



Protecting the Marine Environment from Land-Based Sources of Pollution

Towards Effective
International Cooperation

Daud Hassan

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ASHGATE

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PROTECTING THE MARINE ENVIRONMENT FROM
LAND-BASED SOURCES OF POLLUTION

Preface

In this book I explore the applications and shortcomings of international regimes addressing land-based sources of marine pollution (LBSMP), identifying the sources and effects of LBSMP in addition to problems and associated issues in controlling them. Management principles, policy and laws of LBSMP control are examined at both regional and international levels along with the problems and prospects of present regimes of LBSMP control.

The investigation commences with a descriptive account of international management principles and policies of LBSMP control and proceeds by examining relevant provisions of international and regional legal regimes. It also examines the major strengths and weaknesses of these regimes and difficulties involved in their implementation. These are investigated in order to gain an understanding of, and to fill in the gaps in present regimes of LBSMP control, and to formulate and suggest an effective international legal framework.

Global findings estimate that 80 per cent of marine pollution originates from land-based sources and is trans-boundary in nature. A number of legal and policy initiatives have been undertaken incorporating international management principles to establish international regimes to protect the marine environment from LBSMP. However, they are still inefficient and questions remain as to how effective present regimes are. It is concluded here that the existing global arrangements of LBSMP control are unsatisfactory. *United Nations Convention on the Law of the Sea* (LOSC), the only global treaty addressing LBSMP, inadequately covers this issue. Several globally agreed rules, standards and recommended practices have been adopted together with detailed strategies. Although they have provided guidance on actions needed, and emphasis on the importance of cooperation at international and regional levels to control LBSMP, they are of a non-binding nature. Nevertheless, it is found that LBSMP control is better addressed at regional levels. Provisions in regional treaties are more onerous and precautionary than those of the LOSC. However, overall, satisfactory outcomes are yet to be seen at regional levels. Finally, progress has been achieved only in regions where developed countries or jointly developed and developing countries, are the participants in a LBSMP control regime. LBSMP control is grossly neglected where control regimes comprise only developing countries. These findings suggest that more effective arrangements remain to be designed, particularly to reinforce LBSMP control opportunities for developing countries cooperating through regional regimes.

Based on the conclusions of the study, one possible solution to the deficiencies of the existing legal regimes of LBSMP control is proposed. That is, a comprehensive

global treaty, with a new model of effective cooperation through the interlocking of regional and global arrangements, is proposed.

This book is based on my research which was approved by the University of Wollongong, Australia in 2003. I would like to express my deep appreciation to my supervisor, Associate Professor Gregory Rose at the Faculty of Law, University of Wollongong, for his kind and excellent supervision, providing me with support and feedback. I am also indebted to Professor Martin Tsamenyi at the Centre for Maritime Policy in the University of Wollongong for his role in supervising my work and supporting me in the Faculty.

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An article based on Chapter 6 was published in the *Queensland University of Technology Law and Justice Journal* (2004). Two articles based on Chapter 5 were published i) in *Georgetown International Environmental Law Review* (2004) and ii) in *Australian International Law Journal* (2003). Also, an article based on Chapter 7 was published in *Asia Pacific Journal of Environmental Law* (2002). I am grateful to the editors and administrators of the above mentioned journals for their permission to reprint the articles for use in my book.

Finally, I would like to express my thanks to my family and friends for their encouragement and support while I undertook this project. I express my appreciation to my wife Rita and our daughter Trisha for their sacrifice, tolerance, support and understanding. Although I have been assisted by people and institutions, I am alone responsible for the opinions expressed and any mistakes that may remain.

I dedicate this book to my wife Rita and our daughter Trisha.

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Sydney, Australia

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List of Abbreviations

ACOPS	Advisory Committee on the Pollution of the Sea
ADB	Asian Development Bank
ASEAN	Association of the South East Asian Countries
BAT	Best Available Technology
BCAS	Bangladesh Centre for Advance Studies
BEP	Best Environmental Practices
CDS	Compulsory Dispute Settlement
CETP	Common Effluent Treatment Plant
CIL	Customary International Law
CSD	Commission on Sustainable Development
DOE	Department of Environment
EEC	European Economic Community
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EPA	Environment Protection Authority
FAO	Food and Agricultural Organisation
GCRMN	Global Coral Reef Monitoring Network
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESAMP	United Nations Joint Group of Experts of Scientific Aspects of Marine Pollution
GFCM	General Fisheries Council for the Mediterranean
GNP	Gross National Product
GPA	Global Program of Action for the Protection of the Marine Environment from Land-based Sources
GPPPS	Global Public Private Partnerships
HELCOM	Helsinki Commission
IAEO	International Atomic Energy Organisation
ICJ	International Court of Justice
ICLARM	International Centre for Living Aquatic Resources Management
ICZM	Integrated Coastal Zone Management
IEL	International Environmental Law
ILC	International Law Commission
ILM	International Legal Materials
ILTOS	International Tribunal for the Law of the Sea
IMM	Interim Ministerial Meeting

