

Regional Maritime Management & Security

**Sam Bateman &
Stephen Bates, Editors**



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**REGIONAL MARITIME
MANAGEMENT AND SECURITY**

Edited by

Sam Bateman and Stephen Bates

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ABSTRACT

This monograph includes the discussion papers presented at the Third Meeting of the CSCAP Maritime Cooperation Working Group held in Bangkok 30 May - 1 June 1997. It is the third in the series of similar monographs by the CSCAP Maritime Cooperation Working Group.

The theme of the meeting was regional ocean management and security. Its objectives were fourfold:

- to review progress with the Guidelines for Regional Maritime Cooperation;
- to contribute to the development of new ideas about cooperative management of regional sea and ocean areas;
- to identify present and planned activities in some area of regional maritime cooperation (such as shipping, resource management, pollution prevention, marine safety, and law and order at sea) which have benefits for regional security (that is, 'value added'); and
- to share national and sub-regional perspectives of cooperative oceans and marine management.

The overall aim of the meeting was to explore new ideas of preventive diplomacy and confidence building in the general area of regional maritime cooperation, particularly in the enclosed and semi-enclosed regional seas of Southeast and Northeast Asia, where maritime activity is increasing and cooperation so important. The opportunity was also taken to discuss existing arrangements for regional maritime cooperation and the experiences of other regions in the world with similar considerations of maritime cooperation (that is, the Baltic and Mediterranean seas, and the Caribbean).

Canberra Papers on Strategy and Defence are a series of monograph publications which arise out of the work of the Strategic and Defence Studies Centre, Research School of Pacific and Asian Studies, Australian National University. Previous Canberra Papers have covered topics such as the relationship of the superpowers, arms control at both the superpower and Southeast Asian regional level, regional strategic relationships and major aspects of Australian defence policy. For a list of New Series Canberra Papers refer to the last pages of this volume.

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CONTENTS

Figures	ix
Tables	x
Acronyms and Abbreviations	xi
Contributors	xv
Preface	xxiii

PART ONE: NATIONAL ARRANGEMENTS FOR MARITIME MANAGEMENT

1	AUSTRALIA Anthony Bergin	3
2	CHINA Xu Guangjian	13
3	INDIA Rahul Roy-Chaudhury	19
4	INDONESIA Hasjim Djalal	29
5	JAPAN Sumihiko Kawamura	37
6	REPUBLIC OF KOREA Sang Don Lee	47
7	MALAYSIA B.A. Hamzah	51
8	PHILIPPINES Emma Sarne	61
9	SINGAPORE Kevin Santa Maria	69

10	THAILAND Chart Navavichit	79
11	VIETNAM Pham Hao	83

**PART TWO: REGIONAL ARRANGEMENTS
FOR COOPERATIVE MARITIME MANAGEMENT**

12	SOUTHEAST ASIA: SEAPOL Frances Lai	99
13	SOUTH PACIFIC Grant Hewison	105
14	SOUTH CHINA SEA Ian Townsend-Gault	117
15	BALTIC AND MEDITERRANEAN SEAS Glen Hearn	129
16	CARIBBEAN Joly Eichner and Stanley Weeks	161

**CONCLUSION: SUMMARY REPORT OF
THE THIRD MEETING**

	Sam Bateman and Hasjim Djalal	179
	Annex: CSCAP Memorandum No.4: Guidelines for Regional Maritime Cooperation	187
	Bibliography	199
	Strategic and Defence Studies Centre	205

FIGURES

1.1	Australia's Marine Jurisdictional Zones	4
9.1	The Traffic Separation Scheme and Chain of Radar Stations in the and Singapore Strait	72
9.2	Proposed Vessel Services and Ship Reporting System in the Malacca and Singapore Straits	73

TABLES

1.1	Current Value of Some of Australia's Major Marine Industries	5
14.1	Summary of Needs and Opportunities Identified by South China Sea Experts	126
15.1	Baltic Sea Joint Comprehensive Action Programme Elements	137
16.1	Participation of States in IOC-IOCARIBE Events, by Programmes and States	174

ACRONYMS AND ABBREVIATIONS

AMVER	Automated Mutual Assistance Vessel Rescue System
APEC	Asia Pacific Economic Cooperation
APOG	Asia Pacific Ocean Governance
ASEAN	Association of Southeast Asian Nations
ARF	ASEAN Regional Forum
ASF	Asian Shipowners Forum
BAT	best available technology
CabCom-MOA	Cabinet Committee on Maritime and Ocean Affairs (Philippines)
CARICOM	Caribbean Community and Common Market
CIDA	Canadian International Development Agency
COLREG	International Regulation for Preventing Collision at Sea
CSCAP	Council for Security Cooperation in the Asia Pacific
CZM	Coastal Zone Management
DOD	Department of Ocean Development (India)
DOST	Department of Science and Technology (Philippines)
DPRK	Democratic People's Republic of Korea (North Korea)
EAHC	East Asia Hydrographic Committee
EARL	East Asia Response Limited
EEZ	exclusive economic zone
EPL	Environmental Protection Law (Vietnam)
EU	European Union
FFA	Forum Fisheries Agency
GDP	gross domestic product
GNP	gross national product
GRT	gross registered tonnage
HELCOM	Baltic Marine Environment Protection Commission (Helsinki Commission)
IHO	International Hydrographic Organisation
IMO	International Maritime Organisation
INMARSAT	Convention on the International Maritime Satellite Organisation

