对外，保护两岸人民的共同文化遗产。

值得注意的是，两岸就合作水下文物保护的意愿已逐渐明显，两岸的学者和政府官员都多次通过论坛的形式了解两岸水下文物保护的相关规定，以及探讨两岸合作保护水下文物的可能性。2018 年 6 月，“两岸水下文化资产法律、政策及实务论坛”在台湾基隆举办。来自国家文物局水下文化遗产保护中心、厦门大学、中华水下考古学会、台湾海洋大学等机构的专家和学者，以水下文化遗产保护为主轴，针对两岸最新水下文化遗产的立法与管理信息、探勘与维护，以及未来两岸水下文化遗产交流合作方向等议题进行研讨。此次研讨会为两岸了解对方在水下文物保护相关规定与实务的现况提供了机会，也为未来双方进一步的合作，共同两岸人民的共同文化遗产奠定基础。

（三）合作保护的模式

台湾海峡的水下文化遗产进行法律保护不仅必要，而且紧迫。不能否认的是，虽

48 台湾地区《水下文化资产保存法》第 9 条。
49 《中华人民共和国水下文物保护管理条例》第 9 条。
50 2019 年《水下文物条例》修订草案第 10、11 条。

然台湾海峡两岸都是中国领土，受单一而不可分的中国主权的管辖，但海峡两岸事实上尚未统一。对于台湾海峡内专属经济区和大陆架上发现的水下文化遗产，是大陆和台湾所面对的共同挑战，也是两岸如果考虑合作保护海峡内的水下文化遗产所必须要面对的问题。

至今，两岸在水下文物方面的合作尚未破冰，但是从其他领域的合作来看，比如就船源污染问题的合作，海峡两岸可以协商划定双方各自的管辖水域。但是如果要划分，可以参考适用的规范只有《海洋法公约》第 74 条，即参考海岸相向或相邻国家间专属经济区界限的划定办法来划定中国一国之内海峡两岸各自的专属经济区管辖界限。但若适用该条，则很可能被台独势力引为分裂国家、制造“一中一台”的口实。[51] 因此，在目前海峡两岸局势的大背景下，并不适合采用。目前可作的，应是在原有的默契基础上，建立共同保护区，由两岸联合执法，相互配合，采取措施保护台湾海峡的水下文化遗产。

就建立共同保护区而言，两岸可以以某一特定沉船为起点，探索两岸合作保护的具体内容和模式。在此基础上，扩展到具有大量沉船的特定区域，最后扩大至整个台湾海峡。[52] 举例而言，两岸可以颁布法令共同实施原址保护，并且禁止包括打捞沉船、拖网捕鱼、采集矿物、铺设电缆等影响水下文物保护的活动。在保护区内，只有获得主管机关许可的个体或者机构，才可以进入水下文化资产保护区。 而对于违反两岸相关规定的行为，主管机关可以请求海岸巡防机关协助。而在不侵扰水下文化遗产保存和管理的前提下，海峡两岸也可以考虑开放保护区全部或一部分，提供公众观览，以达到社会教育之目的。

五、结　语

台湾海峡内水下文化遗产不仅是中华文明发展的鉴证，更是两岸同宗同源的明证，有效的保护台湾海峡内水下文化遗产，是两岸中国人的共同使命，也是当前迫切需要海峡两岸共同解决的重大问题之一。然而，长期以来，台湾海峡是被两岸认为是一块特殊的敏感区域，因而对它的有效管理和保护也迟迟没有被提上议事日程。但随着考古技术的不断发展，水下遗迹变得不再遥不可及。迄今为止，已经有大量水下遗址在未使用科学的考古开采方法的情况下遭到勘探、打捞和破坏，造成了不可挽回的损失。因此，大陆和台湾应采取积极的措施加强对海峡内水下遗产的原址保护，阻止未经许可的打捞行为，以及打击涉及水下遗产的非法流转和贩运。海峡两岸的合作，

51　傅崐成、刘先鸣：《台湾海峡船源污染法律问题刍议》，载《中国海洋法学评论》2006 年第 1 期，第 154 页。

52　对于两岸具体合作的模式和内容，参考赵亚娟：《论两岸保护台湾海峡水下文化遗产之合作机制的构建》，载《华南理工大学学报（社会科学版）》2012 年第 1 期，第 83-85 页。

实际上是大陆与台湾共同携手，一致对外，保护台湾海峡的共同文化遗产，保护两岸人民的共同文化遗产。

Legal Protection of Underwater Cultural Heritage in the Taiwan Strait

ZHONG Hui*

Abstract: Scholars generally call for both sides along the Taiwan Strait to put aside their political differences and build a set of cooperation mechanisms to protect the common cultural heritage of the people on both sides. However, current research mainly focuses on the practical operational issues, but rarely explores the basis of cross-strait cooperation that concerns the protection of underwater cultural heritage in a legal context. In view of this, this paper analyzes the legal basis of cross-strait cooperation and protection from two levels: The first is whether both sides of the strait have jurisdiction over activities directed at or affecting underwater cultural heritage in the Taiwan Strait. The second is whether the relevant regulations between both sides of the strait provide a legal basis for cooperation. This paper argues that there is a solid legal basis and a clear path of cooperation between both sides of the strait to protect the underwater cultural heritage.

Key Words: United Nations Convention on the Law of the Sea; Convention on the Protection of the Underwater Cultural Heritage; the Taiwan Strait; Protection and management; Underwater cultural heritage

The Taiwan Strait has been an important channel for China's foreign trade since ancient times, which has a very rich underwater cultural heritage and is of great value to study early maritime trade and cultural exchanges. Despite this, the underwater cultural heritage in the Strait is becoming vulnerable to illicit excavation and destruction. For example, in 2005, when the wreckage of a Qing Dynasty ship named "Wangjiao No. 1" was discovered in Pingtan, Fujian Province,

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it had already being a victim of theft, and its hull and blue-and-white porcelains were seriously damaged.[1] This resulted in an urgent need for both sides to take preventive measures to protect the underwater cultural heritage in the Taiwan Strait, more specifically to combat potentially illegal salvage activities in this sea area. However, before taking such measures, some questions need to be discussed: Are these protective measures in line with the relevant provisions of the United Nations Convention on the Law of the Sea (UNCLOS). Will the jurisdiction of coastal States be indirectly expanded, and, as a result, opposed by the international community? If both sides of the strait cooperate to protect the underwater cultural heritage in the Taiwan Strait, will this cause any friction or conflict arising that could potentially jeopardize relations along the strait? More precisely, do both sides of the strait agree that underwater cultural relics are essentially "cultural heritage" rather than "commodities", and thus take measures to protect the cultural, historical and archaeological value of underwater cultural relics as opposed to encouraging commercial organizations to salvage underwater cultural relics and seek to profit from them? This paper will first analyze the legal status of the Taiwan Strait and clarify the sea areas it contains. On this basis, this paper will further demonstrate the legal basis and potential avenues for heritage cooperation between both sides of the strait.

I. Legal Status of the Taiwan Strait

In order to discuss the protection of underwater cultural heritage in the Taiwan Strait, it is necessary to clarify which sea areas it includes. According to UNCLOS, coastal States enjoy different rights in different sea areas, and therefore coastal States generally have the right to take measures against activities that take place in the territorial sea involving underwater cultural heritage. An example of such defensive measures include the enactment of laws to prevent unauthorized salvage

1 LIU Bin, *A Summary of the Symposium on Cooperation in the Protection of underwater Cultural relics in the Taiwan Strait*, China Ocean Law Review, Vol. 6:2, p. 133-134 (2010). (in Chinese)

and excavation activities.[2] In most sea areas, such as the exclusive economic zone and the continental shelf, the jurisdiction of coastal States is very limited, and whether it includes underwater cultural heritage is debatable. If salvage activities take place on the high seas, such activities are only subject to the jurisdiction of the flag State, unless the flag State prohibits its vessels or citizens from engaging in the salvage of underwater cultural relics or requires prior approval to engage in such activities. The salvage of underwater cultural relics is theoretically within the scope of freedom on the high seas. In short, the measures and jurisdiction that coastal States can take to salvage underwater cultural relics in different sea areas are different. Therefore, the analysis of the legality surrounding the Taiwan Strait is the basis for discussing cross-strait cooperation with the intention of protecting underwater cultural heritage in the Taiwan Strait.

Chapter III of UNCLOS specifically addresses the issue of "straits for international navigation" and sets out in detail the regime of passage of such straits, as well as the rights and obligations of coastal States. Whether the Taiwan Strait complies with the provisions of the Taiwan Strait will determine whether both sides of the strait need to follow its provisions. From the perspective of purely contextual interpretation, the northern and southern ends of the Taiwan Strait connect both parts of the exclusive economic zone and are actually used for international navigation, fulfilling the requirements of UNCLOS regarding "straits for international navigation". However, what is particularly special about the Taiwan Strait is that the width of the Taiwan Strait is 70 to 350 nautical miles. As UNCLOS stipulates that territorial sea is no more than 12 nautical miles, there must be a fairly wide exclusive economic zone in the Taiwan Strait, and its navigation and hydrological characteristics are as convenient as those near the coast. Therefore, this particularity of the Taiwan Strait determines that the "transit passage system" is not applicable in the Taiwan Strait. Its legal status should be based on the legal nature of different maritime areas, which determine the measures that can be taken by the Chinese mainland and Taiwan concerning the protection and management of

2 The controversial issue for the protection of underwater cultural heritage in the territorial sea is whether sunken warships and other state-owned sunken ships continue to enjoy state immunity. For related discussions, please see David J. Bederman, *Rethinking the Legal Status of Sunken Warships*, Ocean Development and International Law, Vol. 31:1, p. 97 (2000); Craig Forrest, *An International Perspective on Sunken State Vessels as Underwater Cultural Heritage*, Ocean Development & International Law, Vol. 34:1, p. 41 (2003).

underwater cultural heritage in this area.[3]

Given that the maximum width of the Taiwan Strait is no more than 350 nautical miles, the Taiwan Strait is actually divided into two parts: The first part is theterritorial waters of 12 nautical miles along both sides of the Taiwan Strait, which are under the jurisdiction of the Chinese mainland and Taiwan respectively. The second is China's exclusive economic zone and continental shelf which is beyond 12 nautical miles. As far as heritage protection is concerned, for the underwater cultural heritage located in the territorial sea, both sides of the strait can protect and manage the underwater cultural heritage in the sea area in accordance with their respective regulations. The main challenge is how do both sides of the strait protect the underwater cultural heritage in the exclusive economic zone outside the territorial sea and on the continental shelf. With regard to this issue, the second part of this paper will discuss what kind of management measures permitted by international law can be taken by both sides of the strait to protect the underwater cultural heritage located in the waters under the framework of existing international law.

II. The Protection of Underwater Cultural Heritage under International Law

A. UNCLOS: A basic but insufficient regulation regime

UNCLOS serves as the basic law concerning the coordination of ocean affairs. Article 149 of Part XI “the Area” and Article 303 of Part 16 “General provisions” are devoted to the protection of underwater cultural heritage. Although UNCLOS provides a certain basis for the protection of underwater cultural heritage, its own provisions are not perfect and are not sufficient to protect underwater cultural heritage in the exclusive economic zone and on the continental shelf.

Although the contiguous zone beyond the territorial sea is part of the exclusive economic zone, Article 303(2) of UNCLOS treats it as a special area, which grants coastal States more rights. Specifically, if the underwater cultural heritage

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3 FU Kuenchen & LIU Xianming, *On the Legal Issues of Ship Source Pollution in the Taiwan Strait*, China Ocean Law Review, Vol. 2:1, p. 493-500 (2006); ZOU Keyuan, *Redefining the Legal Status of the Taiwan Strait*, The International Journal of Marine and Coastal Law, Vol. 15:2, p. 245 (2000).

is removed from the seabed of the contiguous zone without the consent of the coastal State, the coastal State may presume that the act violates the relevant legal provisions and thus has the right to take relevant measures to prevent it.

With regard to the continental shelf and the exclusive economic zone beyond the contiguous zone, articles 149 and 303 of UNCLOS do not make special provisions for underwater cultural heritage in this area. However, if reference is made to the special sections of UNCLOS on the exclusive economic zone and continental shelf, it is clear that the jurisdiction of coastal States in the exclusive economic zone and continental shelf is not absolute, which mainly includes sovereign rights relating to natural resources, and jurisdiction relating to the construction and use of artificial islands, facilities and structures; marine scientific research; and the protection and preservation of the marine environment.[4] However, underwater cultural heritages, such as shipwrecks, porcelains, underwater sites, are created by human and therefore are not considered natural resources.[5] This means that searches, salvages and even destruction of underwater cultural relics in this sea area is limited to the exclusive jurisdiction of the flag State, and the coastal State does not have jurisdiction over it. As such, unless the flag State imposes restrictions on this behaviour, such as stipulating that underwater archaeology must be approved by the government in advance, individuals or organizations of that country can fully engage in the excavation and salvage of underwater cultural relics in the exclusive economic zone of other countries. Yet the problem is that not every country adopts a restrictive attitude towards underwater archaeology, and countries such as the United States, Indonesia and Malaysia even encourage commercial salvaging. Also, flag States often ignore sea activities as they often occur in areas that are far away from their waters, making the protection of underwater cultural heritage located in the exclusive economic zones and continental shelves of other States extremely difficult.

It can thus be concluded that UNCLOS does not explicitly grant coastal States jurisdiction over underwater cultural objects in the exclusive economic zone and continental shelf. However, it is worth noting that UNCLOS also does not prohibit coastal States from taking unilateral measures to prohibit or authorize the development of cultural heritage within their exclusive economic zones or on their continental shelves. This has led to an increasing number of coastal States, through

4 Arts. 56 & 77 of the United Nnations Convention on the Law of the Sea.
5 Janet Blake, *International Cultural Heritage Law*, Oxford University Press, 2015, p. 74.

unilateral measures, advocating jurisdiction over underwater cultural heritage located in the exclusive economic zone and / or on the continental shelf.[6]

B. Underwater Heritage Convention: effective protection regime, but unratified

Given that UNCLOS does not provide effective protection for underwater cultural heritage overseas, UNESCO prepared and published a special convention for the protection of underwater cultural heritage in 2001, which is known as the Convention on the Protection of the Underwater Cultural Heritage (hereinafter "the Underwater Heritage Convention"). One of the purposes of this Convention is to provide comprehensive protection for underwater cultural heritage, no matter where it is located, and to combat the increasing looting and destruction of underwater cultural heritage.[7]

With regard to underwater cultural heritage in the exclusive economic zone and on the continental shelf means that the because of the limited jurisdiction of States over maritime areas, intervention and plunder cannot be prevented by a State that does not have jurisdiction over a site. In response to this issue, the Underwater Heritage Convention provides an international cooperation programme, as well as providing reporting and consultation, as a strategy to address this situation. The principle of its cooperation programme is that even if coastal States do not have jurisdiction over archaeological sites on their exclusive economic zone and continental shelf, they can still cooperate with other States which may be either flag States or the State to which the treasure hunters are from. Such cooperation will bypass the jurisdiction dilemma and allow legal action to be taken to ensure appropriate protection. Although the feasibility of this cooperation system has been questioned, an important breakthrough in the Underwater Heritage Convention lies in Article 10(2). In this article, a coastal State has, under the framework of international cooperation, "the right to prohibit or authorize any activity directed at such heritage to prevent interference with its sovereign rights or jurisdiction as provided for by international law".[8] In other words, although the Underwater Heritage Convention claims to be consistent with UNCLOS, it actually expands the

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6 More analysis can be found in Section 3 of Part 2.

7 ZHAO Yajuan, *International Legal Regime for Protecting Underwater Cultural Heritage*, Wuhan University International Law Review, Vol. 5:1, p. 102 (2007). (in Chinese)

8 Art. 10(2) of the Convention on Underwater Heritage.

jurisdiction of coastal States in the exclusive economic zone and on the continental shelf to some extent. Accordingly, coastal States may take unilateral measures in accordance with article 10 (2) to prevent the salvage and excavation of underwater cultural heritage occurring in its exclusive economic zone or on the continental shelf.[9]

Although the Underwater Heritage Convention gives coastal States jurisdiction over underwater cultural heritage on the exclusive economic zone and on the continental shelf, the Convention has not been widely accepted by the international community. An example of this is in Asia, where only Cambodia and Iran have acceded to the Convention. Although Chinese scholars have been vocal on China to ratify the Underwater Heritage Convention to combat the plunder and illegal trafficking of underwater heritage, and to promote public awareness of underwater heritage, China has yet to sign up to the Convention.[10] This means that the Chinese mainland and Taiwan cannot rely on Article 10(2) to take unilateral measures to prevent foreign ships from salvaging the underwater cultural heritage in the Strait.

C. Customary rule: emerging, but not established

Despite international conventions failing to effectively protect the underwater cultural heritage beyond a State's territorial sea, more and more countries have extended their jurisdiction beyond their territorial waters by enacting domestic laws in order to prevent the plunder and unscientific development of underwater cultural heritage. For example, Vietnam claims ownership of all underwater cultural heritage located on its continental shelf and in its exclusive economic zone.[11] Indonesia also advocates the protection of underwater shipwrecks on the continental shelf and in the exclusive economic zone, but with the condition that the shipwreck has been underwater for at least 50 years.[12] Thailand claims that underwater cultural relics located in its exclusive economic zone are state-owned

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9 Sarah Dromgoole, *Underwater Cultural Heritage and International Law,* Cambridge University Press, 2013, p. 290.

10 ZHANG Liang & ZHAO Yajuan, *On China Should Ratify the Convention on the Protection of Underwater Cultural Heritage as Soon as Possible*, Wuhan University Journal (Philosophy & Social Science), Vol. 2011:4 , p. 43-44 (2011).