IMO	International Maritime Organisation
INDSEC	Commission Working Group on Industrial Sectors
INSC	International North Sea Conferences
IOC	Inter-Governmental Oceanographic Commission
IOI (India)	International Ocean Institute Operational Centre (India)
IOI	International Ocean Institute
IOMAC	Indian Ocean Marine Affairs Cooperation
IUCN	International Union for the Conservation of Nature and Natural Resources
IWGMP	Inter-Governmental Working Group on Marine Pollution
LBA	Land Bases Activities
LBS	Land-based Sources
LBSMP	Land-based Sources of Marine Pollution
MPBu	Marine Pollution Bulletin
MAP	Mediterranean Action Plan
MEDPOL	Program for the Assessment and Control of Pollution in the Mediterranean Region
MEDU	Regional Coordinating Unit Mediterranean Action Plan
MOEF	Ministry of Environment and Forest
MPC	Marine Policy Centre
NEMAP	National Environment Management Action Plan
NEP	National Environment Policy
NGO	Non-Governmental Organisations
NOAA	National Oceanic and Atmospheric Administrations
OCA	Ocean and Coastal Areas Program
OECD	Organisation for Economic Cooperation and Development
OSPARCOM	Paris Commission
PAC	Program Activity Centre
PAH	Polycyclic Aromatic Hydrocarbons
PAHO	Pan American Health Organisation
PCIJ	Permanent Court of International Justice
PLC	Pollution Load Complication
POP	Persistent Organic Pollutants
RAC	Australia's Resource Assessment Commission
ROPME	Regional Organisation for the Protection of the Marine Environment
RSP	Regional Seas Program
SAARC	South Asian Association for Regional Cooperation
SACEP	South Asian Cooperative Environment Program
SADTI	Asia Development Triangle Initiative
SAP	Strategic Action Plan
SEMP	Sustainable Environmental Management Program
SMT	Selected Multilateral Treaties
UNCED	United Nations Conference on Environment and Development

UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCO	United Nations Scientific and Cultural Organisation
UNO	United Nations Organisation
UNTS	United Nations Treaty Series
WCED	World Commission on Environment and Development
WCR	Wider Caribbean Region
WMO	World Metallurgical Organisation
WRC	Water Research Centre
WWF	World Fund for Nature
YBILC	Yearbook of International Law Commission

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GLOBAL TREATY

- International Convention for the Prevention of Pollution of the Seas by Oil 1954, 327 UNTS 3 **77n41**
- Convention on the High Seas, 1958, UNTS Vol 450, at 82 **77, 78**
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, 1972, 1046 UNTS 120; 11 ILM (1972) 1291 **69, 77, 79**
- Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, 1958, UNTS 285 **77**
- Geneva Convention on the Continental Shelf, 1958, 499 UNTS 311 **77**
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- Convention on the Conservation of Migratory Species of Wild Animals, 1979, 19 ILM (1980) 15 **204n138**
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- International Convention on Oil Pollution Preparedness, Response and Cooperation, 30 Nov 1990, S. Treaty Doc. No 11, 1991; 30 ILM (1991) 733 **63**
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- Frontier Treaty, 1960, concluded between the Netherlands and the Federal Republic of Germany **42n33, 43**
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- Paris Convention for the Prevention of Marine Pollution from Land-based Sources, 1974, 13 ILM (1974) 352 **4n23, 78, 90, 103-4, 106-7**
- Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974, 13 ILM (1974) 546 **4n24, 4-15, 90, 104, 118**
- Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution, 1976, 15 ILM (1976) 290 **15, 127-8**
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- Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources, 19 ILM (1980) 869 **90, 129, 131, 141n233**
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- Protocol for the Protection of the South-East Pacific Against Pollution from Land-based Sources 1983, SMT 2:139; IEL 983:54 **129, 132**
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region 1983, 22 ILM (1983) 227 **127, 128n160**
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region 1985, SMT 2: 234 **127, 128n160**
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986, 26 ILM (1987) 38 **127, 128n160**
- Protocol for the Protection of the Marine Environment [of the Kuwait Region] Against Pollution from Land-based Sources, 1990 **129**
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(1992) 1110 **127, 128n160, 137**

Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992, BNA 35:0401 **15, 120**

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Chapter 1

Introduction

PROTECTION OF THE MARINE ENVIRONMENT FROM POLLUTION

As far as we are aware, the earth is probably the only place in the universe that can support human life. Humanity is totally dependent on the earth's environment and its natural support system. Yet, day by day, the various effects of human activities are making the planet progressively less fit to live in. Following World War II, massive industrialisation has caused the depletion of natural resources and the pollution of the earth's air and oceans. Subsequently, arguments for protecting the earth's environment have been put forward, and calls for devising relevant laws and policies to achieve these goals have been made.

The marine environment, with its vital diversity of marine and estuarine animals and plants is an integral part of the natural and cultural heritage of the world.¹ The world's oceans produce 70 per cent of its oxygen and 80 per cent of its plant and animal life.² As an important source of food and inorganic matter, the oceans of the world present an enormous, and practically untapped, reserve of genetic resources for humankind.³ They are an important medium for tourism, mineral extraction, transportation and recreation. Inshore and offshore waters, the beaches and cliffs, coral reefs, islands, mangrove forests, ports and harbours are of great significance. The waters of the oceans cover 72 per cent of the earth⁴ and comprise 95 per cent of the global water supply.⁵ The world's oceans may, with good reason, be called the earth's lungs.⁶ The reality is that the earth is more of a water planet than a land planet.⁷ All of these factors indicate the importance of the protection and preservation of the marine environment for the sake of the earth's environment.

Unsustainable utilisation and exploitation of ocean resources, along with the impact of pollutants released into the oceans, are causing the marine environment to deteriorate. This must necessarily be reversed by the prevention and control

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4 Ross A. R., *Introduction to Oceanography*, Prentice-Hall International, Inc, 1997, p. 324.

5 Merle P.A., *Deep Sea Mining and the Law of the Sea*, Martinus Nijhoff Publishers, 1983, p. 3.

6 Ananichev K.V., *Environment: International Aspect*, Progress Publishers, 1976, p. 124. For details see Chapter 2.

7 Ross, A.R., *supra* note 4 at 324.