xii *Regional Maritime Management and Security*

IOC	Intergovernmental Oceanographic Commission
IOCARIBE	Intergovernmental Oceanographic Commission (of UNESCO) Sub-Commission for the Caribbean and Adjacent Regions
JASREP	Japan Ship Reporting System
JCP	Baltic Sea Joint Comprehensive Environmental Action Plan
JICA	Japan International Cooperation Agency
JMSA	Japan Maritime Safety Agency
JMSDF	Japan Maritime Self-Defense Force
MAP	Mediterranean Action Plan
MARC	Maritime Affairs Research Community (Philippines)
MARPOL	International Convention for the Prevention of Pollution from Ships
MED POL	program of pollution monitoring and research in the Mediterranean Sea
MIMA	Maritime Institute of Malaysia
MOA	Ministry of Agriculture (PRC)
MOC	Ministry of Communications (PRC)
MOMAF	Ministry of Maritime Affairs and Fisheries (ROK)
MOU	Memorandum of Understanding
MPA	Maritime and Port Authority (Singapore)
MR	maritime patrol aircraft
MSC	maritime reconnaissance monitor, supervise and control
NEPC	Multimedia Super Corridor (Malaysia)
NGO	Nordic Environmental Protection Convention
nm	non governmental organisation
NMP	nautical mile(s)
NOCOP	National Marine Policy (Philippines)
NPA	National Operation Center for Oil Pollution (Philippines)
NOWPAP	National Police Agency (Japan)
OECS	Northwest Pacific Action Programme
OPRC	Organisation of Eastern Caribbean States (International Convention on) Oil Pollution Preparedness, Response and Cooperation
OPS	Ocean Policy Statement

ORZ	Ocean Regulation Zone
OSRAP	(ASEAN) Oil Spill Response Action Plan
PCG	Philippine Coast Guard
PCG	(Singapore) Police Coast Guard
PHILMA	Philippine Institute of Marine Affairs
PN	Philippine Navy
PRC	The People's Republic of China
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RM	Rupiah Malaysia
ROK	Republic of Korea (South Korea)
RSN	Republic of Singapore Navy
RSS	Regional Security System
RTN	Royal Thai Navy
SACEP	South Asian Cooperative Environment Programme
SAIL-SCS	Stewardship Alliance through International Linkages in the South China Sea
SAR	search and rescue
SEAPOL	Southeast Asian Programme in Ocean Law, Policy and Management
SIDS	small island and developing states
SOLAS	International Convention for the Safety of Life at Sea
SOA	State Oceanic Administration (PRC)
SOPAC	South Pacific Applied Geoscience Commission
SPC	South Pacific Commission
SPOCC	The South Pacific Organisations Coordinating Committee
SPREP	South Pacific Regional Environmental Programme
STCW	(International Convention on the) Standards of Training, Certification and Watchkeeping (for Seafarers)
TIMA	Thailand Institute of Marine Affairs
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme

xiv *Regional Maritime Management and Security*

UNESCO	United Nations Educational, Scientific and Cultural Organisation
UP-MSI	University of the Philippines-Marine Science Institute
US	United States
USCG	United States Coast Guard
VMRCC	Centre for Maritime SAR Activities (Vietnam)
VTIS	Vessel Traffic Information System (Singapore)

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PREFACE

Sam Bateman and Stephen Bates

This monograph comprises the papers presented at the Third Meeting of the Council for Security Cooperation in the Asia Pacific (CSCAP) Maritime Cooperation Working Group held in Bangkok on 30 May-1 June 1997.

The theme of the meeting was regional oceans management and security. Its objectives were fourfold:

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We would like to thank the Institute of Security and International Studies (ISIS), Thailand and the Southeast Asian Programme in Ocean Law, Policy and Management (SEAPOL) for their assistance in organising and hosting the meeting.

PART ONE
NATIONAL ARRANGEMENTS FOR
MARITIME MANAGEMENT

CHAPTER 1

AUSTRALIA

Anthony Bergin

This paper is designed to provide a broad overview of Australia's ocean policies in the area of national surveillance and enforcement.¹ Management of Australia's oceans requires an integrated system of surveillance and enforcement. There is a need to exercise Australian jurisdiction over, access to and protection of ocean resources and trade, to implement effective pollution prevention and control, sea safety and border control. As much of this will be achieved in cooperation with neighbours, the paper briefly describes Australia's cooperation with regional states in the area of ocean surveillance.