11 2001 Vietnam Law on Cultural Heritage, No: 28/2001/QH10; 2005 Vietnam Decree on the Management and Protection of Underwater Cultural.

12 Indonesia's 2010 Law Concerning Cultural Conservation and Indonesia's 2007 Presidential Decree on the National Committee and Utilization of Valuable Cargo from Sunken Ships.

property, while[13] Australia,[14] Ireland[15] and Spain[16] have also enacted domestic laws declaring jurisdiction over underwater cultural heritage located on their respective continental shelves. Some examples of more extreme domestic law enforcement include Serbia, who claims sovereign rights to all objects of an archaeological nature on its continental shelf[17], and Malaysia, who stipulates that objects of an archaeological and historical nature found in the sea areas over which it exercises sovereignty or jurisdiction need to be applied for and authorized before they can be removed.[18] Portugal stipulates that underwater cultural relics located within its continental shelf and exclusive economic zone have jurisdiction.[19] The United Kingdom has also extended its protection to certain military war sites containing human remains in international waters.[20]

More and more States have extended their jurisdiction beyond their territorial waters through the implementation of domestic law, some scholars have pointed out whether this means the emergence of new rules of international customary law. The proposed customary international law would provide coastal States with unilateral measures to extend their jurisdiction beyond their territorial waters.[21] Whether the rule can eventually become an international customary law depends on the attitude of the States who are affected the most, including coastal States, large States that have underwater cultural heritage, and shipping powers that advocate freedom of navigation.[22] Currently, although a certain number of affected countries have adopted unilateral measures to regulate the underwater cultural heritage in the exclusive economic zone and the continental shelf, they have not received the full

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13 Section 24 of Thailand's 1961 Act on Ancient Monuments, Antiques, Objects of Art and National Museums. Section 24 of the 1992 Amendment states that "UCH buried in, concealed or abandoned within Thailand's EEZ that that no one could claim to be their owners shall become the state property".

14 Australian Historic Shipwreck Act 1976.

15 Ireland's National Monuments (Amendment) Act No. 17 of 1987.

16 Spain's Law No 16 of 25 June 1985 on the Spanish Historical Heritage.

17 Act concerning the Coastal Sea and the Continental Shelf of 23 July 1987.

18 Declaration upon Ratification of the LOSC, 14 October 1996.

19 Law Decree No. 117 of 14 May 1997.

20 Protection of Military Remains Act in 1986.

21 Robyn Frost, *Underwater Cultural Heritage Protection*, Australian Year Book of International Law, Vol. 23, p. 25 (2004).

22 In the *North Sea Continental Shelf* case, the International Court of Justice noted that state practice, especially those whose interests were "particularly affected", must be broad and almost consistent in the sense of the articles invoked. In other words, it's not just a question of how many countries support creativity, but which country supports it. A new proposed customary rule does not need to be accepted worldwide, but it must be accepted by countries whose interests are particularly affected.

support of the countries who are most affected. This is also reflected in the drafting process of the Underwater Heritage Convention, coastal States and major cultural relic States have actively advocated that the jurisdiction over underwater cultural relics should be extended to the exclusive economic zone and continental shelf. However, this idea has been opposed by the United Kingdom, the United States and other countries who fear that such extension will eventually restrict freedom of navigation.[23] It can thus be concluded that the formation of the customary law is supported by some States, but it does not have the unanimous support of the countries most affected by the rule. Therefore, the proposed customary law has not yet been approved.

Based on the above analysis, it can be concluded that whether the Chinese mainland and Taiwan have jurisdiction over the underwater cultural heritage in the Taiwan Strait, especially the shipwreck sites located in the exclusive economic zone and continental shelf, is actually a grey area. Admittedly, UNCLOS currently restricts the Chinese mainland and Taiwan as it does not explicitly grant coastal States jurisdiction over the protection and management of underwater heritage in the exclusive economic zone and on the continental shelf. However, it also does not prohibit coastal States from taking unilateral measures to prohibit or authorize the development of cultural heritage within their exclusive economic zones or on their continental shelves. In fact, more and more coastal States have advocated jurisdiction over underwater cultural heritage in exclusive economic zones and continental shelves through unilateral measures. This kind of State unilateral practice provides a reference for the both sides of the strait to protect the underwater cultural heritage on the exclusive economic zone and the continental shelf, which means that the protection of underwater heritage in the Taiwan Strait is largely dependent on the relevant regulations on both sides of the Taiwan Strait.

III. Protection of Underwater Cultural Heritage from Both Sides of the Strait

The Chinese mainland and Taiwan attach great importance to the protection of underwater cultural heritage, and have announced relevant regulations claiming jurisdiction over its underwater cultural heritage.

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23 Sarah Dromgoole ed., *Legal Protection for the UCH: National Perspectives in Light of the UNESCO Convention 2001*, Martinus Nijhoff, 2006, p. 467.

A. Chinese mainland

The Law of the Peoples Republic of China on Protection of Cultural Relics Protection, which is the basic law for the protection of cultural relics, is also applicable to underwater cultural relics. In addition, the protection of underwater cultural relics is mainly based on the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics promulgated in 1989 (hereinafter "the Regulations").[24] In judging whether the Chinese mainland has jurisdiction over underwater sites located in different sea areas, the Regulation sets out two criteria, namely, the location of underwater cultural relics and the country of origin. Specifically, (1) for underwater cultural relics in inland waters and territorial waters, the Chinese mainland does not distinguish between countries of origin and claims ownership and jurisdiction over all underwater cultural relics in its sea area. (2) Concerning underwater cultural heritage that is found in the exclusive economic zone (including the contiguous zone) and the continental shelf, the Chinese mainland enjoys different rights according to its location and country of origin: If it originates from China or the underwater cultural relics originate from an unknown country, the Chinese mainland enjoys exclusive ownership and jurisdiction. In this regard, the Regulations require any unit or individual to promptly report or hand over relevant underwater cultural relics to the department in charge of cultural relics, which shall be properly disposed of by the latter.[25] (3) China enjoys the right to identify the owners of artifacts of cultural relics originating from China that remain in foreign exclusive economic zones (including contiguous zones), continental shelves and high seas areas.[26]

Thus it is clear that the Chinese mainland wants to protect every underwater

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24 ZHAO Hongye, *Recent Developments in the Legal Protection of Historic Shipwrecks in China*, Ocean Development & International LawVol. 23:4, p. 305 (2009); LU Bingbin & ZHOU Shichao, *China's State-led Working Model on Protection of Underwater Cultural Heritage: Practice, Challenges, and Possible Solutions,* Marine Policy, Vol. 65, p. 39 (2016).

25 Art. 2, para. 2 of the Regulationsof the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics stipulates that "other sea areas outside China's territorial waters but under the jurisdiction of China in accordance with Chinese law", which means that the contiguous zone is not treated differently as a special sea area of the exclusive economic zone.

26 Art. 2 & 3 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

cultural site has Chinese origins no matter where it is located. However, this form of legislation has been criticized by foreign scholars, who believe that the legal provisions of the Chinese mainland are designed to provide a basis for the adoption of exclusive management measures, thus violating the Underwater Heritage Convention and UNCLOS, particularly in terms of international cooperation relating to the protection of underwater cultural relics.[27] But such criticism is unfounded. First of all, although the Underwater Heritage Convention has been ratified by more than 50 countries, China is not a member State to the Convention. Therefore, China is not legally bound to the Convention. Secondly, Article 303(1) of UNCLOS does prioritize protection and cooperation, stating that "States have the duty to protect objects of an archaeological and historical nature found at sea and shall cooperate for this purpose". However, this is a very vague provision and does not include any specific guidelines on how a State should comply with its obligations. It is however clear that some possible legal consequences can still be inferred from Article 303, for example, if a State repeatedly turns down or overlooks requests for cooperation from other States in the field of heritage protection, it may be held accountable for violations of international rules.[28] However, even in such cases, it is difficult to argue that the provisions with regard to the Chinese mainland's jurisdiction over its cultural heritage indicate that the Chinese mainland will reject or ignore requests for cooperation from other States on the protection of underwater cultural heritage. In fact by analysing the Chinese mainland's Regulations, it is clear that the Chinese mainland has different provisions on underwater cultural heritage from different origins, distinguishing and respecting the rights of other countries that are culturally or historically related to underwater cultural relics.[29] Thirdly, the Chinese mainland has actively sought bilateral or multilateral cooperation in the protection of cultural heritage. One example that illustrates this is the initiative to build the

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27 Elena Perez-Alvaro and Craig Forrest, *Maritime Archaeology and Underwater Cultural Heritage in the Disputed South China Sea*, International Journal of Cultural Property, Vol. 25:3, p. 375 (2018); Jeremy Page, *Chinese Territorial Strife Hits Archaeology*, The Wall Street Journal (Dec. 2, 2013), https://www.wsj.com/articles/chinese-territorial-strife-hits-archaeology-1385954351; Nguyen Hong Thao, *Is China's Silk Road Initiative an Interest in the East Sea?*, Vietnam Net (Sept. 9, 2014) , https://english.vietnamnet.vn/fms/special-reports/111436/is-china-s-silk-road-initiative-an-interest-in-the-east-sea-.html.

28 Tullio Scovazzi, *Law of the Sea and Underwater Cultural Heritage,* The International Journal of Marine and Coastal Law, Vol. 27:4, p. 754; Moritaka Hayashi, *Archaeological and Historical Objects under the United Nations Convention on the Law of the Sea, Marine Policy*, Vol. 20, p. 291 (1996).

29 Art. 2 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

21st century Maritime Silk Road in cooperation with other States. China aims to build a community of interests, a community with a shared future and a community of responsibility through policy communication, shared facilities, smooth trade, financing, and interaction between societies. Protecting underwater cultural objects play an important role in promoting regional cooperation, and in particular, promoting mutual understanding. The Chinese mainland actively supports States along the route to protect the historical and cultural heritage of "the Belt and Road Initiative" through various cooperative mechanisms and projects. In December 2016, China and Saudi Arabia signed a bilateral agreement to carry out a five-year underwater archaeological project together on the al-Serrian site, reflecting the Chinese mainland's active efforts to strengthen the protection of underwater heritage through bilateral cooperation.

B. Taiwan

Taiwan is surrounded by sea. Since ancient times, human beings have carried out frequent activities and voyages. As a result of this, rich underwater treasures and assets exist in its surrounding waters.[30] Taiwan announced the "Underwater Cultural Heritage Preservation Act" (hereinafter "the Preservation Act") and specified the rules for its implementation in 2015 and 2016 respectively. Taiwan's two legislations are drafted to combat the plunder, illegal trafficking and commercial development of underwater heritage. The full text of the Law on the Preservation of underwater Cultural assets consists of 7 chapters and 46 articles, which mainly specifies the definition of underwater cultural assets, the ownership and jurisdiction claim of underwater cultural assets, and the protection of underwater cultural assets.

A major highlight of the Preservation Act is that it defines the rights and jurisdictional space enjoyed by Taiwan for different waters, which provides a basis for Taiwan to protect and manage underwater cultural heritage located in different regions. As far as the Taiwan Strait is concerned, Article 16 of the Preservation Act stipulates that Taiwan " has the exclusive jurisdiction to regulate, authorize, approve or prohibit activities directed at underwater cultural heritage in the contiguous area, exclusive economic area and on the continental shelf of

30 CHIAU Wen-Yan, *Preservation and Challenge of Underwater Cultural Assets in National Parks*, Ocean and Underwater Technology, Vol. 19, p. 12 (2018).

" Taiwan.[31] Although Taiwan claims exclusive jurisdiction over the underwater cultural assets in its continental shelf and exclusive economic zone, the relevant departments shall consult with the countries that have made declarations in accordance with the relevant international conventions on the most constructive way to protect the underwater cultural assets when carrying out archaeological research on the underwater cultural assets in this area. As a coordinating party, Taiwan should implement protective measures agreed upon by all consultative Parties, to implement protective measures that comply with the provisions of the preceding paragraph and the rules of relevant international conventions, and to conduct a necessary preliminary study on underwater cultural assets, and immediately notify the relevant international organizations.[32]

It should be noted that Taiwan's Preservation Act clearly refers to the relevant provisions of the Underwater Heritage Convention, that is, to realize the management of underwater cultural relics through the mode of cooperation.[33] Specifically, the Underwater Heritage Convention first prohibit their citizens and vessels from engaging in the plundering of underwater cultural heritage and, at the same time, require them to report such activities to UNESCO and other relevant Parties.[34] The Underwater Heritage Convention was enacted under the circumstances that the current UNCLOS cannot effectively protect underwater cultural relics outside the territorial sea. As such, the international community hopes to adopt a strategy of international cooperation to combat the excavation and salvage of underwater cultural relics outside the territorial sea of coastal States. That is not to say that such a strategy of cooperation will be as straightforward as it may sound. This is because UNCLOS cannot effectively protect underwater cultural relics beyond the territorial sea, whereas a cooperative strategy would seek to achieve the opposite. Taiwan's Preservation Act is in line with the cooperation mode of the Underwater Heritage Convention and also strengthens the protection and management of underwater cultural relics in the exclusive economic zone and continental shelf.

In brief, both the Chinese mainland and Taiwan claim jurisdiction over

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31 Art. 16 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

32 Art. 16 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

33 HU Nien-Tsu Alfred, *The 2001 UNESCO Underwater Cultural Heritage Convention and Taiwan's Domestic Legal Regime*, Ocean Development & International Law, Vol. 39:4, p. 372 (2008).

34 Art. 10 of the Convention on Underwater Heritage.

underwater cultural heritage in the exclusive economic zone and the continental shelf, and on this basis, both sides of the Strait support and welcome cooperation on underwater cultural heritage. As such, it can be said that there is consistency between both sides on this issue of jurisdiction, which has laid the foundations for cross-strait cooperation.

IV. Feasibility of Cooperation on the Protection of Underwater Cultural Heritage in the Taiwan Strait

A. Comparison of the Two Sides' Rules Concerning Underwater Cultural Heritage

If both sides of the strait want to jointly protect underwater heritage in the Taiwan Strait, there must be a consistent basis for law enforcement. That is, similar legal regulations should exist on both sides. Although both sides of the strait have announced relevant regulations specifically for underwater heritage, they are consistent in many key aspects, laying a foundation for cross-strait cooperation in the protection of underwater cultural heritage.

First, the definition and scope of the protected object are almost identical. Although the laws of the Chinese mainland and Taiwan use different terms, such as "underwater cultural relics" and "underwater cultural assets" respectively, they have roughly the same meaning. Specifically, according to Taiwan's Preservation Act, underwater cultural assets refer to "all traces of human existence having a historical, cultural, archaeological, artistic or scientific character", such as sites, buildings, artifacts and human remains.[35] The Regulations stipulate that protected underwater cultural relics comprise all "human cultural heritages of historical, artistic, and scientific value". The only exception is "underwater relics after 1911 that have nothing to do with major historical events, revolutionary movements, and famous figures".[36] Thus it can be seen that the legislative model of Taiwan and the Chinese mainland is in fact the "blanket" legislative model commonly adopted by traditional cultural relics countries. More specifically, most of the underwater cultural relics are protected through a very broad definition, and it is stipulated that

35 Art. 16 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

36 Art. 2 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

such legal protection already exists automatically before underwater sites are even discovered.[37]

Second, both sides have stipulated that archaeological exploration and excavation of underwater cultural relics shall first be approved by the relevant authorities. The National Cultural Heritage Administration is in charge of the registration, protection and management of underwater cultural relics as well as the examination and approval of archaeological exploration and excavation. Without its approval, no unit or individual may explore or excavate privately in any way.[38] Therefore, any individual or organization who has seeks to engage in the exploration and excavation of underwater cultural relics should first apply to the State Administration of Cultural Relics and obtain its approval.[39] Taiwan authorities also stipulate that field investigations, research, excavations and other activities which may interfere with or destroy underwater cultural assets shall also be conducted only after applying for approval.[40] Additionally, during the course of the approved activity, personnel are required to regularly report on the content and progress of the activity.[41]

Third, both sides have stipulated the discovery reporting system, and, as a result, the application of salvage law or discovery law is excluded. The Chinese mainland's Regulations stipulate that any discoverer shall promptly report and hand over any protected cultural relics to the State Administration of Cultural Relics or the local administrative department of cultural relics.[42] Likewise, in Taiwan, the Preservation Act also clearly stipulates that anyone who discovers suspected underwater cultural assets should immediately stop activities that main affect underwater cultural assets, maintain the integrity of the scene, and immediately

37 With regard to the protection of cultural heritage, common law countries such as Britain and the United States generally adopt a selective approach, that is, to protect only those underwater sites that have been assessed as of special significance. Civil law countries tend to adopt exclusive and exclusive protection practices, that is, to protect all cultural heritage beyond a certain number of years, and advocate that the state should play a leading role in the process of cultural heritage protection.

38 Art. 4 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

39 Art. 7 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

40 Art. 22 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

41 Art. 23 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

42 Art. 6 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

notify the relevant authorities for handling.[43] Therefore, both sides of the strait adopt similar legal provisions concerning the salvage or claiming of underwater cultural heritage, the provisions of the civil law concerning ownerless objects, lost objects, buried objects, and picking up drifting or sunken goods. Equally important is that the maritime law relating to the discovery and salvage of objects is not applicable to underwater cultural heritage, thus excluding the application of discovery law or salvage law.

