

**Protecting the Diversity of the Depths:  
Strengthening the International Law Framework**

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*by*

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## **Preface**

It is only in recent decades that marine scientific research has begun to reveal the true physical characteristics and resource potential of the open ocean and deep seabed beyond national jurisdiction. A combination of factors such as the depletion of inshore fish stocks and an increase in global maritime trade has led to greater usage of the vast maritime area beyond the territorial sea and exclusive economic zone limits of the coastal states. Human activities in this area of the ocean, which covers approximately 50% of the world's surface, have expanded to include bioprospecting, exploration for deep seabed minerals, more sophisticated marine scientific research and deep sea tourism. This rise in human activities beyond the offshore zones of coastal states poses actual and potential threats to the physical characteristics and biodiversity of the open ocean and deep sea environments. Arbitrary human intrusions into this largely unexplored marine domain have the potential to harm the intricate links between complex marine ecosystems and to erode components of marine biodiversity.

This thesis examines the global and regional provisions which have been put in place to regulate the environmental impacts of human activities that occur beyond national jurisdiction. An analysis of these instruments and their implementation reveals that the current international law framework provides only minimal levels of protection for the marine environment beyond national jurisdiction. It explores several options based on the 1982 *United Nations Convention on the Law of the Sea (LOSC)* and the 1992 *Convention on Biological Diversity (CBD)* to establish a cohesive environmental protection system for the marine environment beyond national jurisdiction.

Chapter 1 begins by discussing the juridical extent of maritime areas beyond national jurisdiction, and threats to the biodiversity values of typical deep sea habitats. The evolution of international law principles that have determined the status of the high seas and the deep seabed beyond national jurisdiction is discussed in Chapter 2. Chapters 3 and 4 trace the parallel development of hard and soft law principles to protect the marine environment and their applicability to the marine environment beyond national jurisdiction. These chapters describe the move away from single species protection and an emphasis on marine pollution towards integrated and ecosystem-based protection of the oceans as advocated in the *CBD* and the Oceans Chapter of *Agenda 21*, the action plan which emerged from the 1992 United Nations Conference on Environment and Development.

Two strands of activity have a critical role to play in the protection of the marine environment beyond national jurisdiction. The first relates to the global and regional instruments regulating sectoral activities in maritime areas beyond national jurisdiction. The second relates to the regional arrangements that have been negotiated in many parts of the world to provide integrated environmental protection to particular oceanic regions. Chapters 5, 6, 7 and 8 discuss the first of these strands while Chapter 9 addresses the second. The environmental protection provisions of instruments governing marine living resource exploitation beyond national jurisdiction are reviewed in Chapter 5. It examines the 1995 *UN Fish Stocks Agreement* which is the global template for conservation and management of fish stocks beyond national jurisdiction, incorporating international environmental law principles such as the precautionary principle and some elements of an ecosystem-based approach to fisheries management. Analysis of state practice in a range of regional fisheries management organisations reveals

that implementation of this model is far from comprehensive in most oceanic regions.

In contrast to the marine living resource sector, states involved in maritime transport have negotiated a wide array of global instruments to reduce the negative impacts on the marine environment caused by pollution from vessels, dumping at sea and the transfer of invasive aquatic species. Notwithstanding the global scope of these instruments, the analysis in Chapter 6 discloses anomalies in their application to maritime areas beyond national jurisdiction. The stringency of discharge restrictions reduces with distance from land and ballast water exchange, the principal method of combating the transfer of invasive aquatic species, is mainly conducted on the high seas.

Chapter 7 examines the comprehensive environmental protection regime established by the International Seabed Authority (ISA) for mining the deep seabed beyond national jurisdiction. While the rigorous requirements of this regime have not deterred the limited number of exploration contractors currently involved in this sector, the intensive human resources and funding required to comply with its provisions may result in some resistance from mining consortia if full-scale commercial exploitation takes place in the future.

Chapter 8 reviews the intertwined activities of bioprospecting and marine scientific research which are intensifying in maritime areas beyond national jurisdiction. The current international law framework governing these activities does not provide long-term environmental protection for the fragile deep sea ecosystems and habitats affected by these uses. A range of options for providing

such protection under current international law instruments is analysed in this chapter. These include expanding the mandate of the ISA to include bioprospecting and all marine scientific research that occurs on the deep seabed beyond national jurisdiction and negotiating implementing agreements under the *LOSC* or the *CBD* to regulate the impact of these and other emerging uses on the marine environment beyond national jurisdiction.