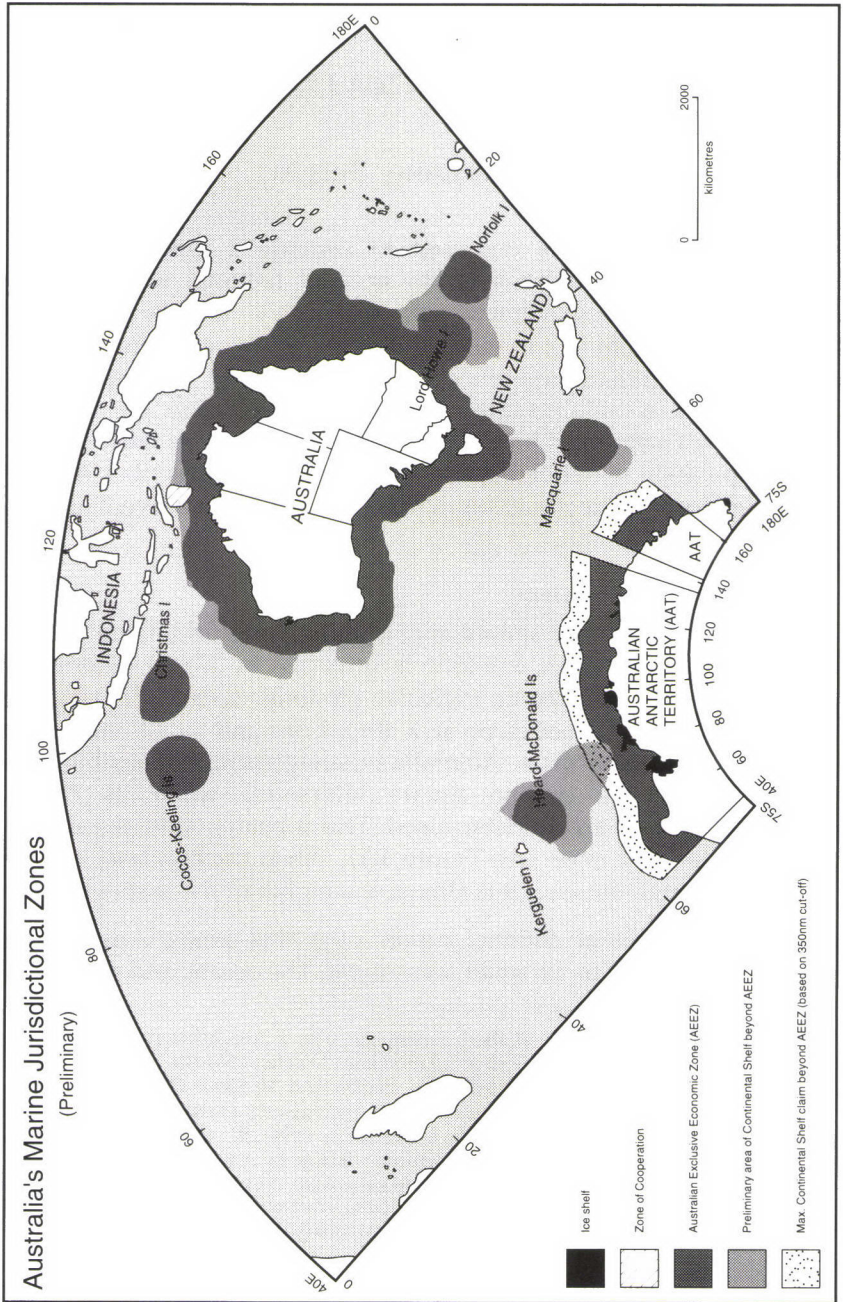
The Size of the Problem

As far as the surveillance task is concerned, there are major challenges. Australia's coastline is in excess of 37,000 kilometres. In 1994 Australia declared an exclusive economic zone (EEZ) of some 11 million square kilometres, an area almost one and a half times as large as Australia's land mass. Australia's management responsibilities will cover almost 15 million square kilometres when its claimable continental shelf area is determined. This is nearly twice the size of the Australian land mass (see Figure 1.1). When international objectives are included in the area, it is almost one-eighth of the earth's surface.

In terms of national surveillance, this means Australia must get a large return on its small investment. The oceans and seas provide

¹ For recent discussion of these issues, see also J. McCaffrie (ed.), *Managing and Protecting the Offshore Estate* (Australian Defence Studies Centre, Australian Defence Force Academy, 1995); A. Bergin and M Sidik Osman (eds), *National Coordination of Maritime Surveillance and Enforcement*, (Australian Defence Studies Centre, Australian Defence Force Academy, 1996); K. Anutha and L. Kriwoken (eds), 'Ocean and Coastal Management Issues in Australia and New Zealand', Special Issue, *Ocean and Coastal Management*, Vol.33. Nos 1-3, 1996; and R. Sherwood and D. McKinnon (eds), *Policing Australia's Offshore Zones: Problems and Prospects* (Centre for Maritime Policy, University of Wollongong, in press).

Figure 1.1: Australia's Marine Jurisdictional Zones



a basis for Australia's industries totalling around \$A30 billion each year, including shipping, offshore oil and gas, marine tourism, fisheries and shipbuilding (see Table 1.1). Marine-based industries are a major export sector. Estimates for 1994 were \$A6.6 billion, or 7 per cent of Australia's total exports. Marine industries employ well over 220,000 people.

Table 1.1: Current Value of Some of Australia's Major Marine Industries

Industry	Value (1994 figures, \$A bn)
Commercial fishing and aquaculture	1.6 (1995/96)
Pharmaceutical and biotechnological	virtually untapped
Shipping, transport and shipbuilding	3.8
Tourism and recreation	15
Oil, gas and engineering	8

Although Australia - leaving aside the Australian Antarctic Territory - has no land borders, it has maritime boundaries with five other nations: Indonesia, Papua New Guinea, Solomon Islands, New Zealand and France. Australia has concluded maritime delimitation with the following countries:

Indonesia

- Seabed boundary agreements in the Timor and Arafura seas were concluded in 1971 and 1972 - both entered into force in 1973.
- The Timor Gap Treaty on the exploration of petroleum resources was concluded in 1989 and entered into force in 1991.
- On 14 March 1997 Australia and Indonesia signed a treaty establishing an EEZ and certain seabed boundaries. These boundaries cover:

6 *Regional Maritime Management and Security*

- (i) the EEZ and seabed boundary between Christmas Island and Java;
- (ii) the western extension of the existing (1972) seabed boundary, to the north and west of the Ashmore Islands; and
- (iii) the EEZ boundary in the Timor and Arafura seas, including the Timor Gap in relation to the water column but not the seabed.

Papua New Guinea

The Torres Strait Treaty, establishing maritime boundaries between Australia and Papua New Guinea in the Torres Strait, was concluded in 1978 and entered into force in 1985.

Solomon Islands

A maritime boundary treaty was concluded in 1988 and entered into force in 1989.

France

A maritime boundary treaty in respect of overlapping EEZs between the eastern Australian seaboard and New Caledonia, and Heard and MacDonal Islands and Kerguelen Islands was concluded in 1982 and entered into force in 1984.