Fourth, both sides of the strait oppose the commercial development and illegal circulation of underwater heritage. Commercial development here refers to the use of underwater cultural heritage for profit, which causes serious damage to the underwater cultural heritage and leads to the permanent loss of excavations.[44] As a result, illegal circulation is a serious violation of the principle of protection of underwater cultural relics. In view of such problems, the Chinese mainland's Regulations stipulates that those who damage underwater cultural relics, or explore, excavate or dredge up underwater cultural relics without authorization, or hide, secretly share, traffic, illicitly sell or export underwater cultural relics shall be face administrative sanctions or be investigated and punished in accordance with the law.[45] Taiwan's Preservation Act also clearly stipulates that "underwater cultural heritage shall not be the object of commercial exploitation, except for situations where public access and educational promotion are approved by the competent authority."[46] Therefore, on this basis, both sides of the strait can cooperate by sharing information about illegal excavations, strengthening customs inspection, preventing shipwrecks and sunken objects that have been illegally excavated from entering their jurisdiction, and monitoring potentially illegal transactions concerning illegal obtained cultural objects.

Fifth, both sides support the joint protection of underwater cultural heritage. As discussed in the third part of this article, although both the Chinese mainland and Taiwan are open to and willing to strengthen the protection of underwater cultural heritage through bilateral or multilateral cooperation. Under the cooperation

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43 Art. 13 of the the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

44 Such commercial development activities violate the spirit of the protection and proper management of cultural heritage and should be distinguished from activities designed to facilitate public closeness and educational promotion, such as underwater antiquities exhibitions in paid museums.

45 Art. 10 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

46 Art. 3 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.

framework established by the Underwater Heritage Convention, Taiwan's Preservation Act itself is highly consistent with the Convention. For the Chinese mainland, although it has not yet joined the Convention, the State has been actively preparing to join the Convention, and its legislation and protective measures have been actively exploring avenues for cooperation.

However, there exist some conflicts between both sides of the strait regarding the protection of underwater heritage, especially in activities that are not targeted at underwater cultural heritage, such as submarine pipeline laying and port dredging. Although these activities are usually legitimate, they may interfere or damage heritage, and the provisions of Taiwan's Preservation Act are relatively lenient on this issue. The competent authority shall convene the review committee of underwater cultural heritage to review the applications for activities directed at underwater cultural heritage, and coordinate with other relevant authorities with respect to activities that may incidentally affect the protection of underwater cultural heritage.[47] Meanwhile, it is a mandatory requirement to conduct a prior investigation to determine the existence of underwater cultural heritage.[48] Conversely, the Chinese mainland's Regulations stipulate that when any unit or individual carries out archaeological exploration or excavation of underwater cultural relics, they shall not interfere with transportation, fishery production, military exercises and other land and underwater operations.[49] The protection of underwater cultural heritage is seen as a secondary issue, but this cannot be an obstacle to cross-strait cooperation because the Amendment Bill of the Regulations published by the Chinese mainland in March 2019 has already deleted this provision. Additionally, it stipulates that when large-scale capital construction projects are carried out in waters where underwater cultural relics likely exist, archaeological investigations should be carried out first, thus putting the protection of underwater cultural relics in a more important position. It has cleared the way for cross-strait cooperation on this issue.[50]

All in all, although both sides of the strait have both announced laws specifically for underwater cultural heritage, their legislative purposes and legal

47 Art. 8 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.
48 Art. 9 of the Underwater Cultural Heritage Preservation Act of the Taiwan Region.
49 Art. 9 of the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.
50 Arts. 10 & 11 of the Amendment Bill of the the Regulations of the People's Republic of China Concerning the Administration of the Work for Protection of Underwater Cultural Relics.

provisions on many key issues are the same. Therefore, there is a legal basis for cross-strait cooperation in the protection of underwater cultural heritage, and it also paves a way for the cooperation of public power departments related to the protection of cultural relics on both sides of the strait in the future.

B. The Feasibility of Cooperative Protection

Although both sides of the strait have obvious common ground in the protection of underwater cultural relics, it cannot be denied that the success or failure of cross-strait protection and cooperation on underwater cultural relics largely depends on the political relations in the Taiwan strait. However, the protection of underwater relics is particularly important to both sides as they share the common cultural roots of the Chinese people. The effective protection of the underwater cultural heritage in the Taiwan Strait actually needs that the Chinese mainland and Taiwan join hands to exercise the rights conferred on coastal States by UNCLOS to protect the common cultural heritage of the people from both sides of the strait.

It is worth noting that the willingness of both sides of the strait to cooperate in the protection of underwater cultural relics has become more and more explicit, and scholars and government officials from both sides of the strait have studied the relevant regulations on the protection of underwater cultural relics on both sides, and explore the possibility of cross-strait cooperation. In June 2018, the Cross-Strait Forum on the Law, Policy and practice of underwater Cultural assets was held in Keelung, Taiwan. Experts and scholars from the National Center of Underwater Cultural Heritage, Xiamen University, and the Chinese Society of Underwater Archaeology at Taiwan's Ocean University., have focused on underwater cultural heritage protection and management, including important policies, management, exploration and maintenance techniques, as well as future exchange and cooperation of underwater cultural heritage between both sides of the strait and other issues to be discussed. This seminar provides an opportunity for both sides to understand the current situation of each other's policies and practices in the protection of underwater cultural relics, and also lays the foundation for further cooperation between both sides in the future and the protection of common cultural heritage for the Chinese people.

C. The models of cooperative protection

The legal protection of underwater cultural heritage in the Taiwan Strait is not only necessary but also urgent. It cannot be denied that although both sides of the Taiwan Strait are Chinese territory and are subject to a single and inseparable Chinese sovereignty, the country is yet to be reunified. The main challenge facing these two sides is the underwater cultural heritage found in the exclusive economic zone and the continental shelf in the Taiwan Strait, and, as a result, it is also the main issue that both sides must face and overcome to achieve cooperation.

Currently, cross-strait cooperation in underwater cultural relics is not common. But from the perspective of cooperation in other areas, such as on the issue of ship pollution, both sides of the Taiwan Strait can negotiate to delineate the waters under their respective jurisdiction. However, if demarcating, both sides can refer to only Article 74 of UNCLOS, that is, with reference to the delimitation of the limits of the exclusive economic zone between the respective coasts or between neighbouring countries to delimit the jurisdictional limits of the exclusive economic zones on both sides of the Taiwan Strait within China. However, if this article is applied, it is likely to be cited by Taiwan's independence forces as an excuse to split the country.[51] Therefore, in the current political landscape between both sides of the Taiwan Strait, it is not the best option to adopt. At present, what can be done is to establish a common protected area on the basis of fairness, where both sides of the strait jointly enforce the law and take measures to protect the underwater cultural heritage of the Taiwan Strait.

As far as the establishment of a common protected area is concerned, both sides of the strait can take a specific shipwreck as a starting point to explore the specific contents and models of cross-strait cooperation and protection, and on this basis, it can be extended to specific areas with a large number of shipwrecks, and finally to the entire Taiwan Strait.[52] For example, both sides of the strait can issue decrees to jointly implement *in-situ* protection, and prohibit activities that affect the protection of underwater cultural relics, including salvaging sunken ships, trawling, collecting minerals, and laying cables. In protected areas, only individuals or institutions that have obtained the permission of the competent authorities

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51 FU Kuenchen & LIU Xianming, *On the Legal Issues of Ship Source Pollution in the Taiwan Strait*, China Ocean Law Review, Vol. 2:1, p. 510 (2006).

52 For the specific modes and contents of cross-strait cooperation, see ZHAO Yajuan, *On the Construction of the Cooperation Mechanism for the Protection of Underwater Cultural Heritage in the Taiwan Strait*, Journal of South China University of Technology (Social Science Edition), Vol. 15:1, p. 83-85 (2012).

may enter the underwater cultural assets protected areas. For acts that violate the relevant regulations on both sides of the strait, the competent authority may request the coast guard for assistance. Under the premise of not interfering with the preservation and management of underwater cultural heritage, both sides of the Taiwan Strait can also consider opening all or part of the protected areas to provide public viewing, so as to achieve the purpose of social education.

V. Conclusion

The underwater cultural heritage in the Taiwan Strait is not just merely proof of ancient Chinese civilization, but is also proof that both sides of the strait share the same cultural DNA. Therefore, it is paramount for the Chinese people on both sides of the Taiwan Strait to effectively protect the underwater cultural heritage in the Taiwan Strait. It is also one of the major issues that urgently needs to be solved by both sides of the Taiwan Strait. However, the Taiwan Strait has long been regarded as a uniquely sensitive area by both sides of the strait, and, as a result, effective management and protection has often been left off the agenda. The continuous development of archaeological technology, underwater relics are no longer out of reach. So far, a large number of underwater sites have been explored, salvaged and destroyed without the use of scientific archaeological mining methods, resulting in permanent loss. The Chinese mainland and Taiwan now need to act, and should take positive measures to strengthen the *in-situ* protection of underwater heritage in the Strait, prevent unauthorized salvage, and crack down on illegal circulation and trafficking of underwater heritage. Cooperation between both sides of the Taiwan Strait actually means that the Chinese mainland and Taiwan join hands to protect the common cultural heritage of the Taiwan Strait, which is the common cultural heritage for the Chinese people on both sides.

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建立健全我国有毒有害物质海洋污染损害赔偿制度的国际公约启示

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内容摘要：坚持绿色可持续的海洋生态环境理念和完善海洋环境立法，是海洋强国建设的重要组成部分。当前，由船舶及海上作业事故造成的溢油污染和有毒有害物质污染风险增加，且对海域的生态环境构成严重威胁。目前国际和国内的立法，针对有毒有害物质污染损害赔偿法律制度均不完善。随着海运有毒有害物质污染可能性逐渐提高，建立健全我国有毒有害物质污染损害赔偿法律体系刻不容缓。本文拟借鉴相关国际公约的特殊制度及其实践，分析我国国内相关立法中存在的问题，探讨建立健全我国有毒有害物质污染损害的赔偿法律制度，以遏制我国有毒有害物质对海洋环境的污染，并保障污染受害者的合法权益。

关键词：HNS 公约　巴塞尔公约　强制保险　赔偿基金

一、问题的提出

建设海洋强国，保护海洋生态环境、全力遏制海洋生态环境不断恶化趋势，重视海洋的开发和保护，需要不断完善海洋环境保护的法律制度。当前船舶及海上作业事故造成的溢油和有毒有害物质等污染，可对涉及海域的生态环境构成严重的威胁和不易恢复的损害，故在完善海洋环境保护的法律制度中，要重视海洋环境污染的相关立法。我国进口原油大部分依靠海运，所以我国海域发生油污损害事故的概率非常高。[1] 从近十年的统计数据来看，船舶在海上发生事故泄露污染物数量依次是燃油、原油、作为货物进行运输的燃料油以及其它有毒有害物质。2010 年我国有毒有害物质水上运输船舶艘次数和运输量与 2006 年相比，船舶大

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1　郝会娟：《中国加入〈1992 年设立国际油污损害赔偿基金国际公约〉的前景分析》，载《中华海洋法学评论》2019 年第 2 期，第 102 页。

型化明显、单船运输量明显增加，这导致我国海运有毒有害物质发生污染损害的风险增加。尽管有毒有害物质泄漏的数量要小于油类物质，但由于有毒有害物质种类繁多，且处理有毒有害物质污染的技术尚不成熟，其污染的后果不仅表现为财产损害，还会带来比油类物质污染更大的人员伤亡风险。[2] 面对有毒有害物质污染可能造成的严重经济损失和人身伤亡，国际和国内中有关的赔偿立法，与海运油类污染损害赔偿的相关立法相比，尚不完善。

首先，国际社会已经建立海运油类污染损害赔偿的完善机制。当前在国际上已经形成以《1969 年国际油污损害民事责任公约的 1992 年议定书》（简称 1992 年责任公约）、《1971 年国际油污损害赔偿基金公约》（简称《1971 年基金公约》）、《1976 年海事赔偿责任限制公约》、《2001 年国际燃油污染损害民事责任公约》（简称《燃油公约》）等为体系的海运油类污染损害赔偿机制，这一机制已经运行多年，被实践证明是科学和行之有效的。

其次，国际社会高度重视有毒有害物质污染损害问题，但有关公约在实施中遭遇障碍。国际海事组织（IMO）《国际海上运输有毒有害物质损害责任及赔偿公约》（简称《HNS 公约》），以及联合国环境规划署制定的《控制危险废料越境转移及其处置巴塞尔公约》（简称《巴塞尔公约》）和《巴塞尔公约责任与赔偿议定书》（简称《巴塞尔议定书》）等共同构成国际有毒有害物质转移造成污染损害赔偿制度。《HNS 公约》中的双层赔偿机制，实际上也是对《1992 年民事责任公约》和《1971 年基金公约》的借鉴。《HNS 公约》和《巴塞尔议定书》均由于各种原因迟迟未能生效，无法满足对受害人进行充分赔偿的要求。但《HNS 公约》和《巴塞尔议定书》的双层赔偿机制等有其合理性，对我国建立和完善海运有毒有害物质污染损害责任和赔偿机制相关立法有借鉴意义。

再次，我国国内尚未有专门的海运有毒有害物质污染损害赔偿立法。当前我国涉及环境污染损害赔偿的制度散见于各个部门法和相关条例，如《民法通则》、《侵权责任法》、《海洋环境保护法》、《海商法》以及《防止船舶污染海域管理条例》等，但均未对海运有毒有害物质污染损害责任相关问题作出明确的规定，故目前只能通过上述的一般规定来确定海运有毒有害物质污染损害的责任主体、归责原则、赔偿范围、赔偿机制等等。专门立法的缺失，导致我国存在有毒有害物质污染损害赔偿的归责原则不明、赔偿范围不确定、赔偿责任机制以及责任限额过低等问题。

随着目前我国有毒有害物质污染事故风险的逐渐增大，建立健全我国海上运输有毒有害物质污染损害赔偿法律制度，调整我国沿海和内河船舶运输有毒有害物质污染损害赔偿法律关系，是我国海洋环境保护的迫切需要。建立健全这一法

2 李桢：《海运有毒有害物质污染损害赔偿法律制度研究》，大连海事大学 2015 年博士学位论文，第 110-111 页。

律制度，可对相关国际公约进行分析，探究其特殊制度的合理性，为借鉴、建立我国的相关制度提供理论基础，同时分析相关公约未能生效的原因，结合我国当前国内法中存在的问题，提出相应的立法建议。

二、国际有毒有害物质海洋污染损害责任相关公约对我国的借鉴与启示

（一）《HNS 公约》的相关制度

《HNS 公约》是继《1992 年民事责任公约》、《1971 年基金公约》后，采用严格责任制的责任赔偿公约。该公约的特殊之处在于“双层赔偿机制”，将《1992 年民事责任公约》中设立的赔偿责任限制制度和强制保险制度，以及《1971 年基金公约》中基于船货共担原则建立起来的损害赔偿基金制度统一起来，形成完整的双层赔偿机制，确保海运有毒有害物质污染受害者得到充分有效的赔偿。

除了双层赔偿机制外，与我国现行立法相比，该公约还存在以下可借鉴的机制：

1.《HNS 公约》明确“船舶”、“所有人”、“接收人”、“有毒有害物质”以及“损害”的范围等概念，能据此直接判断有毒有害物质污染损害赔偿的范围。我国现行立法缺乏对有毒有害物质污染损害赔偿范围的具体规定，导致司法实践中对赔偿金额可能做出不同的判决，不符合法律的确定性和可预见性的要求。

2.《HNS 公约》确定严格责任、免责事项和部分免除责任人责任的情形。虽然该公约并未像《巴塞尔议定书》一样规定危险物与非危险物共同造成污染损害时按照比例责任原则进行责任的分担，但是仍然规定了部分免除责任人责任的情形，与该公约规定的较高赔偿限额制度相结合，能够有效防止海运有毒有害物质污染受害者的道德风险，并通过提高“经济成本”警醒海运有毒有害物质的船方和货方谨慎小心处理有毒有害物质。

3.《HNS 公约》规定较高责任限制。该公约的责任限额按照船舶的吨位计算，最低责任限额为对不超过 2000 吨位的船舶适用 1 千万特别提款权的标准。与此相比，我国《海商法》的海事赔偿责任限额是根据上个世纪《海事赔偿责任限制公约》制定的，最低仅为 16 万 7 千特别提款权，且至今未提高海事赔偿责任限额。随着目前海运有毒有害物质运载量的增加，以及潜在危害性增加，我国《海商法》的海事赔偿责任限额应该适应新形势予以提高。

（二）《巴塞尔公约》的污染损害赔偿制度

《巴塞尔公约》规定了有毒有害物质在国际间转移和处置机制，我国已经加入该公约。《巴塞尔公约》本身并未规定危险废弃物造成的污染损害赔偿机制，而在《巴塞尔议定书》中，规定了危险废弃物转移造成污染损害的适用范围、损害赔偿范围、严格责任的归责原则，以及责任限额等。虽然没有《HNS 公约》双层赔偿机制，但对我国的相关立法还是有一些可借鉴的规定：

1.《巴塞尔议定书》明确归责原则，采用严格赔偿责任原则，还补充规定了免责事项和过失赔偿责任。若损害是由议定书范围之内与非属于本议定书内的危险废物造成的，承担赔偿责任者应按照有关危险废物的体积和特性得等确定其责任比例，并对属于该议定书范围内的部分损害按比例负赔偿责任。

2.《巴塞尔议定书》按危险废物的吨数计算赔偿限额，最低一档的赔偿限额对不超过 5 吨的货运，发出通知者、出口者或进口者承担的最低责任限额为 100 万特别提款权，其赔偿限额也比我国《海商法》的规定要高。

综上所述，《HNS 公约》与《巴塞尔议定书》都对有毒有害等危险物质的污染损害赔偿作出了较为体系化的规定，其中归责原则、赔偿损害的范围、赔偿责任限额，在我国的船舶油污损害赔偿法律制度中已有相似的规定，可以在我国船舶有毒有害物质污染损害赔偿的制度建设中对予以适当的调整和采纳。