The second strand of international activity involving regional marine environmental protection arrangements and their application to maritime areas beyond national jurisdiction is discussed in Chapter 9. This analysis focuses on those regions which have negotiated binding legal instruments to provide integrated environmental protection to maritime areas both within and beyond national jurisdiction. Following the model pioneered for the Mediterranean Sea in the 1976 *Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention)*, many of the regions have adopted framework agreements which allow for the addition of protocols to address particular aspects of marine environmental protection. Some regions have adopted protocols which provide for the protection of marine biodiversity both within and beyond national jurisdiction. In some cases the strategies being developed at regional level, reveal a coalescence of political will on providing integrated protection to the marine environment beyond national jurisdiction. The existence of a marine environmental protection infrastructure at regional level enhances the potential for extending protection measures to proximate areas beyond national jurisdiction and coordinating their environmental protection programs with the sectoral measures considered in earlier chapters.

The final chapter proposes a global implementing agreement based on the *CBD* that draws together the fragmentary legal provisions and institutional arrangements that currently exist in an interlocking system to provide enhanced protection to the marine environment beyond national jurisdiction. The research in this thesis is current at 1 July 2005, although it has been possible to include more recent material in some cases.

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Robin Margaret Fraser Warner

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**Abbreviations**

ASMA	Antarctic Specially Managed Area
ASPA	Antarctic Specially Protected Area
ATCM	Antarctic Treaty Consultative Meeting
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CBD	Convention on Biological Diversity
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CEP	Caribbean Environment Programme
CFP	Common Fisheries Policy (European Union)
COP	Conference of the Parties (Biodiversity Convention)
COW	Crude oil washing
CPPS	South East Pacific Action Plan
CSD	Commission for Sustainable Development

DOALOS	UN Division for Ocean Affairs and the Law of the Sea
EAP	Eastern African Action Plan
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agricultural Organization
FSI	IMO's Sub-Committee on Flag State Implementation
GATT	General Agreement on Tariffs and Trade
GESAMP	UN Joint Group of Experts on the Scientific Aspects of Marine Pollution
GFCM	General Fisheries Commission for the Mediterranean
GPA	Global Programme of Action for the Protection of the Marine Environment from Land Based Activities

IACS	International Association of Classification Societies
IAEA	International Atomic Energy Agency
IATTC	Inter American Tropical Tuna Agency
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
ILC	International Law Commission
IUU	Illegal, Unreported and Unregulated Fishing
IMCO	Intergovernmental Maritime Consultative Organization (former title of IMO)
IMO	International Maritime Organization
INTERTANKO	Independent Tanker Owners Association
IOTC	Indian Ocean Tuna Commission

ISA	International Seabed Authority
ITLOS	International Tribunal for the Law of the Sea
ITOPF	International Tanker Owners Oil Pollution Federation
IUCN	International Union for Conservation of Nature and Natural Resources
IWC	International Whaling Commission
LOSC	1982 United Nations Law of the Sea Convention
LOT	Load on top
MAP	Mediterranean Action Plan
MEPC	IMO's Marine Environment Protection Committee
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NAFO	Northwest Atlantic Fisheries Organization

NEAFC	North East Atlantic Fisheries Commission
NGO	Non-Governmental Organization
RFMO	Regional Fisheries Management Organization
RMP	Revised Management Procedure (International Whaling Commission)
RMS	Revised Management Scheme (International Whaling Commission)
PSSA	Particularly Sensitive Sea Area
SAP	Strategic Action Plan (UNEP Regional Seas Programme)
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice (Convention on Biological Diversity)
SBT	Segregated ballast tanks
SEAFO	South East Atlantic Fisheries Organization
SPAMI	Specially Protected Area of Mediterranean Interest

SPREP	South Pacific Regional Environment Programme
UNCED	United Nations Conference on Environment and Development
UNCLOS I	First United Nations Conference on the Law of the Sea
UNCLOS II	Second United Nations Conference on the Law of the Sea
UNCLOS III	Third United Nations Conference on the Law of the Sea
UNEP	United Nations Environment Programme
UNGA	United Nations General Assembly
UNICPOLOS	United Nations Informal Consultative Process on Oceans and the Law of the Sea
VMS	Vessel Monitoring System
WCPA	World Commission for Protected Areas



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