New Zealand

Still to conclude maritime boundaries with Australia.

Maritime Surveillance - Why?

Given the significant national ocean interests that Australia has, it is important that it develops a picture of the activity on and around its EEZ and areas of interest. Surveillance is also important to protect Australia's vital interests, resources and economy; to demonstrate presence, visibility and intent (the ability to respond); to

enforce legal requirements; and to contribute to layered defence in peace and war.

Maritime Surveillance—Where?

Australia's security objectives focus surveillance in two areas. First, Australia's coastline, offshore territories, fishing zones and the EEZ surrounding these areas. Second, with regional neighbours and partners in the Indian Ocean, the South China Sea, the Western Pacific, the Timor, Arafura and Coral seas, and the Southern Ocean.

Wide Customer Base

In Australia the national maritime surveillance effort is seen not as just a defence activity but rather as supporting a large number of agencies: the Australian Customs Service; the Australian Quarantine and Inspection Service; the Department of Immigration; the Australian Fisheries Management Authority; the Department of Environment; the Australian Federal Police; and the Department of Foreign Affairs and Trade.

Outcomes

Australia's surveillance and maritime enforcement regime is designed to achieve the following broad objectives:

- sovereignty enforcement and picture compilation;
- sustainment and protection of the EEZ, monitoring of foreign fisheries activity, and licence enforcement;
- detection of illegal trafficking and smuggling of drugs;
- monitoring of the environment and resource protection;
- detection of illegal immigration and refugee protection;
- detection of illegal activity and quarantine breaches;
- enforcement of national marine park protection;
- monitoring any other breaches of Commonwealth or state laws; and

8 Regional Maritime Management and Security

- enhancement of security through regional engagement.

Resources Available

In terms of resources devoted to maritime surveillance and enforcement, both defence and civil assets are utilised. The Royal Australian Navy (RAN)'s ships and patrol boats are the main assets used for offshore surface surveillance - averaging 1,800 sea-going days a year for patrol boats. This equates to four to five vessels deployed at any one time. The Royal Australian Air Force (RAAF)'s P-3C *Orion* aircraft provide 1,200 hours of ocean surveillance and 250 hours of EEZ surveillance.

On the civil side, the main body involved is Coastwatch, which comes under the authority of the Australian Customs Service and coordinates the requirements of the client agencies to conduct surveillance and law enforcement. It manages the civil aircraft contract for surveillance flying. Its 1996-97 budget is \$34.8 million. This does not include the navy and air force contribution, which in 1995-96 was \$70 million. There is daily coordination between Coastwatch and the Australian Defence Force. There is a Chief of Defence Force directive to the RAN Maritime Commander and the RAAF Air Commander to provide support to Coastwatch.

The civil programme contributes to defence objectives through information sharing. Coastwatch has 45 people in five locations. Its main clients are Fisheries, Customs, Immigration, Quarantine, the Nature Conservation Agency and the federal police.

Coastwatch contracts a civilian company to undertake aerial surveillance (14,000 flying hours) in the EEZ. The assets available to Customs include three Dash 8 deployed in Broome, Darwin and Cairns; three Reims F406 deployed in Broome, Darwin and Cairns; six Britten Islander, one helicopter (Torres Strait) and one *Shrike* Commander; and customs vessels (mainly inshore).

Types of Problems Encountered

The main problems encountered in policing Australia's offshore zones relate to illegal immigrants, quarantine, marine pollution and illegal fishing.

Since 1989, 58 vessels have arrived in Australia with 2,500 people seeking refugee status. There were 15 vessels in 1996, or nearly 600 Cambodians, Chinese, and third-country nationals, travelling from Indonesia and Papua New Guinea.

Quarantine is another major problem. The introduction of exotic diseases has the potential to disrupt industries and affect our natural fauna. Australia is remote and, while it has remained free from some potential disasters, exotic species such as the screw-worm fly and the Asian papaya fruit fly could cause major devastation to Australia's agricultural sector. Vessels from Southeast Asia are known to carry exotic pests and Indonesian fishing vessels have introduced new exotic mosquitos, drywood termites and exotic ants.

As far as marine pollution is concerned, Australia is attempting to reduce pollution from ships as well as from the land - 80 per cent of marine pollution affecting the oceans originates on land.

Australia has, for example, initiated compulsory pilotage schemes in sensitive marine areas, and traffic-reporting systems in the Great Barrier Reef, and has introduced a rigorous system of port state control. In 1996 2,901 inspections were carried out in Australian ports - an inspection rate of 59 per cent.

Up until the early 1970s there was little appreciation of fishing activity around Australia. With a value of \$1.6 billion, fisheries are now a major resource to be protected - and there is gross overfishing detected in some areas.

While Japanese longliners are permitted to fish for tuna in some areas and Indonesian traditional fishermen are also allowed to fish in some areas, other foreign fishing activity in Australia's EEZ is currently illegal. The majority of surveillance assets are devoted to the task of fisheries enforcement. Three hundred foreign fishing vessels are boarded and seventy or more are apprehended each year. In 1996, out of the 106 apprehended 103 were Indonesian. Between January and April 1997, Australia apprehended 70 vessels.

There are new fishing pressures around Australia's sub-Antarctic Heard and MacDonalld islands. There is now evidence of systematic illegal fishing around the EEZs of these islands by foreign (often reflagged) fishing vessels. This will pose a major surveillance problem now and into the future.

Maritime Cooperation with Australia's Neighbours

Maritime surveillance is conducted by Australia in close association with neighbouring countries, such as:

- Malaysia - P3-C patrols of the South China Sea and Indian Ocean, excluding those areas under dispute;
- Indonesia - air and surface patrols of a zone of cooperation in the Timor Sea; and
- New Zealand - P3-C and patrol boat patrols of Papua New Guinea, Southwest Pacific island nations (Niue Treaty).