双重赔偿机制是《HNS 公约》首次将赔偿责任限额和强制保险制度与赔偿基金制度合并，故需要重点对其进行合理性分析如次。

（三）《HNS 公约》双层赔偿机制的合理性分析

《HNS 公约》第一层赔偿机制包含《1992 年民事责任公约》、《巴塞尔议定书》中提出的责任限制和强制保险制度，第二层赔偿机制借鉴了《1971 年基金公约》以船货共担原则为基础的污染损害赔偿基金机制。要将《HNS 公约》中的强制保险制度和有毒有害物质收货人和船方共同承担基金摊款的制度移植至我国，需对其法律价值重新进行考量，即需在实现法的整体社会价值与保护污染物接收者合法权益之间找到平衡点，既实现法律的社会价值又体现法的公平与正义，以解决在我国建立有毒有害物质污染损害双层赔偿机制的法理基础。

1. 法经济学角度分析

首先，公正、效率以及均衡的角度。古希腊哲学家们最早提出公平、正义的概念，影响到后来法律的制定。但随着整个人类社会的发展，工业革命和科技革命带来法律制度的巨大变革，真正行之有效的法律制度不再仅仅是公平的，更应当是有效率的。20 世纪中后期法经济学开始兴起，法经济学家认为法律的效率与公平同样重要，主张通过法律规则将权利授予给使社会产生最大收益的人，或把损失分配给能以最小的成本承担这种损失风险的一方，或最有能力承担这种风险

的人，从而提高法律的效率。[3] 从《HNS 公约》的相关规定来看，强制保险制度就是将污染损害赔偿责任社会化。保险公司通过向船方收取保费的方式筹集大量资金，当有毒有害物质污染损害发生时，能够直接赔付给受害人更为充足的赔偿金，从而使污染者承担了自身应尽的责任同时也保护受害人受到最小化的损害。在经济面前，法律既是一个交易规则，也是市场主体通过国家的立法机关博弈的结果。有效率的法律制度是努力使法律供求趋于均衡。只有经济行为人之间的自我利益最大化都得到实现，才能实现均衡。[4] 传统侵权法中权益保障功能的优势地位无可厚非，但侵权法的基本目标在于确保权益与行为自由的平衡，若因强调权益保障功能对行为自由形成过度的制约，从而发生权益保障与行为自由之失衡，显然就会再一次引发侵权法的伦理危机。[5]《HNS 公约》规定的污染损害赔偿责任制度不同于一般侵权损害赔偿制度，其在倾向于保护受害者权益的同时，也考虑到污染者实际承担责任的能力，使污染者承担的责任是合理的和保障受害人利益得到最大化，从而达到法经济学上的均衡。

其次，成本 - 收益的角度。趋利避害是人类的本能，通过成本（价格）这类经济手段，可以引导资源配置到最合理的用途上。从合法权利的配置考虑，当事人在履行所有的规则时，都存在违法成本与合法权益，因此可运用经济学的手段来解析法律。[6]《HNS 公约》关于有毒有害物质污染损害赔偿设置的赔偿责任限额要高于我国《海商法》规定的海事赔偿责任限额，从这一点来看污染者将要承担更多的赔偿责任，提高了污染者的违法成本，可以有效督促污染者采取措施避免污染。且《HNS 公约》设立的强制保险制度和污染损害赔偿基金机制，通过对社会资源等的合理配置，将风险转嫁到保险人和船货双方，基于保险的分散功能和损害补偿功能，能够保障受害者能够得到更为充足的赔偿。从法经济学的角度对《HNS 公约》中的特殊制度进行分析，将有助于我国国内对有毒有害物质污染损害赔偿制度方案的设计。

2. 法理学角度分析

首先，权利与义务（责任）对等的原则。根据权益与责任对等原则，使有毒有害物质的收货方承担一定污染损害责任是合理的。欧共体理事会 1974 年建议将“污染者”定义为“直接或间接损害环境或造成导致这种损害的条件的人”，此举的目的是为了保护全球环境，维护全人类的共同利益。污染者权益与责任的对等原则就是，污染者实施的行为一般能为污染者带来效用或好处，故其应为其行为承担

3 李珂、叶竹梅：《法经济学基础理论研究》，中国政法大学出版社 2013 年版，第 5 页。
4 李振宇：《法经济学方法论研究》，载《2006 年度中国法经济学论坛会议论文集》，第 204-205 页。
5 张铁薇：《侵权法危机的伦理诊断》，载《法学家》2012 年第 1 期，第 129-130 页。
6 张文显：《二十世纪西方法哲学思潮研究》，法律出版社 1996 年版，第 200 页。

一定的责任。[7] 从国际海运有毒有害物质来看，每种有毒有害物质从卖方国家运输到污染物收货方的国家，以经营为目的的收货方都会因接收污染物而得到效用或者好处，就算在国际海上货物运输中未发生有毒有害物质泄露的情形，但最终在后期生产和使用的过程中还是会给接收国的环境带来损害。以经营为目的的污染物收货方应该为其获得的效用或好处支付对价，而不该由接受国的国家与国民为环境损害买单。

其次，权利相互性原则。根据权利相互性理论，权利与权利之间的界限是不明显的，保护生态环境与污染物收货方合法权益之间的界限亦难以区分。但环境问题的核心在于公共利益与个人利益、环境利益与经济利益，即期利益与长期利益冲突以及冲突的结构基础在社会行动及其选择过程中所呈现出来的紧张、冲突和融合问题。[8] 当对自然资源的破坏和环境污染直接威胁人类的生命、健康、生存发展时，人们追求在不被污染和破坏的环境中生存及利用环境资源也是一种权利。当环境权、有毒有害物质污染受害者的权利与有毒有害物质接受者的权利形成对抗均衡时，应在社会利益和人类长远和整体利益及公正原则指导下解决权利冲突产生的矛盾。面对权利冲突，解决途径是对权利进行配置。[9] 在环境污染损害的权利配置中，应当更多考虑环境与受害者因素，更加重视对环境保护和对污染受害者权益的保障。因此，船货共担原则和强制保险制度就是考虑环境和受害者因素的权利分配方式，通过一种从根本上有利于整个人类社会的途径，来解决权利相互性的冲突。

最后，人类利益与自然环境的协调。现代国际法开始关注经济全球化的负面影响，要求各国适当关注跨国贸易与投资等经济活动和经济价值之外的环保、人权、公共健康等领域的公共利益和社会价值。世界范围内越来越接近于形成一个共识，以牺牲环境和人权为代价的跨国经济交往不值得提倡，毁损生态环境、严重背离可持续发展理念、漠视经济发展中代际公平和代内公平模式应予反对，片面追求眼前利益、偏袒性地保护少数商业性私人利益而无视国家公共利益和社会群体的社会利益的行为不值得颂扬。[10] 采取船货共担原则与强制保险制度，将社会资源配置的效率最大化，保障有毒有害物质污染损害的受害者得到充分有效的赔偿，就是协调个别与社会整体利益的途径。

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7 刘梦兰、莫守忠：《污染者自负原则》，载《法学评论》2017 年第 6 期，第 205 页。
8 王蓉：《中国环境法律制度的经济学分析》，法律出版社 2003 年版，第 1 页。
9 苏力：《法治及其本土资源》，中国政法大学出版社 1996 年版，第 185 页。
10 刘笋：《国际法的人本化趋势与国际投资法的革新》，载《法学研究》2011 年第 4 期，第 196-197 页。

三、我国有关有毒有害物质污染损害赔偿立法中存在的具体问题

纵观我国有关有毒有害物质污染损害赔偿相关立法，可以按照不同职能分成三类:第一类是我国《宪法》规定的环境保护的抽象原则;第二类是《海洋环境保护法》和《防止船舶污染海域管理条例》等具有一定行政法特征的法规，从制定符合环保的行为标准和对违法行为进行处罚的角度，处理污染损害案件，主要通过对潜在可能发生污染的行为设定标准，并对未达到标准的行为实施处罚，以此来保护海洋环境、海洋资源，防止污染损害和维护生态平衡，《海洋环境保护法》未规定对于海洋环境污染损害受害者的赔偿，《防止船舶污染海域管理条例》中则规定受害人对船舶污染赔偿责任和赔偿解纠纷可由港务监督部门调解或起诉、仲裁，却并未规定具体的赔偿范围和标准;第三类是《民法通则》、《侵权责任法》和《海商法》等，从私法层面处理污染损害赔偿案件。

主要从私法层面分析，我国有毒有害物质海洋污染赔偿有关立法存在如下问题。

（一）归责原则不明

我国《民法通则》第一百二十四条仅对环境污染损害赔偿责任作了原则性规定。《侵权责任法》对环境污染责任以及高度危险物致害责任，分别规定了归责原则以确定责任人应当承担的责任，但是两者的归责原则有所不同。根据《侵权责任法》第六十五条，环境污染责任适用无过错原则且无任何免责和减轻条款，但是根据第七十二条高度危险物致害责任的规定，在受害人故意或不可抗力造成的时不承担责任。由于我国《侵权责任法》并未对海运有毒有害物质污染的归责直接作出规定，司法实践中的海运有毒有害物质污染案件可能适用上述的不同条款，而导致责任人承担的责任不同。因此，需在立法中明确海运有毒有害物质污染的归责原则，避免判决之间的冲突。

（二）损害赔偿范围不明

《侵权责任法》主要解决的是责任人是否应当承担责任以及承担的责任比例，对于哪些损失属于赔偿的范围并并无具体规定。而有毒有害物质海洋污染损害赔偿案件中，《海商法》是用来判断该污染损害是否属于限制性债权，从而是否能够适用海事赔偿责任限制，但是对哪些损失属于污染损害赔偿范围内也无规定。与此相对，我国国内法虽然针对船舶油污损害赔偿范围无相关规定，但是由于我

国加入的《1992 年民事责任公约》规定了“污染损害”的范围包括“油类从船上溢出引起的污染在船之外造成的灭失和损害、已经实际采取或将要采取恢复措施的费用、预防措施费用以及预防措施造成的进一步灭失或损害”，故船舶油污损害赔偿范围在我国有法可依。而《HNS 公约》第六条也规定了“损害的范围”包括“有毒有害物质造成的人员伤亡、财产灭失、环境污染造成的损害、实际采取或待采取的合理恢复措施费、预防措施费用和预防措施造成的新损失”。虽然《HNS 公约》至今仍未生效，但《1992 年民事公约责任》规定的“污染损害”范围已在国际上得到广泛认可。为避免在有毒有害物质污染损害赔偿案件中出现对赔偿范围的争议，我国在建立健全有关案件的赔偿机制时，应该将海运有毒有害物质污染损害赔偿也考虑在内。

（三）赔偿机制不健全

当前我国针对有毒有害物质海洋污染损害的赔偿机制，仅在我国《海商法》中有所体现。《海商法》第二百零七条规定了可以申请海事赔偿责任限制的限制性债权种类，而有毒有害物质污染损害赔偿可以归属于第二百零七条第一款规定的在船上发生的或者与船舶营运、救助作业直接相关的人身伤亡或者财产的灭失、损坏等情形，或第三款与船舶营运或者救助作业直接相关的，侵犯非合同权利的行为造成其他损失的赔偿请求。即当事人能够因此提起海事赔偿责任限制的申请。但是《海商法》第二百一十条规定的赔偿限额，仅相当于《1992 年民事责任公约》中规定的赔偿限额和《HNS 公约》规定的第一层级的赔偿限额，而缺少《1971 年基金公约》以及《HNS 公约》规定的第二层级的赔偿机制，并不能给予海运有毒有害物质污染损害的受害人充分合理的赔偿。

我国当前面临的海洋环境污染问题与几十年前的发达国家有类似之处，过去发达国家面对环境污染损害赔偿责任经历了由“个人责任”到“社会责任”的发展过程，以责任保险、责任基金、社会安全体制等为表现形式的环境损害赔偿的社会化已经成为大多数国家环境污染损害赔偿的发展趋势。[11] 我国也在《海洋环境保护法》中规定了船舶油污损害赔偿责任由船东和货主共同承担风险的原则，建立船舶油污损害赔偿基金制度。但是该制度排除有毒有害物质污染损害的适用，且征收工作并非一帆风顺。对于有毒有害物质污染损害而言，其所造成的后果较油污损害可能会更为严重，单靠船方自身的力量难以充分保护受害人的利益，需要将损害赔偿责任向社会转移，即设立有毒有害物质损害赔偿基金，但是基金的筹款工作仍有很长的路要走。

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11 庄敬华：《环境污染损害赔偿立法研究》，中国方正出版社 2012 版，第 159 页。

（四）赔偿责任限额过低

当前，我国关于油污损害赔偿有专门的国际条约加以调整，即《1992 年油污民事责任公约》。该公约大幅度提高了船舶所有人的责任限额，最低限额为 3000000 的特别提款权。但由于我国国内尚无专门针对有毒有害物质海洋污染损害赔偿责任限额的立法，且《HNS 公约》也迟迟未生效，这导致我国司法实践中的有毒有害物质海洋污染损害赔偿案件，只能适用我国《海商法》第二百一十条规定的海事赔偿限额。而我国《海商法》中的海事赔偿责任限额是根据《1967 年海事赔偿责任限制公约》作出的，该公约在过去的三十多年里通过修正案的形式两次提高了赔偿责任限额，但我国《海商法》至今仍未提高海事赔偿责任限额。

综上所述，我国现行立法尚未专门针对有毒有害物质海洋污染损害赔偿制度做出明确规定，因此只能适用各部门法的一般规定。缺乏配套的赔偿机制，容易造成司法实践中判决之间的冲突，同时也不利于更好地保障受害人的合法利益和保护我国海洋生态环境。建立健全有毒有害物质损害赔偿机制，对于我国海洋环境污染损害赔偿法律体系的完善以及海洋强国的建设都具有重要意义。

四、对我国建立健全有毒有害物质海洋污染损害赔偿法律体系的建议

针对当前国际和国内均为建立完善的有毒有害物质海洋污染损害赔偿法律体系的现状，随着有毒有害物质海上运输活动的增加，建立健全我国有毒有害物质海洋污染损害赔偿法律体系刻不容缓。应当从我国司法实际出发，在建设海洋强国的背景下和建设绿色可持续的海洋生态环境的理念下，参考有关国际公约的特殊赔偿机制，构建我国海运有毒有害物质污染损害赔偿制度。总体而言，有几个部分的立法建议：

（一）从理论角度明确立法目的

21 世纪是海洋的世纪，我国是拥有 300 万平方公里主张管辖海域、1.8 万公里大陆海岸线的海洋大国。近些年来，国家在加紧推进海洋强国建设，而推进海洋生态文明建设、加强海洋污染防控与整治是海洋强国建设的重要组成部分。坚持绿色可持续的海洋生态环境理念，需对有毒有害物质造成的海洋环境的污染行为建立严格责任制度，并设立较高的赔偿限额标准，用经济手段提高经济成本，遏制海运有毒有害物质污染的发生，并有效保障受害者得到充分的赔偿和被污染的海洋环境能够得到有效清理。与此同时，也要注意到海运有毒有害物质的船方自

身承担能力的限度，对超出其能力范围外的责任采用赔偿责任社会化制度。

当前，在国际油污损害赔偿领域，国际社会已经形成赔偿责任社会化的趋势。由于有毒有害物质污染损害与油污损害均可能导致严重的经济损害后果和生态环境破坏后果，故赔偿责任社会化对于有毒有害物质污染损害赔偿制度的建设也有借鉴意义。法经济学和法理学的赔偿责任社会化理论认为，赔偿责任社会化的意义在于通过法律规则将权利授予能给社会产生最大收益的人，或把损失分配给能以最小的成本承担这种损失风险的一方，或最有能力承担这种风险的人，从而提高法律的效率。此外，在环境的权利配置中，会更多考虑社会与人类因素，船货共担原则和强制保险制度就是这种机制，考虑社会和人类因素的权利分配方式，通过一种从根本上有利于整个人类社会的途径来解决权利相互性的冲突。

故建议我国建立健全有毒有害物质海洋污染损害法律制度时，参考《HNS 公约》的立法宗旨，即意识到有毒有害物质在我国沿海和内河的运输中造成的危险，确保受到有毒有害物质污染损害的受害者能够得到充分、迅速和有效的赔偿，并认为有毒有害物质运输所致损害的经济后果应当由航运界和货方共同承担，最大程度地保障受害人的合法权益以及保护海洋生态环境。

（二）建构形式与主要内容

关于建构形式。建立健全有毒有害物质污染损害赔偿法律制度涉及到多个方面的问题，包括责任主体、归责原则、赔偿范围、责任限制、强制保险和赔偿基金制度等。部分问题在我国当前立法中有一般性规定，但是却分散在各个部门法和行政条例中，无法形成统一有效的法律体系。与我国有毒有害物质海洋污染损害赔偿法律制度现状相比，油类污染损害赔偿责任法律制度较为成体系化。建议我国建立健全有毒有害物质海洋污染损害赔偿法律制度时，可以司法解释的形式，如制定《最高院关于审理船舶有毒有害物质污染损害赔偿案件的若干法律问题的解释》，避免今后《HNS 公约》生效以及我国加入后导致各部门法的大范围修改。

关于主要内容。我国国内当前关于有毒有害物质海洋污染损害赔偿的相关立法，存在归责原则不确定、赔偿范围不明、赔偿机制不健全和赔偿限额过低等问题，而《HNS 公约》对有毒有害物质污染损害赔偿的规定已经较为完善，可以适当采用《HNS 公约》的相关规定。从《HNS 公约》的立法结构来看：

其一，《HNS 公约》第一条规定了 “船舶”、“所有人”、“收货人”、“有毒有害物质”、“损害的范围”、“事故”等等概念，明确了责任人和损害赔偿的范围。我国现行立法则没有针对有毒有害物质污染建立上述体系性规定，上述相关概念以及损害赔偿范围等等应当在我国专门处理有毒有害物质污染损害赔偿案件的司法解释中集中体现。