This cooperative activity forms part of the Australian government's security policy and contributes to a perception of Australia as a good international and regional citizen. It also contributes to building a picture of what is happening in the region around Australia, while at the same time assisting nations such as those in the Southwest Pacific to manage their economic resources, primarily their fishery resources.

In the Timor Sea, Australia cooperates closely with Indonesia in an area of joint development. This is done by conducting joint patrols; sharing information; coordinating arrangements for security; cooperating in search and rescue (on an opportunity basis); and coordinating hydrographic and seismic survey activities. Australia has more recently been discussing with Indonesia ways to assist in the surveillance and defence of the Natuna gas fields.

On pollution control cooperation, Australia has an Memorandum of Understanding (MOU) on oil spill response with New Zealand that covers contact points, loans of equipment and personnel, reimbursement of costs, and consultation on exercises. A similar MOU was concluded with Indonesia in 1996 that includes territorial waters and the EEZ and waters outside those areas in which an oil spill could affect both countries. The Indonesian MOU contains details relating to issues likely to arise if an oil spill were to occur in the Timor Gap Treaty area. A similar MOU will be concluded in 1997 with Papua New Guinea.

Conclusion

Maritime surveillance and enforcement tasks have increased during the last four years but without any accompanying increase in national response capability. With the replacement of the RAN's *Fremantle*-class patrol boats over the next few years there will be fewer vessels available. Illegal fishing and migration look set to increase. Shipping traffic in the region will grow faster, as will the transport of hazardous and dangerous cargoes, such as crude oil, liquified natural gas/liquified petroleum gas, and chemicals. Smuggling illegal drugs by sea is also likely to become a more serious problem.

It is fair to say that there is currently a problem with respect to the coordination of intelligence for surveillance. No one agency is responsible for taking an integrated view of requirements. As for regional cooperation, it is in many ways an extension of Australia's policing of its own offshore zones. No single department has oversight of these commitments. All this means that surveillance and enforcement, as part of overall Australian oceans policy, is likely to continue to pose political as well as resource challenges into the future.

CHAPTER 2

CHINA

Xu Guangjian

Marine Managerial System in China

The marine administrative system in China is characterised by the integration of national management with local management and of comprehensive management with sectoral management, and by the important role played by sectoral management.

The agencies involved in the management of marine affairs and their primary functions are as follows:

- The State Oceanic Administration (SOA) is the authority responsible for national marine affairs. It is in charge of comprehensive marine management, and the formulation and implementation of marine development strategy, policy and planning, and of the basic marine laws.
- The Harbour Superintendency Administration, which is affiliated to the Ministry of Communications (MOC), is responsible for the safety of sea transportation and traffic.
- The Fishery Superintendency Administration, which comes under the Ministry of Agriculture (MOA), is responsible for marine fishery resources and other related matters.
- The Ministry of Geology and Minerals has primary responsibility for matters pertaining to marine mineral resources.

There are also some other agencies, such as Public Security, Customs, Environmental Protection, and Meteorology and Public Health, that are involved to varying degrees in the management of marine affairs. Local agencies have also been established in coastal areas to manage some marine matters.

Marine Management in China Today

Marine management in China is concerned with a wide range of issues in marine development and conservation. The major tasks are:

The Protection and Management of the Marine Ecological Environment

The promulgation and enforcement of the Marine Environment Protection Law of 1982 and its relevant regulations marked the beginning of a legal framework for marine environment protection in China. The principal task of marine environment protection is the management of the various sources of pollution. The discharge of pollutants into the sea is controlled by strict adherence to the principle of 'putting prevention first, combining prevention with control'.¹

Since 1984, the SOA has set up in succession the National Marine Pollution Monitoring Network, the National Marine Environment Protection Surveillance Network and the National Environment Forecasting Network.

China has also established more than 60 marine reserves, with a total coverage of 20,000 square kilometres. The establishment of marine reserves has played a crucial role in protecting the marine ecosystem, natural scenery, geological relics and endangered marine species.

Marine Resource Management

Marine resource management falls into two categories: fishery management and the management of offshore hydrocarbon resources.

a. Fishery Management

Fishery management in China basically involves managing mariculture and marine fishing, increasing and protecting marine fishery resources, and combating violations. Until now, China has benefited from a sound legal framework in this area. A strict control policy has been applied in the management of marine fishing. Fishery

¹ This principle of environment protection was issued by the State Council.

agencies have completely closed off many fishery areas, set up fishery reserves, and stipulated the closure and suspension of seasons.

b. Offshore Hydrocarbon Resource Management

The enactment of the Regulations on the Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprises by State Council, which has overall responsibility for the regulation of offshore oil and gas exploration and development, has been remarkably successful in promoting the development and prosperity of the Chinese offshore petroleum industry.

The two main agencies involved in the management of offshore oil and gas are the State Planning Commission and the Ministry of Geology and Minerals. The China National Offshore Oil Corporation is a state corporation. It has sole responsibility for the exploitation of offshore oil in cooperation with foreign enterprises.

Marine Traffic Management

China has promulgated many laws and regulations that govern the management of maritime traffic. Among these are the Maritime Traffic Safety Law and the Provisional Regulations Governing Sea Ports. China has a well-established maritime traffic management force.

Cracking down on Crimes at Sea

Historically, China has suffered greatly from piracy and drug smuggling. It has therefore always striven to crack down severely on crimes at sea and will continue to do so over the long term.

The Public Security Authority and Frontier Agency and, in particular, the Military Policy Marine Patrol Contingent under that Authority, is responsible for maintaining public order and controlling immigration within China's maritime jurisdiction, and for assisting Customs in the prevention of smuggling. The prevention of smuggling across maritime borders, however, is largely the concern of Customs.

16 *Regional Maritime Management and Security*

Marine Surveillance and Enforcement Supervision

At present, responsibility for marine surveillance and enforcement supervision in China is still divided among a number of different organisations. The major marine surveillance forces include the SOA's China Ocean Surveillance; the MOA's China Fishery Superintendency; the MOC's China Harbour Superintendency; China Customs; the Public Security Authority, and the Frontier Agencies and Military Policy Marine Patrol Contingent that come under that authority.

The principal means used for marine surveillance in China are surveillance patrols by vessels and aircraft, spot checks, the collection and investigation of evidence, and the punishment of violations. Quite recently, satellites have also been used for marine observation.

Marine Development Strategy and Policy in China

Strategy and Policy

In *China Ocean Agenda 21*, the pursuit of sustainable development is clearly identified as China's strategy in marine areas.² The general objectives of that strategy are to:

- prevent the degradation of, and restore and improve the quality of, the marine environment, and to build well-balanced marine ecosystems;
- establish a rational marine development system that will continually strive for the optimal marine industry structure, and that will accelerate the sustainable development of the marine economy.

Marine management policy in China has three tasks: to develop marine resources rationally and accelerate marine economic growth; to protect the marine environment, and prevent and mitigate marine hazards; and to develop marine high and/or new technology.

² *China Ocean Agenda 21* (China Ocean Press, Beijing, 1996).

Actions and Measures

China is seeking to achieve the objectives outlined above by the following methods:

a. Enhancing the Marine Legal System

Efforts are already being made to establish and perfect the marine legislative framework by:

- establishing the basic marine laws such as the Law of the Exclusive Economic Zone (EEZ) and Continental Shelf, and the Marine Development Basic Law;
- modifying some existing laws including the Marine Environment Protection Law and the Fishery Law; and
- formulating laws and regulations pertaining to the utilisation and management of marine resources. These range from the Coastal Zone Management (CZM) Law, the Sea Use Management Law, and the Law of Marine Resources Development and Management to the Islands Management Law.

b. Improving the Mechanism for Marine Management

At present, sectoral management often takes precedence over comprehensive management at sea. With marine activities increasing and the marine economy growing constantly, China needs to develop a new marine management mechanism in which comprehensive management takes precedence over sectoral management.

c. Promoting Regional Cooperation and Participating in Global Marine Affairs

At the regional level, China has consistently advocated that China and the other countries in the region should enhance communication and understanding among themselves, starting with some practical programmes that are based on their shared interest in the joint development of the resources in the areas of sea under dispute. Thus in 1996, China and the Philippines reached an agreement on joint research and cooperation in marine resources and environmental protection. China has also cooperated successfully in various fields with countries such as the Democratic People's Republic

18 *Regional Maritime Management and Security*

of Korea (DPRK), the Republic of Korea (ROK), Japan, the United States and Germany for nearly 20 years.

At the wider international level, China has been an active participant in international activities as a member of nearly 20 international organisations including the Intergovernmental Oceanographic Commission (IOC) under the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Maritime Organisation (IMO), the Food and Agriculture Organisation (FAO), and the Less Developed Countries (LDC) organisation and the relevant organs under the UN Convention on the Law of the Sea (UNCLOS). China has also ratified many important international conventions, including UNCLOS, and has established cooperative relationships in marine affairs with many countries and regions. China has made a significant contribution to the development of marine science, the protection of the marine environment, and the establishment and maintenance of the new international oceanic order.

CHAPTER 3

INDIA

Rahul Roy-Chaudhury

Ocean/marine management in India's federal political structure is primarily carried out through the enactment of legislation by both the central and provincial governments. At times their differences in perception and policy lead to confusion, and even public disagreement, over critical developmental issues. A multiplicity of organisations and agencies with overlapping jurisdiction, controlled by the central as well as the provincial governments, compound the problem. Nevertheless, attempts at overcoming such obstacles are become increasingly apparent, as in the case of the central government's draft notification in 1996 on Ocean Regulation Zones (ORZs). Although this is yet to be finalised, it can be seen as a major step towards integrated coastal and marine management in India.

Maritime Interests

India's dominant physical features and geographical location in the Indian Ocean indicate its dependence on the sea for both prosperity and security. India's considerable maritime interests include a coastline of 6,100 kilometres extending deep into the Indian Ocean, augmented by about 1,400 kilometres of island and rock territories in the Arabian Sea and the Bay of Bengal (the latter comprising 723 islands and rocks of the Andaman and Nicobar chain). Virtually all of India's foreign trade, some 97 per cent in volume, is transported over the sea; in 1994-95 this accounted for an estimated 20 per cent of GNP. In addition, as much as 80 per cent of India's demand for oil is met from the sea, either carried aboard ships (46 per cent) or extracted from offshore areas (34 per cent).