其二，我国建立健全有毒有害物质污染损害赔偿法律制度，主要是为了解决

沿海船舶造成的有毒有害物质污染事故。故应当在立法中明确法律的适用范围，且对于赔偿责任的限额应当根据的具体情况制定标准。对于在沿海发生的国际航线船舶造成的有毒有害物质污染事故，由于我国《海商法》规定的海事赔偿责任限额过低，故损害赔偿责任限额可适当高于我国《海商法》现行关于海事赔偿限额的规定。

其三，《HNS 公约》第七条第 1 款确定了严格责任的归责原则，且在第 2 款、第 3 款规定了船舶所有人的免责事由和除外责任事由。而我国《侵权责任法》关于环境污染损害侵权仅规定无过错责任且未规定免责事由，使船方承担的责任过重，再加之适用《海商法》的责任限额，过低的责任限额也会导致受害人无法得到充分合理的赔偿，而最终致使《侵权责任法》的无过错责任变得毫无意义。建议在严格责任的基础上，增加船舶所有人的免责事由和除外责任事由。此外，明确针对有毒有害物质与非有毒有害物质共同造成的污染损害，能够区分各自造成损失的，按照造成损失的比例承担各自责任;若不能区分各自的责任，承担连带责任。

其四，关于强制保险制度和赔偿基金制度。我国国内法针对有毒有害物质海洋污染损害赔偿均无强制保险制度和赔偿基金制度的规定，而在《HNS 公约》第十二条规定“登记并实际运输有毒有害物质的船舶的所有人，必须对适用第九条责任限额确定的金额进行保险获取的其他经济担保”，在第十三条规定“赔偿基金设立的目的是为了在赔偿责任限额制度保护不足或无法得到的情况下为海上运输有毒有害物质的损害提供赔偿等”。《HNS 公约》的双层赔偿机制，是有毒有害物质污染损害赔偿责任社会化的重要体现，能够在使船舶所有人承担应有责任之外，有效保障受害者得到合理充足的赔偿。

总之，建议按照《HNS 公约》的体系，且根据我国司法的实际情况合理采用其相关规定。明确我国建立健全有毒有害物质海洋污染损害专门规定的立法目的，是在倾向于保护受害者权益的同时，也要考虑到造成污染的船舶所有人的实际承担责任能力，确保能够得到充分、迅速和有效的赔偿。采用专门针对有毒有害物质污染损害赔偿制定司法解释的方式，避免《HNS 公约》生效以及我国加入后造成对各个部门法的大幅度修改。借鉴《HNS 公约》和《巴塞尔议定书》中有关明确相关概念、确定损害赔偿范围、适用范围、归责原则以及强制保险和赔偿基金制度，并根据我国的具体情况制定赔偿限额标准，以建立健全我国有毒有害物质污染损害赔偿制度。

五、结　语

随着世界范围内工业化的发展，全球各国产业之间的联系也越来越紧密，导致国际间以及一国内部船载有毒有害物质的艘次数和运输量都有所增加，我国海

运有毒有害物质发生污染损害的风险也在增加。一旦发生有毒有害物质污染事件，则可能造成比油污损害和燃油损害更为严重的经济损失和人身伤亡后果，损害赔偿制度的建立十分紧迫。当前，有关有毒有害物质污染损害赔偿的国际公约尚未生效，而国内尚无专门立法且在适用各个部门法的一般规定时还存在众多问题，故在我国建立健全相关的赔偿法律制度，是坚持绿色可持续海洋生态环境理念的应有之意，更是我国建设海洋强国、完善海洋环境立法的必然要求。建立健全我国有毒有害物质污染损害法律制度，应当根据我国具体情况，对国际上相关公约、机制进行合理分析、借鉴，以建立、健全国内的相关立法。

The Enlightenment on Establishing and Perfecting the System of Compensation for Pollution Damage Caused by Hazardous and Noxious Substances in China from Relevant International Convention

ZHAO Ruoxing LI Guangchun*

Abstract: Adhering to the concept of green and sustainable Marine ecological environment and improving Marine environmental legislation are the important parts of building a maritime power. Nowadays, there is an increased risk of oil spill pollution and hazardous and noxious substances pollution caused by ship and Marine operation accidents, which poses a serious threat to the Maritime ecological environment of the sea area. However, based on the current international and domestic legislation situation, the legal system of compensation for pollution damage caused by hazardous and noxious substances is not perfect. With the hazardous and noxious substances pollution accident possibility gradually increased, it is urgent to establish and perfect the legal system of compensation for pollution damage caused by hazardous and noxious substances in China. By referring to the special system of relevant international conventions and their practice, this paper analyzes the problems existing in China's domestic legislation and discusses how to establish and perfect the legal system of compensation for pollution damage caused by hazardous and noxious substances in China, in order to curb the Marine environment pollution caused by hazardous and noxious substances in China and protect the legitimate rights and interests of the victims of pollution.

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Key Words: HNS Convention; Basel Convention; Compulsory insurance; Compensation fund

I. Problem Introduction

To build a maritime power, protect the Marine ecological environment and curb the deteriorating trend of Marine ecological environment, we need to pay attention to the development and protection of the Marine environment and constantly improve the legal system of Marine environmental protection. At present, oil spills, hazardous and noxious substances and other pollution caused by ships and Marine operation accidents tend to pose a serious threat to the ecological environment involved in the sea areas and cause damage that is not easy to recover. Therefore, in improving the legal system of Marine environmental protection, relevant legislation on Marine environmental pollution should be attached importance to. Most of China's imported crude oil depends on sea transportation, so the probability of oil pollution damage accidents in China's sea areas is very high.[1] According to the statistics of the past decade, the largest amount of pollutants leaked by ships at sea is fuel oil, followed by crude oil, fuel oil transported as cargo and other hazardous and noxious substances. In 2010, compared with 2006, the number and volume of ships carrying hazardous and noxious substances on the sea in China were significantly larger and the shipping volume of the single ship was significantly increased, which increased the risk of pollution damage caused by hazardous and noxious substances by sea in China. Although the amount of hazardous and noxious substances leakage is smaller than that of oil substances, due to the wide variety of hazardous and noxious substances and the immature technology to deal with pollution caused by hazardous and noxious substances, the consequences of pollution are not only property damage, but also bring a greater risk of casualties than oil substances pollution.[2] In the face of the serious economic losses and human casualties that may be caused by the pollution of hazardous and noxious substances, the international and domestic legislation on compensation for pollution damage caused by hazardous and noxious substances by sea is not perfect

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1 HAO Huijuan, *Prospect of China's Accession to the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage*, China Oceans Law Review, Vol. 15:2, p. 102 (2019). (in Chinese)

2 LI Zhen, Study on the Legal System of Compensation for Pollution Damage Caused by Hazardous and Noxious by Sea, Ph.D. dissertation, Dalian Maritime University, 2015, p. 110-111. (in Chinese)

compared with the relevant legislation on compensation for pollution damage caused by oil.

To begin with, the international community has established a perfect mechanism of compensation for pollution damage caused by oil. At present, an international mechanism of compensation for pollution damage caused by oil has been formed based on "Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969" (CLC PROT 1992), "International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971" (1971 FUNDS), "Convention on Limitation of Liability for Maritime Claims, 1976" (LLMC 1976), and "International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001" (BUNKER). Through working well for many years, this mechanism has been proved to be scientific and effective in practice. Second, despite the great importance attached by the international community to the pollution damage caused by hazardous and noxious substances, relevant conventions find themselves stuck in their implementation. An international system of compensation for pollution damage caused by the movements of hazardous and noxious substances has been formed based on the "International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea" (HNS Convention) of International Maritime Organization (IMO), "Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal" (Basel Convention) formulated by the United Nations Environment Programme, and "Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal Basel, 1999" (Basel Protocol). In fact, the two-tier compensation scheme of the HNS Convention also draws reference from CLC PROT 1992 and 1971 FUNDS. Both the HNS Convention and Basel Protocol have not entered into force for various reasons, thus failing to meet the requirements for full compensation to the victims. The rationality of the two-tier compensation scheme of the HNS Convention and Basel Protocol can provide some references for China to establish and improve the relevant legislation of liability and compensation mechanism for pollution damage caused by hazardous and noxious substances by sea.

Third, special legislation has not yet been available on compensation for pollution damage caused by hazardous and noxious substances by sea in China. At present, the system involving compensation for environmental pollution damage at home appears in scattered departmental laws and relevant regulations, such as the

General Principles of Civil Law, the Tort Liability Law, the Marine Environmental Protection Law, the Maritime Law and the Regulations on the Control over Prevention of Pollution by Vessels in Sea Waters. However, no clear provisions have put forward on the liability for pollution damage caused by hazardous and noxious substances by sea. Therefore, the subject of liability, the doctrine of liability fixation, the scope of damage, and the compensation mechanism, etc. can only be determined through the above general provisions. The lack of special legislation at home has resulted in such problems as the unclear doctrine of liability fixation, uncertain scope of damage, imperfect compensation mechanism and too low limit of liability in the system of compensation for pollution damage caused by hazardous and noxious substances.

In light of the gradually increasing risk of pollution accidents caused by hazardous and noxious substances in China, it is in sore need of China's Marine environmental protection to establish and perfect the legal system of compensation for pollution damage in connection with the carriage of hazardous and noxious substances by sea in China, and to adjust the legal relationship of compensation for pollution damage caused by hazardous and noxious substances carried by coastal and inland river ships in China. To establish and perfect this legal system, we can analyze the relevant international conventions, explore the rationality of their special systems, and provide a theoretical basis for drawing lessons from and establishing the relevant systems of our country. Meanwhile, by analyzing the reason why relevant international conventions failed to take effect and in combination with the problems existing in the current domestic law of China, the corresponding legislative suggestions are put forward.

II. Reference and Enlightenment of International Convention on Liability for Pollution Damage Caused by Hazardous and Noxious Substances to China

A. The Relevant Legal System of the HNS Convention

HNS Convention is a convention on compensation with a strict liability system after CLC PROT 1992 and 1971 FUNDS. The Convention is characterized in its "two-tier compensation scheme", which unifies the compensation limitation system and compulsory insurance system established in CLC PROT 1992, and the damage compensation fund system established based on the principle of shared

responsibility between ship and shipper in 1971 FUNDS, thus forming a complete two-tier compensation scheme to ensure full and effective compensation for victims of pollution caused by hazardous and noxious substances by sea.

In addition to the two-tier compensation scheme, compared with the current legislation in China, the following mechanisms in the Convention can also be used for reference:

1. HNS Convention defines the concepts of "ship", "owner", "receiver", "hazardous and noxious substances" and scope of "damage", based on which the scope of compensation for pollution damage caused by hazardous and noxious substances can be directly judged. As a result of the absence of specific provisions on the scope of damage of pollution caused by hazardous and noxious substances in China's current legislation, different judgments may be made on the amount of compensation in judicial practice, which does not conform to the requirements of legal certainty and predictability.

2. HNS Convention defines the circumstances of strict liability, exemption from liability and partial exclusion of liability. Although the Convention does not provide for the sharing of liability following the principle of proportionate liability for pollution damage caused by hazardous and non-hazardous substances as Basel Protocol does, it still provides for the partial exemption of liability, which can effectively prevent the moral hazard of the victims of pollution caused by hazardous and noxious substances by sea in combination with the higher compensation limit system stipulated in the Convention. Also, by raising the "economic cost", it can alert the ship and the shipper shipping hazardous and noxious substances to handle them carefully.

3. HNS Convention provides for a higher limit of liability. The limit of liability of the Convention is calculated based on the tonnage of the ship, and the minimum limit of liability is 10 million Special Drawing Rights (SDR) applicable to ship with a tonnage not exceeding 2,000 tons. In contrast, the limit of liability for maritime claims in the Maritime Law of China is set as per the Convention on Limitation of Liability for Maritime Claims in the last century, with a minimum of 167,000 SDR, which has not yet been raised so far. In light of the growing carrying capacity of hazardous and noxious substances by sea and the increasing potential hazard, the limit of liability for maritime claims in the Maritime Law of China should be raised to subject to the new situation.

B. The Pollution Damage Compensation System in Basel Convention

Basel Convention provides for the mechanism of international movement and disposal of hazardous and noxious substances, and China has already acceded to the Convention. No provisions on the compensation mechanism for pollution damage caused by hazardous waste are stipulated in Basel Convention, but Basel Protocol stipulates the applicable scope of pollution damage caused by the movements of hazardous waste, the scope of damage, the doctrine of liability fixation of strict liability, as well as the limit of liability. In spite of the absence of the two-tier compensation scheme in the HNS Convention, there are still some provisions that can be used for reference in China's relevant legislation.

1. Basel Protocol defines the doctrine of liability fixation, adopts the principle of strict compensation liability, and supplements the exception from liability and fault liability. In case of damage caused by hazardous waste falling within and outside the scope of this Protocol, the person responsible for compensation shall, with the proportion of his/her liability determined subject to the volume and characteristics of the hazardous waste concerned, be liable for part of the damage falling within the scope of the Protocol on a prorata basis.

2. Basel Protocol calculates the compensation limit based on the tonnage of hazardous waste, with the minimum limit of liability of 1 million SDR for notifier, exporter and importer for shipments not exceeding 5 tons, which also has a limit of liability higher than that stipulated in the Maritime Law of China.

To sum up, both the HNS Convention and Basel Protocol have made more systematic provisions on compensation for pollution damage caused by hazardous and noxious substances. For the doctrine of liability fixation, the scope of damage and the limit of liability, China has stipulated similar provisions in the legal system of compensation for ship oil pollution damage, so they can be appropriately adjusted and adopted in the construction of the system of compensation for pollution damage caused by hazardous and noxious substances in China.

For the two-tier compensation scheme, HNS Convention combines the limit of liability and the compulsory insurance system with the compensation fund system for the first time, so the analysis of its rationality should be valued as follows.

C. The Rationality Analysis of the Two-Tier Compensation Scheme of the HNS Convention

The first-tier compensation scheme of the HNS Convention includes the limit of liability and compulsory insurance system proposed in CLC PROT

1992 and Basel Protocol. The second tier compensation scheme is inspired by the pollution damage compensation fund mechanism based on the principle of shared responsibility between ship and shipper in 1971 FUNDS. To transplant the compulsory insurance system and sharing of fund contribution between the consignee and the ship in HNS Convention to China, we should reconsider its legal value, that is, to find equilibrium between realizing law's overall social value and protecting lawful rights and interests of pollutant receiver, thus realizing the social value of the law and reflecting the fairness and justice of the law, in order to solve the jurisprudence basis of establishing the two-tier compensation scheme for pollution damage caused by hazardous and noxious substances in China.

1. Analysis from the Perspective of Law and Economics

First, from the perspective of fairness, efficiency and balance. The concept of fairness and justice was initially put forward by Ancient Greek philosophers, which affected the later legislation. However, along with the development of the whole human society, the industrial revolution and technological revolution have brought about tremendous changes in the legal system, making truly effective legal system no longer just fair, but also efficient. Law and economics began to rise in the mid-to-late 20th century. Law and economics scholars thought that the efficiency of law was as important as fairness, and advocated that rights should be granted to the people who could bring the greatest benefits to the society through legal rules, or the loss should be allocated to the side who could bear the risk of such loss at the minimum cost or the person who was most capable of taking this risk, so as to improve the efficiency of law.[3] Judging from the relevant provisions of the HNS Convention, the compulsory insurance system is to socialize the liability for pollution damage. The insurance company raises a large number of funds by collecting premiums from the ships. When the pollution damage caused by hazardous and noxious substances occurs, it can directly pay more adequate compensation to the victims, thereby making the polluters assume their due liabilities while minimizing the damage to the victims. The law is not only a trading rule to the economy, but also the result of the game of the market entities through the national legislature. An efficient legal system can balance the legal supply and demand to the greatest extent. Only when the maximization of self-interest among

3 LI Ke & YE Zhumei, *Research on the Basic Theory of Law and Economics*, China University of Political Science and Law Press, 2013, p. 5. (in Chinese)

economic actors is realized, can equilibrium be achieved.[4] The protection function of rights and interests occupies a dominant position in the traditional tort law and it should be, but the basic goal of tort law is to ensure the balance between rights and interests and freedom to act. If the emphasis on the protection function of rights and interests forms excessive restriction on the freedom to act, resulting in the imbalance between the protection of rights and interests and the freedom to act, it will obviously lead to another ethical crisis of tort law.[5] Different from the general tort damage compensation system, the system of compensation for pollution damage stipulated in HNS Convention tends to protect the rights and interests of the victims, and also takes into account the actual capacity to bear liabilities of the polluters, so as to ensure reasonable liability borne by the polluters and maximize the interests of the victims, thereby achieving equilibrium in law and economics.

Second, from the perspective of cost and benefit. It is human instinct to seek advantages and avoid disadvantages. Resources can be allocated to the most reasonable utilization through economic means such as cost (price). Considering the distribution of legal rights, there are illegal costs and legitimate rights and interests when the parties perform all the rules, so economic means can be adopted to analyze the law.[6] The limit of liability set by the HNS Convention for compensation for pollution damage caused by hazardous and noxious substances is higher than that stipulated in the Maritime Law of China. From this point of view, polluters will bear more liability, which raises the illegal cost of polluters and can effectively urge polluters to take measures to avoid pollution. Moreover, the compulsory insurance system and the pollution damage compensation fund mechanism established by the HNS Convention transfer the risk to both the insurer and the ship and shipper through the rational allocation of social resources. Based on the decentralized function of insurance and the damage compensation function, the victims can be guaranteed to get more adequate compensation. The analysis of the special system in the HNS Convention from the perspective of law and economics will be conducive to the design of the system of compensation for pollution damage caused by hazardous and noxious substances in China.