Maritime Zones Act

In view of the prospective changes in the international law of the sea at the United Nations Convention on the Law of the Sea (UNCLOS) III, the Indian Parliament extended constitutional

recognition to the new concept of an exclusive economic zone (EEZ) in May 1976. Three months later, the Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act was passed. This made provisions for 12 nautical miles (nm) of territorial water, 24 nm of contiguous zone, 200 nm of continental shelf, and 200 nm of EEZ, dramatically increasing India's responsibility from 83,200 square kilometres to some 2.8 million square kilometres area of sea, or over two-thirds of the total area of land.¹ In December 1982, India signed the Law of the Sea Convention, and ratified it (along with the implementation of Part XI) in June 1995. The legal provision for the extension of the continental shelf to 350 nm by the year 2004, if preliminary exploration of the extended area is completed, will provide an additional area of about 1.5 million square kilometres.²

Maritime Boundaries

In view of the Maritime Zones Act, India began to actively demarcate boundaries with its seven maritime neighbours. By June 1997, 12 bilateral and trilateral agreements had been signed with five of its neighbours - Indonesia (1974, 1977, 1979); the Maldives (1976, 1978); Myanmar (1987, 1995); Sri Lanka (1974, 1976 (2), 1977); and Thailand (1978, 1979, 1994, 1995). These include six agreements on the Andaman Sea, of which two are trilateral by nature - the agreement with India, Indonesia and Thailand (1979) and that with India, Myanmar and Thailand (1995).³ As a result, the delimitation of India's borders with four of these five countries is complete; the only exception, Myanmar, requires an agreement to determine its trijunction point with India and Bangladesh. However, this can only take place after the delimitation of the maritime boundary between India and Bangladesh, which is beset with problems. In addition, India's maritime boundary with Pakistan has not been demarcated.

1 *The Gazette of India, Extraordinary Part II - Section 2, No.49, 28 May 1976, and Notifications by India of the Exclusive Economic Zone, 15 January 1977.*

2 Department of Ocean Development, *Annual Report 1996-97* (Government of India, New Delhi, 1997), p.22.

3 *The Gazette of India, Extraordinary Part II - Section 3, No.397, 9 December 1981; and updates from 1982.*

Department of Ocean Development

In order to effectively cope with the multiplicity of activities relating to the sustainable development of the Indian Ocean, the Department of Ocean Development (DOD) was created in July 1981. The DOD functions under the direct control of the Prime Minister, providing it considerable importance and prestige. One of its early acts was to formulate the first, and only, Ocean Policy Statement (OPS) of the country. The OPS of November 1982 sets out the basic principles through which the development of the ocean is to be carried out, along with considerable emphasis on the sustainable exploitation of both living and non-living resources of the EEZ. It advocates the control, management and utilisation of the natural resources of the sea through knowledge of marine space, along with the development of appropriate technologies. In addition, it stresses the importance of infrastructural support, as well as effective systems of management and control.⁴ Notwithstanding the strengths of the OPS in being simple and open, its major weakness has been poor implementation and enforcement over the years.⁵

Pioneer Investor

Two additional aspects of India's ocean policy under the purview of the DOD merit attention. In 1987, India became the first developing state to be accorded the status of a 'pioneer investor', which provided it an area of 150,000 square kilometres in the central Indian Ocean for deep seabed mining. In March 1996, India was also elected as a Member of the Council of the International Seabed Authority under the 'Investors Category'.⁶

Antarctica

India maintains an active programme in the Antarctic. Since 1981, 16 scientific expeditions to the area have been launched, the most recent in December 1996. The first Indian research station in Antarctica, Dakshin Gangotri, commissioned in 1983, was replaced

4 'Ocean Policy Statement', Department of Ocean Development, Government of India, New Delhi, November 1982.

5 *Voices for the Oceans: A Report to the Independent World Commission on the Oceans* (The International Ocean Institute (India), New Delhi, 1996), p.58.

6 Department of Ocean Development, *Annual Report 1996-97*, p.21.

22 *Regional Maritime Management and Security*

five years later by a permanent station, Maitri. Following its accession to the Antarctic Treaty in 1983, India was granted Consultative Status the same year. In April 1996, India ratified the Protocol to the Antarctic Treaty on Environmental Protection.⁷

Shipping

India's mercantile marine lags far behind the requirements of the country. Notwithstanding the dependence on shipping, only 36 per cent of its foreign trade is carried on Indian bottoms. This includes just over half its demand for oil, as well as 26 per cent of bulk carrier and 21 per cent of liner cargo. The Indian merchant marine consists of some 400 ships, of about 6 million GRT (including nearly 5.5 million tonnes of overseas shipping). Although India stands sixth in terms of shipping tonnage among the Asian countries, it possesses less than 1.5 per cent of total world tonnage. The public sector company, the Shipping Corporation of India (SCI), dominates the shipping industry, comprising just under half of total Indian tonnage.

Fisheries

About 10-15 per cent of the Indian population living in the coastal areas are engaged in fishing as the sole means of livelihood. The total catch of marine fish in India, estimated at 2.7 million tonnes in 1994-95, is far less than the estimated sustainable yield of approximately 4 million tonnes in the EEZ. In view of the traditional non-mechanised nature of Indian fishing craft, the vast proportion of fishing is confined to territorial waters.⁸

The management of living resources up to the territorial waters is the sole responsibility of India's provincial governments - its nine maritime provinces and four union territories (comprising 59 districts) - through their Fisheries Acts. The central government can only provide guidelines to influence their legislation, in order to ensure conformity with international norms and regulations.

⁷ *ibid.*, p.2.

⁸ See Rahul Roy-Chaudhury, *Sea Power and Indian Security* (Brassey's, London, 1995), pp.88-9.

Fishing beyond territorial waters comes under the jurisdiction of the central government's Ministry of Food Processing (MFP). In November 1981, the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act came into force. It laid down conditions under which foreign fishing vessels could operate in Indian maritime zones, clearly prohibiting fishing in territorial waters. Fines and other punishments to be imposed on those violating its provisions were also included. At present, protests from local fishermen have forced the government to suspend the granting of new licenses to joint venture companies operating in the EEZ.