2. Analysis from the Perspective of Jurisprudence

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4 LI Zhenyu, *Research on Methodology of Law and Economics*, Proceedings of 2016 China Law and Economics Forum, 2006, p. 204-205. (in Chinese)

5 ZHANG Tiewei, *The Ethical Diagnosis of the Crisis of Tort Law*, The Jurist, Vol. 27:1, p. 129-130 (2012). (in Chinese)

6 ZHANG Wenxian, Research on the Ideological Trend of Western Law Philosophy in the 20th Century. Law Press China, 1996, p. 200. (in Chinese)

First, the principle of reciprocity of rights and obligations (liabilities). According to the principle of reciprocity of rights and liabilities, it is reasonable to make the consignee of hazardous and noxious substances bear certain liability for pollution damage. The Council of the European Community proposed in 1974 to define "polluter" as "a person who directly or indirectly damages the environment or causes the conditions leading to such damage", aiming to protect the global environment and safeguard the common interests of all mankind. The principle of reciprocity of rights and liabilities of polluters means that since the actions carried out by polluters can generally bring utility or benefits to polluters, they should bear certain liability for their actions.[7] From the perspective of international carriage of hazardous and noxious substances, for each hazardous and noxious substance transported from the seller's country to the pollutant consignee's country, the consignee for business purposes will get utility or benefits from receiving the pollutants. Even if there is no leakage of hazardous and noxious substances in international carriage of goods by sea, it will eventually bring damage to the environment of the receiving country in the process of later production and use. Consignees of pollutants for business purposes should pay for the utility or benefits they gain, rather than that the state and national of the receiving pay for the environmental damage.

Second, reciprocity of rights theory. According to the reciprocity of rights theory, there exists an unobvious boundary between rights, and it is difficult to distinguish the boundary between the protection of the ecological environment and the legitimate rights and interests of pollutant consignees. However, the core of environmental problems lies in the conflicts between public interest and personal interest, environmental interest and economic interest, immediate interest and long-term conflict of interest, as well as the tension, conflict and integration of the structural basis of conflict in the process of social action and its choice.[8] In case the destruction of natural resources and environmental pollution directly threatens human life, health, survival and development, it is also a right for people to pursue survival and utilize environmental resources in an environment free from pollution and destruction. In case of a confrontation balance between the environmental rights, the rights of the victims of pollution caused by hazardous

7 LIU Menglan & MO Shouzhong, *On the Polluter Pays Principle*, Law Review, Vol. 38:6, p. 205 (2017). (in Chinese)

8 WANG Rong, *Economic Analysis of Chinese Environmental Lawful Institution*, Law Press China, 2003, p. 1. (in Chinese)

and noxious substances and the rights of the receivers of hazardous and noxious substances, the contradictions arising from the conflicts of rights should be resolved under the guidance of social interests and the long-term and overall interests of mankind and the principle of justice. In the face of the conflict of rights, the solution is to distribute the rights.[9] In the distribution of rights of environmental pollution damage, the factors of the environment and victims should be given more consideration, with more emphasis on environmental protection and the protection of rights and interests of pollution victims. Therefore, the principle of shared responsibility between ship and shipper and the compulsory insurance system are the rights distribution ways considering the environment and victim factors, so as to solve the conflict of rights in a way that is fundamentally beneficial to the whole human society.

Third, the coordination of human interests and the natural environment. Modern international law has begun to concern about the negative impact of economic globalization, requiring various countries to pay proper attention to the public interests and social values in the fields of environmental protection, human rights and public health besides the economic activities and economic values, such as transnational trade and investment. There is growing consensus worldwide that transnational economic exchanges at the expense of the environment and human rights are not worth advocating; damage to the ecological environment, a serious departure from the concept of sustainable development, and disregard for the inter-generational equity and generation equity in economic development should be opposed; the one-sided pursuit of immediate interests and biased protection of the commercial private interests of a minority while ignoring the national public interests and the social interests of social groups is not praiseworthy.[10] It is a way to coordinate the interests of the individual and whole society by adopting the principle of shared responsibility between ship and shipper and the compulsory insurance system to maximize the efficiency of social resources allocation and ensure full and effective compensation for the victims of pollution damage caused by hazardous and noxious substances.

III. The Specific Problems Existing in China's Legislation

9 SU Li, *The Rule of Law and Its Local Resources*, China University of Political Science and Law Press, 1996, p. 185. (in Chinese)

10 LIU Sun, *The Humanization Trend of International Law and the Innovation of International Investment Law*, Chinese Journal of Law, Vol. 55:4, p. 196-197 (2011). (in Chinese)

on Compensation for Pollution Damage Caused by Hazardous and Noxious Substances

Looking at the relevant legislation on compensation for pollution damage caused by hazardous and noxious substances in China, it can be divided into three categories as per different functions: first, the Constitution of China, which stipulates the abstract principle of environmental protection; second, the laws and regulations with certain administrative characteristics, such as the Marine Environmental Protection Law and the Regulations on the Administration of Prevention of Marine Pollution by Ships, which deal with pollution damage cases from the perspective of formulating behavior standards in line with environmental protection and punishing illegal acts, mainly by setting standards for potential pollution behaviors and punishing those failing to meet the standards, so as to protect the marine environment and resources, prevent pollution damage and maintain ecological balance. The Marine Environmental Protection Law does not stipulate the compensation for victims of marine environmental pollution damage, while the Regulations on the Administration of Prevention of Marine Pollution by Ships stipulate that the compensation liability of victims for pollution by ships and the settlement of disputes may be mediated or sued or arbitrated by the harbor superintendence administration, but there is no specific provision on the compensation scope and standard; third, the General Principles of Civil Law, the Tort Liability Law and the Maritime law, etc., which deal with pollution damage compensation cases from the perspective of private law.

By analyzing mainly from the perspective of private law, there exist the following problems in the legislation on compensation for marine pollution caused by hazardous and noxious substances in China.

A. Unclear Doctrine of Liability Fixation

Article 124 of the General Principles of Civil Law of China only stipulates the liability for compensation for environmental pollution damage in principle. The Tort Liability Law stipulates the doctrine of liability fixation respectively for determining the liability of the person responsible for the environmental pollution and the damage caused by highly hazardous substances, but the doctrine of liability fixation of the two are different. It is stipulated in Article 65 of the Tort Liability Law that the liability for environmental pollution shall be subject to the principle

of liability without fault and any exemption or mitigation provisions. However, the provisions of Article 72 on the liability for damage caused by highly hazardous substances show that no liability shall be assumed in case the damage is caused by the victim intentionally or by force majeure. As there is no direct stipulation on the doctrine of liability fixation for pollution caused by hazardous and noxious substances by sea in the Tort Liability Law of China, abovementioned different provisions may be applied to the cases of pollution caused by hazardous and noxious substances by sea in judicial practice, which leads to different liabilities of the liable persons. Therefore, it is necessary to clarify the doctrine of liability fixation for marine pollution caused by hazardous and noxious substances in legislation, so as to avoid the conflict between judgments.

B. Uncertain Scope of Damage

The Tort Liability Law mainly deals with whether the liable person should bear the liability and the proportion of the liability, with the absence of specific provisions on the scope of damage for the losses. In the case of compensation for marine pollution damage caused by hazardous and noxious substances, the Maritime Law is used to judge whether the pollution damage belongs to claims subject to limitation, so as to judge whether the limitation of liability for maritime claims is applicable, but it is the same that no provisions are available on the scope of damage for the losses. In contrast, despite no relevant provisions on the scope of damage of ship oil pollution at home, the CLC PROT 1992, which China has joined, stipulates that the scope of "pollution damage" includes "loss and damage caused by pollution caused by oil spill outside the ship, the cost of recovery measures that have been taken or will be taken, the cost of preventive measures and the further loss or damage caused by preventive measures". Therefore, there are laws to abide by for the scope of damage for ship oil pollution in China. Article 6 of HNS Convention also stipulates that "the scope of damage" includes "casualties caused by hazardous and noxious substances, loss of property, damage caused by environmental pollution, cost of reasonable recovery measures actually taken or to be taken, cost of preventive measures and further loss or damage caused by preventive measures." Although HNS Convention has not yet entered into force, the scope of "pollution damage" stipulated in CLC PROT 1992 has been widely recognized in the international community. To avoid disputes about the scope of damage in the cases of compensation for pollution damage caused by hazardous

and noxious substances, China should also take into account the compensation for pollution damage caused by hazardous and noxious substances by sea when establishing and perfecting the compensation mechanism for relevant cases.

C. Imperfect Compensation Mechanism

At present, only the Maritime Law has relevant provisions on the compensation mechanism for marine pollution damage caused by hazardous and noxious substances in China. Article 207 of the Maritime Law stipulates the types of claims subject to the limitation that can apply for limitation of liability for maritime claims, and the compensation for pollution damage caused by hazardous and noxious substances may fall within the circumstances of personal injury or death and loss or damage of property that occurs onboard or is directly related to ship operation or salvage operations as stipulated in Paragraph 1 of Article 207, or the compensation claims for other losses caused by violations of non-contractual rights that are related to shipping operation or salvage operations as stipulated Paragraph 3. That is, the parties can, therefore, apply limitation of liability for maritime claims. However, the limit of compensation stipulated in Article 210 of the Maritime Law is only equivalent to that stipulated in CLC PROT 1992 and the first-level limit stipulated in HNS Convention, with the absence of the second tier compensation scheme stipulated in 1971 FUNDS and HNS Convention, so it cannot ensure full and reasonable compensation to the victims of pollution damage caused by hazardous and noxious substances by sea.

The current marine environmental pollution issues in China are similar to those of the developed countries several decades ago. In the past, the developed countries experienced the development process from "individual liability" to "social liability" for environmental pollution damage compensation. The socialization of environmental damage compensation in the form of liability insurance, liability fund and social security system has become the development trend of environmental pollution damage compensation in most countries.[11] China has also stipulated the shared responsibility between ship and shipper for ship oil pollution damage compensation in the Marine Environmental Protection Law, and established a fund system for compensation for ship oil pollution damage.

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11 ZHUANG Jinghua, *Research on Legislation of Compensation for Environmental Pollution Damage*, China Fangzheng Press, 2012, p. 159. (in Chinese)

However, the system excludes the application of pollution damage caused by hazardous and noxious substances, and collective work is not plain sailing. The consequences of the pollution damage caused by hazardous and noxious substances may be more serious than that caused by the oil pollution damage, and it is difficult to fully protect the interests of the victims by relying on the ship's strength alone. Therefore, it is necessary to transfer the liability for damage to the society, that is, to establish a hazardous and noxious substances damage compensation fund, but there is still a long way to go for the fund-raising work.

D. Too Low Limit of Liability

At present, there is a special international convention for adjusting the compensation for oil pollution damage in China, that is, CLC PROT 1992. The Convention significantly increases the limit of liability of shipowners to a minimum of 3,000,000 SDR. However, since special legislation has not yet been available on compensation for pollution damage caused by hazardous and noxious substances by sea in China, and HNS Convention has not yet come into force, the cases of compensation for marine pollution damage caused by hazardous and noxious substances in our judicial practice can only be subject to the limit of liability for maritime claims stipulated in Article 210 of the Maritime Law of China. The limit of liability for maritime claims in the Maritime Law of China is set according to the LLMC 1976, which has raised the limit of liability twice in the form of amendments in the past 30 years. However, the Maritime Law of China has not yet raised the limit of liability for maritime claims so far.

To sum up, China's current legislation has not yet made specific provisions on the system of compensation for marine pollution damage caused by hazardous and noxious substances, so only the general provisions of various departmental laws can be applied. Also, there is a lack of supporting compensation mechanism, which is prone to conflicts between judgments in judicial practice, and at the same time, not conducive to better protecting the legitimate interests of victims and protecting the marine ecological environment of China. Establishing and perfecting the compensation mechanism for damage caused by hazardous and noxious substances is of great significance to the improvement of the legal system of compensation for marine environmental pollution damage and the building of maritime power in China.

IV. Suggestions on Establishing and Perfecting the Legislation System of Compensation for Pollution Damage Caused by Hazardous and Noxious Substances in China

In view of the current international and domestic situation of establishing a perfect legal system of compensation for marine pollution damage caused by hazardous and noxious substances, with the increase in maritime transport of hazardous and noxious substances, it is urgent to establish and perfect the legal system of compensation for marine pollution damage caused by hazardous and noxious substances in China. We should proceed from the judicial reality of China, take into account the background of building a maritime power and the concept of building a green and sustainable marine ecological environment, and learn from the special compensation mechanism of relevant international conventions to construct the compensation system for pollution damage caused by hazardous and noxious substances by sea in China. On the whole, there are several suggestions on legislation:

A. Clarify the Purpose of Legislation from a Theoretical Perspective

The 21st century is the century of the ocean. Boasting 3 million square kilometers of sea areas and 18,000 kilometers of continental coastline makes China a big maritime country. Also, China has pressed forward building itself into a maritime power in recent years, of which promoting the marine ecological progress and strengthening prevention and control of marine pollution constitute vital pieces of building a maritime power. To adhere to the concept of green and sustainable marine ecological environment, it is necessary to establish a strict liability system for the marine environment pollution caused by hazardous and noxious substances, set a higher limit of liability, and increase economic costs by economic means, so as to curb the pollution caused by hazardous and noxious substances by sea, and effectively ensure that victims are fully compensated and the polluted marine environment can be effectively cleaned up. In the meantime, it is also necessary to concern about the limit of the ship's bearing capacity of hazardous and noxious substances, and adopt the socialization system for the liability beyond the scope of its capacity.

At present, the trend of socialization of liability for compensation has been formed in the international community in the field of international compensation

for oil pollution damage. As the pollution damage caused by hazardous and noxious substances and oil pollution damage may lead to serious economic damage and ecological environment damage consequences, the socialization of liability for compensation can also be used for reference for the construction of the compensation system for pollution damage caused by hazardous and noxious substances. The theory of socialization of liability for compensation in law and economics and jurisprudence argues that the significance of socialization of liability for compensation is to grant rights to the people who can produce the greatest benefits to the society through legal rules, or allocate the loss to the party who can bear the risk of such loss at the minimum cost or the person who is most capable of taking this risk, so as to improve the efficiency of the law. Besides, more consideration will be given to social and human factors in the right distribution of the environment. The principle of shared responsibility between ship and shipper and the compulsory insurance system are such mechanisms, which take into account social and human factors in the distribution of rights to resolve the conflict of rights in a way that is fundamentally beneficial to the whole human society.

Therefore, it is suggested that when establishing and perfecting the legal system of compensation for pollution damage caused by hazardous and noxious substances by sea, we should refer to the legislative purpose of HNS Convention, that is, to be aware of the hazard caused by hazardous and noxious substances in the coastal and inland river transportation of China, and to ensure full, prompt and effective compensation for victims of pollution damage caused by hazardous and noxious substances. We should also hold that the economic consequences of damage caused by the transport of hazardous and noxious substances should be shared by the ship and shipper, so as to protect the legitimate rights and interests of the victims and protect the marine ecological environment to the greatest extent.

B. Construction Form and Main Content

In terms of the construction form, establishing and perfecting the legal system of compensation for pollution damage caused by hazardous and noxious substances involves many issues, including the subject of liability, the doctrine of liability fixation, the scope of damage, the limit of liability, the compensation insurance and the compensation fund system. Some of the issues have been generally stipulated in the current legislation of China, but they are scattered in various departmental laws and administrative regulations, which cannot form a unified and effective legal

system. Compared with the current situation of the legal system of compensation for marine pollution damage caused by hazardous and noxious substances in China, the legal system of liability for compensation for oil pollution damage is more systematic. It is suggested that when establishing and perfecting the legal system of compensation for marine pollution damage caused by hazardous and noxious substances, the form of judicial interpretation can be adopted, such as formulating "The interpretation of the Supreme Court on some legal issues in the case of compensation for pollution damage caused by hazardous and noxious substances by ships", so as to avoid future extensive revision of various departmental laws after the entry into force of HNS Convention and China's accession.

In terms of the main content, there exist some problems in the relevant legislation on compensation for marine pollution damage caused by hazardous and noxious in China, such as the unclear doctrine of liability fixation, the uncertain scope of damage, imperfect compensation mechanism and too low limit of liability. Considering the relatively perfect provisions of the HNS Convention on compensation for pollution damage caused by hazardous and noxious substances, the relevant provisions of the HNS Convention can be adopted appropriately. Judging from the legislative structure of the HNS Convention:

First, Article 1 of HNS Convention stipulates the concepts of "ship", "owner", "consignee", "hazardous and noxious substances", "scope of damage", "accident", etc., and defines the scope of the liable person and the scope for damage. Viewing that the current legislation of China does not establish the above-mentioned systematic provisions for the pollution caused by hazardous and noxious substances, the above-mentioned related concepts and the scope of damage should be embodied in the judicial interpretation of the cases of compensation for pollution caused by hazardous and noxious substances in China.

Second, China's establishment and improvement of the legal system of compensation for pollution damage caused by hazardous and noxious substances mainly aims to solve the pollution accidents caused by hazardous and noxious substances transported by coastal ships. Therefore, the scope of application of the law should be clearly defined in the legislation, and the limit of liability should be based on the specific circumstances. For the pollution accidents of hazardous and noxious substances caused by ships on international routes along the coast, since the limit of liability for maritime claims stipulated in the Maritime Law of China is too low, the limit of liability for damage may be appropriately higher than the current limit of liability for maritime claims in the Maritime Law of China.

Third, Article 7 of the HNS Convention defines the doctrine of liability fixation of strict liability in Paragraph 1, and provides for the exemptions and exclusions of the shipowner in Paragraphs 2 and 3. However, the Tort Liability Law of China only stipulates liability without fault and no exemptions for environmental pollution damage tort, which makes the liability borne by the ship too heavy. Coupled with the application of the limit of liability in the Maritime Law, too low limit of liability will also lead to the victims failing to get sufficient and reasonable compensation, resulting in the meaningless liability without fault of the Tort Liability Law. It is suggested that the exemptions and exclusions of the shipowner should be increased based on strict liability. Moreover, concerning the pollution damage caused by hazardous and noxious substances and non-hazardous and -noxious substances, if their respective losses can be distinguished, the respective liabilities shall be assumed on a prorata basis; if not, the joint and several liabilities shall be borne.

Fourth, with regard to the compulsory insurance system and the compensation fund system, the provisions on both are unavailable for compensation for marine pollution damage caused by hazardous and noxious substances in China's current law. Article 12 of HNS Convention stipulates that "the shipowner registered and actually transporting hazardous and noxious substances must insure or obtain other economic guarantees for the amount determined by the limit of liability in Article 9", and Article 13 provides that "the purpose of the compensation fund is to provide compensation for damage in connection with the carriage of hazardous and noxious substances by sea if the limit of liability system is insufficient or unavailable". The two-tier compensation scheme of the HNS Convention is an important embodiment of the socialization of liability for compensation for pollution damage caused by hazardous and noxious substances, which can effectively guarantee reasonable and adequate compensation for victims while making shipowners bear their due liabilities.

In brief, it is suggested that the relevant provisions should be reasonably adopted as per the actual judicial situation of China following the system of the HNS Convention. We should make it clear that the legislative purpose of establishing and perfecting the special regulations on marine pollution damage caused by hazardous and noxious substances in China is not only to protect the rights and interests of the victims, but also to take into account the actual capacity to bear the liability of the shipowners causing the pollution, so as to ensure adequate, prompt and effective compensation for victims. The judicial interpretation

of compensation for pollution damage caused by hazardous and noxious substances can be adopted to avoid future extensive revision of various departmental laws after the entry into force of the HNS Convention and China's accession. We can learn from the relevant concepts in HNS Convention and Basel Protocol, determine the scope of damage, the scope of application, the doctrine of liability fixation, as well as compulsory insurance and compensation fund system, and formulate the limit standard of liability according to the specific situation of our country, in order to establish and perfect the system of compensation for pollution damage caused by hazardous and noxious substances in China.

V. Conclusions

With the development of industries around the world, the industrial links among countries around the world are getting closer, which leads to the increase of the number of ships and the transport volume of hazardous and noxious substances in international and internal vessels, and also leads to the increased risk of pollution damage caused by hazardous and noxious substances by sea in China. Once the pollution event caused by hazardous and noxious substances occurs, it may cause more serious economic losses and personal casualties than that of oil pollution damage and fuel damage, so it is urgent to establish a damage compensation system. However, at present, the international convention on compensation for pollution damage caused by hazardous and noxious substances has not yet entered into force, there is no special legislation in China, and there are still many problems in applying the general provisions of various department laws. Therefore, to establish and perfect the legal system of compensation for pollution damage caused by hazardous and noxious substances in our country is not only the proper intention of adhering to the concept of green and sustainable marine ecological environment, but also the inevitable requirement of building China into a maritime power and improving the legislation of Marine environment. To establish and perfect the legal system of pollution damage caused by hazardous and noxious substances in China, it is necessary to make a reasonable analysis of and learn from the international conventions and mechanisms in the light of China's actual conditions, so as to establish and perfect the relevant legislation at home.

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中华人民共和国渔业法实施细则

（1987 年 10 月 14 日国务院批准，1987 年 10 月 20 日农牧渔业部发布，2020 年 3 月 27 日国务院令第 726 号《国务院关于修改和废止部分行政法规的决定》修订）

第一章 总 则

第一条 根据《中华人民共和国渔业法》（以下简称《渔业法》）第三十四条的规定，制定本实施细则。

第二条 《渔业法》及本实施细则中下列用语的含义是：

（一）“中华人民共和国的内水”，是指中华人民共和国领海基线向陆一侧的海域和江河、湖泊等内陆水域。

（二）“中华人民共和国管辖的一切其他海域”，是根据中华人民共和国法律，中华人民共和国缔结、参加的国际条约、协定或者其他有关国际法，而由中华人民共和国管辖的海域。

（三）“渔业水域”，是指中华人民共和国管辖水域中鱼、虾、蟹、贝类的产卵场、索饵场、越冬场、洄游通道和鱼、虾、蟹、贝、藻类及其他水生动植物的养殖场所。

第二章 渔业的监督管理

第三条 国家对渔业的监督管理，实行统一领导、分级管理。

国务院划定的“机动渔船底拖网禁渔区线”外侧，属于中华人民共和国管辖海域的渔业，由国务院渔业行政主管部门及其所属的海区渔政管理机构监督管理；“机动渔船底拖网禁渔区线”内侧海域的渔业，除国家另有规定者外，由毗邻海域的省、自治区、直辖市人民政府渔业行政主管部门监督管理。

内际水域渔业，按照行政区划由当地县级以上地方人民政府渔业行政主管部门监督管理；跨行政区域的内际水域渔业，由有关县级以上地方人民政府协商制定管理办法，或者由上一级人民政府渔业行政主管部门及其所属的渔政监督管理机构监督管理；跨省、自治区、直辖市的大型江河渔业，可以由国务院渔业行政主管部门监督管理。

重要的、洄游性的共用渔业资源，由国家统一管理；定居性的、小宗的渔业资

源，由地方人民政府渔业行政主管部门管理。

第四条 “机动渔船底拖网禁渔区线”内侧海域的渔业，由有关省、自治区、直辖市人民政府渔业行政主管部门协商划定监督管理范围；划定监督管理范围有困难的，可划叠区或者共管区管理，必要时由国务院渔业行政主管部门决定。

第五条 渔场和渔汛生产，应当以渔业资源可捕量为依据，按照有利于保护、增殖和合理利用渔业资源，优先安排邻近地区、兼顾其他地区的原则，统筹安排。

舟山渔场冬季带鱼汛，浙江渔场大黄鱼汛，闽东、闽中渔场大黄鱼汛，吕泗渔场大黄鱼、小黄鱼、鲳鱼汛，渤海渔场秋季对虾汛等主要渔场、渔汛和跨海区管理线的捕捞作业，由国务院渔业行政主管部门或其授权单位安排。

第六条 国务院渔业行政主管部门的渔政渔港监督管理机构，代表国家行使渔政渔港监督管理权。

国务院渔业行政主管部门在黄渤海、东海、南海三个海区设渔政监督管理机构；在重要渔港、边境水域和跨省、自治区、直辖市的大型江河，根据需要设渔政渔港监督管理机构。

第七条 渔政检查人员有权对各种渔业船舶的证件、渔船、渔具、渔获物和捕捞方法，进行检查。

渔政检查人员经国务院渔业行政主管部门或者省级人民政府渔业行政主管部门考核，合格者方可执行公务。

第八条 渔业行政主管部门及其所属的渔政监督管理机构，应当与公安、海监、交通、环保、工商行政管理等有关部门相互协作，监督检查渔业法规的施行。

第九条 群众性护渔管理组织，应当在当地县级以上人民政府渔业行政主管部门的业务指导下，依法开展护渔管理工作。

第三章 养殖业

第十条 使用全民所有的水面、滩涂，从事养殖生产的全民所有制单位和集体所有制单位，应当向县级以上地方人民政府申请养殖使用证。

全民所有的水面、滩涂在一县行政区域内的，由该县人民政府核发养殖使用证；跨县的，由有关县协商核发养殖使用证，必要时由上级人民政府决定核发养殖使用证。

第十一条 领取养殖使用证的单位，无正当理由未从事养殖生产，或者放养最低于当地同类养殖水域平均放养量 60% 的，应当视为荒芜。

第十二条 全民所有的水面、滩涂中的鱼、虾、蟹、贝、藻类的自然产卵场、繁殖场、索饵场及重要的洄游通道必须予以保护，不得划作养殖场所。

第十三条 国家建设征用集体所有的水面、滩涂，按照国家土地管理法规办理。

第四章 捕捞业

第十四条 近海渔场与外海渔场的划分：

（一）渤海、黄海为近海渔场。

（二）下列四个基点之间连线内侧海域为东海近海渔场；四个基点之间连线外侧海域为东海外海渔场。四个基点是：

1、北纬 33 度，东经 125 度；

2、北纬 29 度，东经 125 度；

3、北纬 28 度，东经 124 度 30 分；

4、北纬 27 度，东经 123 度。

（三）下列两条等深线之内则海域为南海近海渔场；两条等深线之外侧海域为南海外海渔场。两条等深线是：

1、东经 112 度以东之 80 米等深线；

2、东经 112 度以西之 100 米等深线；

第十五条 国家对捕捞业，实行捕捞许可制度。

从事外海、远洋捕捞业的，由经营者提出申请，经省、自治区、直辖市人民政府渔业行政主管部门审核后，报国务院渔业行政主管部门批准。从事外海生产的渔船，必须按照批准的海域和渔期作业，不得擅自进入近海捕捞。

近海大型拖网、围网作业的捕捞许可证，由国务院渔业行政主管部门批准发放；近海其他作业的捕捞许可证，由省、自治区、直辖市人民政府渔业行政主管部门按照国家下达的船网工具控制指标批准发放。

内陆水域的捕捞许可证，由县级以上地方人民政府渔业行政主管部门批准发放。

捕捞许可证的格式，由国务院渔业行政主管部门制定。

第十六条 在中华人民共和国管辖水域，中外合资、中外合作经营的渔业企业，未经国务院有关主管部门批准，不得从事近海捕捞业。

第十七条 有下列情形之一的，不得发放捕捞许可证：

（一）使用破坏渔业资源、被明令禁止使用的渔具或者捕捞方法的；

（二）未按国家规定办理批准手续，制造、更新改造、购置或者进口捕捞渔船的；

（三）未按国家规定领取渔业船舶证书、航行签证簿、职务船员证书、船舶户口簿、渔民证等证件的。

第十八条 娱乐性游钓和在尚未养殖、管理的滩涂手工采集零星水产品的，不必申请捕捞许可证，但应当加强管理，防止破坏渔业资源。具体管理办法由县级以上人民政府制定。

第十九条 因科学研究等特殊需要，在禁渔区、禁渔期捕捞，或者使用禁用的渔具、捕捞方法，或者捕捞重点保护的渔业资源品种，必须经省级以上人民政府渔业行政主管部门批准。

第五章 渔业资源的增殖和保护

第二十条 禁止使用电力、鱼鹰捕鱼和敲（舟古）作业。在特定水域确有必要使用电力或者鱼鹰捕鱼时，必须经省、自治区、直辖市人民政府渔业行政主管部门批准。

第二十一条 县级以上人民政府渔业行政主管部门，应当依照本实施细则第三条规定的管理权限，确定重点保护的渔业资源品种及采捕标准。在重要鱼、虾、蟹、贝、藻类，以及其他重要水生生物的产卵场、索饵场、越冬场和洄游通道，规定禁渔区和禁渔期，禁止使用或者限制使用的渔具和捕捞方法，最小网目尺寸，以及制定其他保护渔业资源的措施。

第二十二条 在“机动渔船底拖网禁渔区线”内侧建造人工鱼礁的，必须由有关省、自治区、直辖市人民政府渔业行政主管部门或其授权单位批准。

建造人工鱼礁，应当避开主要航道和重要锚地，并通知有关交通和海洋管理部门。

第二十三条 定置渔业一般不得跨县作业。县级以上人民政府渔业行政主管部门应当限制其网桩数量、作业场所，并规定禁渔期。海洋定置渔业，不得越出“机动渔船底拖网禁渔区线”。

第二十四条 因养殖或者其他特殊需要，捕捞鳗鲡、鲥鱼、中华绒螯蟹、真鲷、石斑鱼等有重要经济价值的水生动物苗种或者禁捕的怀卵亲体的，必须经国务院渔业行政主管部门或者省、自治区、直辖市人民政府渔业行政主管部门批准，并领取专项许可证件，方可在指定区域和时间内，按照批准限额捕捞。捕捞其他有重要经济价值的水生动物苗种的批准权，由省、自治区、直辖市人民政府渔业行政主管部门规定。

第二十五条 禁止捕捞中国对虾苗种和春季亲虾。因养殖需要中国对虾怀卵亲体的，应当限期由养殖单位自行培育，期限及管理办法由国务院渔业行政主管部门制定。

第二十六条 任何单位和个人，在鱼、虾、蟹、贝幼苗的重点产区直接引水、用水的，应当采取避开幼苗的密集期、密集区，或者设置网栅等保护措施。

第二十七条 各级渔业行政主管部门，应当对渔业水域污染情况进行监测；渔业环境保护监测网，应当纳入全国环境监测网络。因污染造成渔业损失的，应当由渔政渔港监督管理部门协同环保部门调查处理。

第二十八条 在重点渔业水域不得从事拆船业。在其他渔业水域从事拆船业，造成渔为资源损害的，由拆船单位依照有关规定负责赔偿。

第六章 罚 则

第二十九条 依照《渔业法》第二十八条规定处以罚款的，按下列规下执行：

（一）炸鱼、毒鱼的，违反关于禁渔区、禁渔期的规定进行捕捞的，擅自捕捞国家规定禁止捕捞的珍贵水生动物的，在内陆水域处五十元至五千元罚款，在海洋处五百元至五万元罚款；

（二）敲（舟古）作业的，处一千元至五万元罚款；

（三）未经批准使用鱼鹰捕鱼的，处五十元至二百元罚款；

（四）未经批准使用电力捕鱼的，在内陆水域处二百元至一千元罚款，在海洋处五百元至三千元罚款；

（五）使用小于规定的最小网目尺寸的网具进行捕捞的，处五十元于一千元罚款。

第三十条 依照《渔业法》第二十九条规定处以罚款的，按罚款一千元以下执行。

第三十一条 依照《渔业法》第三十条规定需处以罚款的，按下列规定执行：

（一）内陆渔业非机动渔船，处五十元至一百五十元罚款；

（二）内陆渔业机动渔船和海洋渔业非机动渔船，处一百元至五百元罚款；

（三）海洋渔业机动渔船，处二百元至二万元罚款。

第三十二条 依照《渔业法》第三十一条规定需处以罚款的，按下列规定执行：

（一）内陆渔业非机动渔船，处二十五元至五十元罚款；

（二）内陆渔业机动渔船和海洋渔业非机动渔船，处五十元至一百元罚款；

（三）海洋渔业机动渔船，处五十元至三千元罚款；

（四）外海渔船擅自进入近海捕捞的，处三千元至二万元罚款。

第三十三条 买卖、出租或者以其他形式非法转让以及涂改捕捞许可证的，没收违法所得，吊销捕捞许可证，可以并处一百元至一千元罚款。

第三十四条 依照《渔业法》第二十八条、第三十条、第三十一条、第三十二条规定需处以罚款的，对船长或者单位负责人可以视情节另处一百元至五百元罚款。

第三十五条 未按《渔业法》和本实施细则有关规定，采取保护措施，造成渔业资源损失的，围湖造田或者未经批准围垦沿海滩涂的，应当依法承担责任。

第三十六条 中外合资、中外合作经营的渔业企业，违反本实施细则第十六条规定，没收渔获物和违法所得，可以并处三千元至五万元罚款。

第三十七条 外国人、外国渔船违反《渔业法》第八条规定，擅自进入中华人

民共和国管辖水域从事渔业生产或者渔业资源调查活动的，渔业行政主管部门或其所属的渔政监督管理机构应当令其离开或者将其驱逐，并可处以罚款和没收渔获物、渔具。

第三十八条 渔业行政主管部门或其所属的渔政监督管理机构进行处罚时，应当填发处罚决定书；处以罚款及没收渔具、渔获物和违法所得的，应当开具凭证，并在捕捞许可证上载明。

第三十九条 有下列行为之一的，由公安机关依照《中华人民共和国治安管理处罚条例》的规定处罚；构成犯罪的，由司法机关追究刑事责任：

（一）拒绝、阻碍渔政检查人员依法执行职务的；

（二）偷窃、哄抢或者破坏渔具、渔船、渔获物的。

第四十条 渔政检查人员玩忽职守或者徇私枉法的，由其所在单位或者上级主管部门给予行政处分；构成犯罪的，依法追究刑事责任。

第七章 附则

第四十一条 本实施细则由农牧渔业部负责解释。

第四十二条 本实施细则自发布之日起施行。

财政部关于印发《海洋生态保护修复资金管理办法》的通知

财资环〔2020〕24 号

各省、自治区、直辖市财政厅（局）：

为加强海洋生态保护修复资金使用管理，我们制定了《海洋生态保护修复资金管理办法》，现予印发，请遵照执行。

附件：海洋生态保护修复资金管理办法

财政部

2020 年 4 月 26 日

附件：

海洋生态保护修复资金管理办法

第一条 为加强和规范海洋生态保护修复资金管理，提高资金使用效益，促进海洋生态文明建设和海域的合理开发、可持续利用，根据《中华人民共和国预算法》《中华人民共和国海域使用管理法》《中华人民共和国海岛保护法》《中央对地方专项转移支付管理办法》等，制定本办法。

第二条 本办法所称海洋生态保护修复资金（以下简称保护修复资金），是指中央财政通过一般公共预算安排的，用于支持对生态安全具有重要保障作用、生态受益范围较广的海洋生态保护修复的共同财政事权转移支付资金。

第三条 保护修复资金的管理和使用应当遵循下列原则：

（一）坚决贯彻党中央、国务院决策部署，突出支持重点。

（二）符合国家宏观经济政策和涉海规划，遵循节约优先、保护优先、自然恢复为主方针。

（三）按照编制财政中期规划的要求，统筹考虑有关工作总体预算安排。

（四）坚持统筹兼顾，整体施策，鼓励各地从系统工程和全局角度，全方位、全海域、全过程开展海洋生态保护和修复治理。注重实现海洋生态产品的综合价值，推动提高优质海洋生态产品的供给能力。

（五）坚持公开、公平、公正，主动接受社会监督。

（六）实施全过程预算绩效管理，强化资金监管，充分发挥资金效益。

第四条 保护修复资金实施期限至2020年。期满后根据法律、行政法规和国务院有关规定及海洋生态保护修复工作形势的需要，评估确定是否继续实施和延续期限。

第五条 保护修复资金实施方案按照《中华人民共和国国民经济和社会发展第十三个五年规划纲要》《国务院办公厅关于印发＜“十三五”生态环境保护规划＞的通知》以及党中央、国务院关于打好污染防治攻坚战和生态保护修复的有关决策部署制定，支持范围具体包括：

（一）生态保护。对海岸带、红树林和海域海岛等生态系统较为脆弱或生态系统质量优良的自然资源实施保护。

（二）修复治理。对红树林、海岸线、海岸带、海域、海岛等进行修复治理，提升海岛海域岸线的生态功能。

（三）能力建设。支持海域、海岛监视监管能力建设，海洋生态监测监管能力建设，开展海洋防灾减灾，海洋观测调查等。

（四）生态补偿。支持鼓励跨区域开展海洋生态保护修复和生态补偿。

（五）根据党中央、国务院决策部署需要统筹安排的其他支出。

对不再符合法律、行政法规等有关规定，政策到期或者调整，相关目标已经实现或者实施成效差、绩效低的支持项目，应当及时按照程序退出。

第六条 已从中央基建投资等其他渠道获得中央财政资金支持的项目，不得纳入保护修复资金支持范围。

第七条 保护修复资金由财政部会同自然资源部管理。

财政部负责确定保护修复资金支持重点、分配原则；审核保护修复资金分配建议方案；编制保护修复资金预算草案并下达预算；组织实施全过程预算绩效管理，指导地方预算管理等工作。

自然资源部负责组织研究提出海洋生态保护修复项目重点支持方向和工作任务、组织开展项目储备，会同财政部进行入库项目审核；提出保护修复资金总体绩效目标及资金安排建议方案；开展日常监管、综合成效评估和技术标准制定等工作；开展保护修复资金全过程预算绩效管理，指导地方做好项目管理工作等。

各省（自治区、直辖市，以下统称省）财政部门和自然资源主管部门（含海洋主管部门，下同）负责组织海洋生态保护修复实施方案的编制和审核；开展本区域内项目储备；对项目内容的真实性、准确性负责；组织已储备项目竞争性评审，从中央海洋生态保护修复项目储备库中择优确定实施项目，并向财政部、自然资源部报送实施项目建议清单。

第八条 自然资源部根据海洋生态保护修复工作需要以及相关因素、权重以及上一年度绩效情况等，向财政部提出年度保护修复资金安排建议。

财政部根据自然资源部等提出的分配建议，审核确定有关省资金安排数额，

并依法下达保护修复资金预算。

自然资源部根据财政部确定的各省资金预算，组织各省将资金落实到具体项目，在资金预算文件下达 30 天内下达项目清单，并抄送财政部有关监管局。各省应积极做好项目储备库建设，改变“钱等项目”的状况，尽快形成实物工作量，提高预算资金执行进度和使用效率。

第九条 保护修复资金采用因素法分配。财政部会同自然资源部根据党中央、国务院决策部署，结合各省海洋生态保护修复形势、财力状况等，选取确定分配因素。

支持“蓝色海湾”整治行动、海岸带保护修复工程资金的分配因素，主要包括红树林和海岸带保护修复任务量、自然情况、保护修复工作成效和项目储备情况，具体分配权重为 50%、20%、20%、10%。

采用因素法分配资金应考虑各省财政困难程度，同时将预算执行率、绩效评价结果作为重要参考依据。因素和权重确需调整的，应当按照程序报批后实施。

第十条 项目在实施过程中因实施环境和条件发生重大变化，确有必要调整实施方案的，应当坚持工程目标不降低、中央资金不增加的原则，由省级财政部门会同自然资源主管部门等审批同意后，报财政部、自然资源部备案。

第十一条 财政部、自然资源部负责组织对保护修复资金实施全过程预算绩效管理，开展绩效自评和重点绩效评价，加强绩效评价结果反馈应用，并建立保护修复资金考核奖惩机制。对各地保护修复资金使用和方案执行情况的考核结果和绩效评价结果应当作为调整完善政策及资金预算安排的重要依据。

绩效评价包括对决策、过程、产出、效益等指标的考核。具体内容包括：决策情况、相关制度建设与执行情况、资金到位使用及项目实施进展情况、实现的产出情况、取得的效益情况等。

第十二条 各级财政部门、自然资源主管部门应当加强保护修复资金的绩效评价，并选择部分重点项目开展绩效评价，按要求建立资金监测监管机制，加强对具体项目及保护修复资金使用情况的动态监督，加强绩效运行监控，通过海洋生态保护修复项目库加强对支持项目预算执行进度监控，压实项目单位和地方主体责任。发现资金违规使用、项目实施方案变更等重大问题的，应当按程序及时报告财政部、自然资源部。

第十三条 海洋生态保护修复资金使用管理相关信息应当按照预算公开有关要求执行。

第十四条 财政部各地监管局按照固有职责或财政部要求，开展资金监管工作。

第十五条 任何单位和个人不得截留、挤占和挪用保护修复资金。对于违反国家法律、行政法规和有关规定的单位和个人，有关部门应当及时制止和纠正，并严格按照《中华人民共和国预算法》、《财政违法行为处罚处分条例》等予以处理。构成犯罪的，依法追究刑事责任。

第十六条 各级财政部门、自然资源主管部门及其工作人员存在违反本办法规定行为的，以及其他滥用职权、玩忽职守、徇私舞弊等违纪违法行为的，按照《中华人民共和国预算法》及其实施条例、《中华人民共和国监察法》、《财政违法行为处罚处分条例》等有关规定追究相应责任。构成犯罪的，依法追究刑事责任。

第十七条 本办法未明确的其他事宜，包括预算下达、资金拨付、使用、结转结余资金处理等，按照预算管理有关规定执行。各级财政部门应加快预算执行，提高资金使用效益。切实加强结转结余资金管理，对存在大量结转结余资金的，要充分分析原因、调整分配机制。

第十八条 沿海地区各省级财政部门会同自然资源主管部门结合本地区实际情况，根据本办法制定保护修复资金使用管理实施细则，并报财政部及自然资源部等备案。

第十九条 本办法由财政部会同自然资源部负责解释。

第二十条 本办法自公布之日起施行。除 2019 年提前下达的 2020 年渤海综合治理资金分配和管理按照《海岛及海域保护资金管理办法》（财建〔2018〕861 号）的相关规定执行外，《海岛及海域保护资金管理办法》涉及的其他资金的分配和管理执行本办法。

《中华海洋法学评论》“海法杯”征文大赛启事

国际海洋法作为国际法最古老的部门法之一，自 1982 年《联合国海洋法公约》缔结后取得了长足发展。随着海洋科技的进步，人类开发利用海洋的能力持续增强，国际海洋法在不断发展的同时，亦在解释和适用等方面面临新的挑战。如何面对这些新发展与新挑战是国际海洋法研究的重要议题。此次征文大赛以“国际海洋法：新发展与新挑战”为主题，题目自拟。具体事项通知如下：

1. 征文对象：

海内外各高校相关专业在读本科生、硕博士研究生。

2. 字数要求：

原则上为 5000-12000 字。

3. 截止时间：

2020 年 10 月 15 日。

4. 征文要求：

中英文均可，需为原创独著，符合学术规范，且未公开发表，文责自负。议题包括但不限于以下选题：

★ 国家管辖范围以外区域海洋生物多样性（BBNJ）谈判中的法律问题

★ 国际海底区域矿产资源勘探与开发的法律问题

★ 无人设备在海洋运用中的法律问题

★ 海洋新能源与水下文化遗产的法律保护

5. 撰写项目及顺序：

标题，作者姓名，作者所在院校，内容摘要，关键词，正文，脚注。

6. 提交方式：

通过电子邮件提交 Word 文档附件至 colr@xmu.edu.cn，邮件主题：COLR 征文 + 学校 + 作者姓名 + 论文题目，附件标题：姓名 + 论文题目，并在邮件正文中写明作者信息：姓名、院校、专业、年级、手机号码及电子邮箱。

7. 评选流程

《中华海洋法学评论》编辑部将对所有来稿进行初审，并邀请 3-5 名国际海洋法领域专家组成评委会对通过初审的稿件进行匿名评审，确定入围复赛名单；入围复赛选手将做现场报告，由专家评委会进行评审并确定获奖名单。

8. 奖励事宜

此次征文活动设**一等奖一名，奖金 3000 元；二等奖两名，奖金 1500 元；三等奖三名，奖金 800 元；优秀奖五名，颁发证书。**

所有获奖作者均可免费参加 2021 年厦门大学南海研究院**“马可•波罗—郑和国际海洋法律与政策暑期班”**。

一、二等奖获奖作者将有机会参加“第四届中欧国际海洋法研讨会”（时间待

定），并做大会英文发言。

所有获奖论文**本刊将享有第一刊登权，并共享著作权。**

9. 征文格式及引征体例：

统一页边距为左右各 3.17 厘米，上下各 2.54 厘米，中文使用宋体，英文使用 Times New Roman，正文五号、单倍行距，脚注小五号，不设置任何标题等格式。来稿要求一律采用脚注，体例参考《法学引注手册》，以数字 123 表示。

10. 联系方式：

电子邮箱：colr@xmu.edu.cn

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Haifa Cup Dissertation Competition

As one of the oldest branches of international law, the international law of the sea has made great progress since the adoption of the United Nations Convention on the Law of the Sea in 1982. The ability of mankind to exploit and utilize the oceans has been continuously enhanced with the progress of marine science and technology. While the international law of the sea is constantly developing, it is also facing new challenges in its interpretation and application. How to deal with these new developments and challenges is an important topic in the study of international law of the sea. Thus, the COLR dissertation competition focuses on the theme of "International Law of the Sea: New Developments and New Challenges".

1. Eligibility

The competition is open to all college students home and abroad, including undergraduate and postgraduate students. Dissertations are eligible if they are in domains that are related to the law of the sea.

2. Requirements on Submissions

Deadline for submission is 15 October 2020. All material submitted must be original and unpublished works, either in Chinese or English. Submission that are 12,000 Chinese characters or 20,000 English words or less, including text and footnotes, are strongly preferred.

Authors are kindly requested to submit their dissertations electronically by emailing to colr@xmu.edu.cn. Submissions should be in Microsoft Word format with subject of the email as "COLR Dissertation + university + full name of the author + title of dissertation". Authors are expected to provide their personal information in the email, including name, university, major, grade, email address, contact number etc.

The dissertation must include and clearly label the following in this order: title, abstract, key words, main report section, footnote.

3. Judging Process

The judging will occur in two phases. The Chair of the competition will send the dissertations to a panel of judges that consist of 3~5 experts in the field of international law of the sea. Each judge will be asked to submit to the Chair of the competition a ranking of their dissertations. Based on the judges' rankings, the Chair of the competition will determine the top 15~20 dissertations and these become the semifinalists. The Chair contacts the semifinalists to present at the final. The panel of judges will evaluate the complete dissertations and then convene

to discuss and rank the dissertations and will determine the top three places, and honorable mentions, if applicable

4. Awards

There will be two types, or levels, of winners:

a. The first level consists of the First, Second, and Third Place Winners.

b. The second level, if applicable, consists of those who are recognized as Honorable Mention (out of the remaining semi-finalists).

The first place winner will receive an award in the amount of ￥3,000. The second place winner will receive an award of ￥1,500. The third place winner will receive an award of ￥800. All these finalists will present their dissertations in individual concurrent sessions at the conference.

All the winners are admitted to 2021 Marco Polo - ZHENG He Academy of International Oceans Law and Policy.

All the winners of first and second place will also be invited and sponsored to attend the 4th Sino - European States International Law of the Sea Symposium to present their dissertations.

5. Contact Information

E-mail: colr@xmu.edu.cn

Website: http://colr.xmu.edu.cn

WeChat ID: COLReview

Please scan the QR code for more information about the competition:

《中华海洋法学评论》稿约

《中华海洋法学评论》（*China Oceans Law Review*），国际刊号：ISSN 1813-7350，国内刊号：CN-35（Q）第 0017 号，电子刊号：ISSN 2518-6906，是中英双语全文对照的海洋法学期刊。前身为创刊于 2005 年的《中国海洋法学评论》，自 2019 年起由半年刊改为季刊。

本刊由厦门大学南海研究院、大连海事大学海法研究院、澳门大学法学院、香港理工大学董浩云国际海事研究中心和台湾师范大学政治学研究所联合办刊，是海洋法领域中英双语对照的优秀国际学术期刊。

本刊秉承“大中华、大海法”的办刊宗旨，力求刊发海内外与海洋法律、海洋政策相关的一切优秀研究成果，热忱欢迎广大专家、学者不吝赐稿，兹立稿约如下：

一、来稿题材和体裁不限，论文、评论、书评、译作、案例评析等均可，中文投稿每篇原则上不超过 1.2 万字，英文投稿每篇原则上不超过 2 万词（含脚注）。

二、鼓励英文著述，同一学术水准的来稿，英文著述将优先录用。来稿须为单语种原创写作，且未曾在任何纸质和电子媒介上发表。

三、文责自负。译作需附原文，以及原作者或出版者对于此翻译的书面授权许可。译者应保证该译本未侵犯原作者或出版者任何可能的权利，并在可能的损害产生时自行承担损害赔偿责任。编辑委员会或其任何成员不承担由此产生的任何责任。

四、本刊采用中国法学会法学期刊研究会《法学引注手册》的注释体例。

五、来稿请注明作者姓名、单位、职务、职称、研究方向、教育背景、通信地址、电子邮箱及联系电话等。来稿一律不退，请作者自留底稿。

六、本刊采用双向匿名审稿制度。来稿必复，编辑部将在收到来稿后两个月内安排匿名审稿。逾三个月未收到录用通知者，可自做他用。来稿一经刊用，即从优支付稿酬，并提供当期刊物两册。

七、欢迎对本刊文章进行转载、摘登和结集出版，但应尊重原作者依照《中华人民共和国著作权法》享有的权利，并在转载时注明“转自《中华海洋法学评论》20XX 年第 X 期”和原作者、译校者姓名，同时书面通知本刊编辑部。

八、为扩大本刊及作者的知识信息交流渠道，本刊已加入北大法宝、超星法源、读秀、HeinOnline、台湾华艺、万律、维普、中国知网等中外数据库，除非作者在来稿时特别声明，否则视为同意《中华海洋法学评论》拥有以非专有方式向第三方授予已刊作品电子出版权、信息网络传播权和数字化汇编、复制权，以及向《中国社会科学文摘》《高等学校文科学术文摘》和中国人民大学《复印报刊资料》等文摘类刊物推荐转载已刊作品的权利。

九、为了实现办公信息化，本刊要求作者必须以电子邮件方式投稿，不再接受纸质投稿。来稿（仅接受 Microsoft Word 文档）请发送至电子邮箱：colr@xmu.edu.cn。

十、凡向《中华海洋法学评论》编辑部投稿，即视为接受本稿约。

《中华海洋法学评论》编辑部

Submissions Instructions

The *China Oceans Law Review* [ISSN 1813-7350, CN-35 (Q) No. 0017, ISSN 2518-6906 (online)] is a Chinese-English bilingual academic journal focusing on ocean-related laws and policies. Launched in 2005, the *COLR* changed from a semi-annual to a quarterly publication in 2019.

The *COLR* is jointly sponsored by Xiamen University South China Sea Institute, Dalian Maritime University Institute of Maritime Law and Ocean Law, University of Macau Faculty of Law, The Hong Kong Polytechnic University CY Tung International Centre for Maritime Studies, and Taiwan Normal University Graduate Institute of Political Science. The Journal has been indexed by many well-known academic databases at home and aboard, such as HeinOnline, Westlaw China, Airiti, CNKI, Cqvip, Duxiu, and Lawinfochina.com. Papers from all academics and industry practitioners are faithfully respected and welcome. The *COLR* requests that contributors comply with the following standards:

1. No restrictions are placed on the style, idea or perspective of the piece. The same standards of review are applied to all submissions. Although there are no minimum or maximum page requirements for submissions, submissions that are 20,000 words or less, including text and footnotes, are strongly preferred.

2. All material submitted must be original and unpublished works.

3. Authors are responsible for the content of their contributions, unless otherwise declared; however, the Editorial Board has the discretion to edit the textual details. If the submission is a translation, the original article and a written authorization issued by the original author or publisher are also required.

4. Please use footnotes rather than endnotes. Footnotes should conform to the Man ual of Legal Citation (2019).

5. Potential contributors are expected to provide their personal information, including name, employer, title, position, research interest(s), education background, postal and email address, contact number etc. We regret that submissions cannot be returned; please notify the Editorial Board as soon as possible if you are withdrawing an article.

6. Submissions are subject to double-blind peer review within two months of submission. Two free copies of the Journal will be offered to each author of accepted article.

7. Authors are kindly requested to submit their papers electronically by emailing to colr@xmu.edu.cn. Submissions should be in Microsoft Word format.

8. The *COLR* is abstracted and indexed in HeinOnline, Westlaw China, Airiti, CNKI, Cqvip, Duxiu, and Lawinfochina.com.

9. Submission of the piece implies that the authors have read, understood and agreed to the above statements.

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《中华海洋法学评论》是海洋法领域中英双语对照的优秀国际学术期刊，每年出版 4 期，读者主要包括海内外高校、研究所、法院、律所等涉海企事业单位的科研人员和实务工作者。我刊致力于推动中国海洋法学的繁荣发展，衷心欢迎关心海洋法学发展的企事业单位提供赞助。有意者请垂询《中华海洋法学评论》编辑部（电话：0592-2181308）。

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