The Indian Coast Guard, established in 1978 as a consequence of the Maritime Zones Act, is directly responsible for anti-poaching activities in the EEZ. The statutory duties of the service stress the enforcement of legislation in India's maritime zones. Since its formation, the coast guard has apprehended over 500 foreign trawlers, along with approximately 5,700 personnel, for illegally fishing in Indian waters. During April-October 1996, for example, it apprehended 25 trawlers of six countries - Sri Lanka (17), Myanmar (3), Pakistan (2), Indonesia (1), Malaysia (1), and Thailand (1).⁹

Marine Safety

Search and rescue (SAR) operations in Indian waters are carried out approximately 15 to 20 times annually for ships, and about 100 times for other distress calls. Operational control of SAR activities is vested in the navy, with the coast guard and merchant marine providing a crucial role. The two primary SAR areas of the eastern and western coasts are divided into five sectors, comprising Vishakapatnam, Madras and Port Blair on the east coast; and Bombay and Cochin on the west coast.

The navy's assets for SAR include the use of the long-range Tu-142M and Il-38 maritime reconnaissance (MR) aircraft, based on both the coasts. At least one such aircraft is available at four hours' notice to meet SAR requirements. Warships at sea within 300 nm of a

⁹ See Ministry of Defence, *Annual Report 1996-97* (Government of India, New Delhi, 1997), p.38.

24 Regional Maritime Management and Security

craft in distress are expected to proceed to the search area, as are warships in port.¹⁰

The statutory duties of the coast guard emphasise the protection of fishermen, including assistance at sea at times of distress, as well as measures for the safety of life and property at sea. During 1996-97, the coast guard undertook 77 SAR missions and saved 62 lives at sea. In addition, the Indian Merchant Shipping Act (1958) places an obligation on all Indian-registered ships to render assistance to people in distress.

India has signed the International Convention for Safety of Life at Sea (SOLAS) 1974. Although it is attempting to implement the Global Maritime Distress and Safety System (GMDSS), it will be hard-pressed to do so in the short period of time available (February 1999). India has not signed the International Convention on Maritime Search and Rescue (SAR) 1979, due primarily to the financial costs involved in the establishment of Rescue Coordination Centres (RCCs).

Pollution Prevention and Response

The responsibility for the prevention of pollution is shared by the provincial and central governments. The pollution control boards of the maritime provinces/union territories work in close coordination with the central government's Ministry of Surface Transport (MST), which deals with pollution from ships at sea and at major ports; the Ministry of Petroleum and Natural Gas (MPNG) concerning pollution up to 500 metres from oil platforms and structures; and the Ministry of Environment and Forest (MEF)'s Central Pollution Control Board (CPCB), in addition to the DOD.

Since 1993, the Ministry of Defence (MOD), not the MEF, has been directly responsible for pollution response measures. This was an outcome of the *Maersk Navigator* tragedy early that year, when a vast oil slick spread from the entrance to the Strait of Malacca to within 20 nm of the Indian Nicobar islands. As a result, the coast guard was made directly responsible for combating marine pollution. In 1996, the

¹⁰ See Search and Rescue Organisations: India, paper prepared by the Society of Indian Ocean Studies (SIOS), New Delhi, for an international workshop on The Mitigation of Maritime Natural Hazards in the Indian Ocean, Mt. Macedon, Australia, 8-11 October 1996.

coast guard-formulated National Oil Spill Disaster Contingency Plan (NOC-DCP) also came into force; this lays down a series of actions to be taken in the event of a major disaster of this nature. Since the late 1970s, the coast guard has undertaken 29 oil spill operations.¹¹ It maintains pollution response equipment, and approximately 20,000 tonnes of chemicals. In addition, the Ministry of Petroleum and Natural Gas also maintains minor stocks of anti-pollution chemicals.

Marine Environment Protection and Preservation

A critical aspect of environmental protection and preservation relates to the regulation and prohibition of various activities in coastal areas. Major developments in this area are currently underway, which give rise to optimism concerning a pro-active policy towards integrated ocean/marine management. Under the Environmental (Protection) Act 1986, the central government's notifications of 1991 and 1994 declared coastal stretches up to 500 metres from the high tide line (HTL) and the land between the HTL and the low tide line (LTL) as Coastal Regulation Zones (CRZ), and thereby regulated activities such as the establishment of new industries, and the reclamation of land.

At present, it is proposed that these regulations be extended to the limit of territorial waters, to be known as Ocean Regulation Zones (ORZs). Prohibitory and regulatory measures for the three categories involved - ORZ I (critical habitats), ORZ II (developed areas), and ORZ III (undeveloped and under-developed areas) - are to be enforced by the central and provincial governments. The provincial governments are also to prepare Integrated Coastal and Marine Area Management Plans (ICMAMP) within a period of four years from the date of formal notification. The ICMAMP is to be integrated with management plans prepared for the land part of the coastal zone, in order to achieve the overall goal of protecting and preserving the marine environment.¹²

Law and Order at Sea

The maintenance of law and order at sea is a statutory duty of the coast guard, carried out at times with the help of the navy. At

¹¹ Ministry of Defence, *Annual Report 1996-97*, p.38.

¹² Department of Ocean Development, *Draft Notification 1996*, pp.1-9.

present, joint coast guard/navy patrols are being undertaken to protect the southeastern coast from armed infiltration (Operation Tasha); to curb clandestine activity in the Palk Bay and Gulf of Mannar (Operation Nakabandi); and to prevent the smuggling of arms and ammunition on the western coast (Operation Swan), following the series of bomb blasts in Bombay in March 1993.¹³ The coast guard operates alone in anti-poaching, anti-piracy and anti-smuggling (drugs and narcotics) operations. In March 1997, the Royal Thai Navy (RTN) seized a shipment of arms in the Andaman Sea destined for a militant group in India.¹⁴ Actions such as this demonstrate the need for international cooperation against activities of this nature, especially in terms of intelligence sharing and coordination.

Maritime Surveillance

The surveillance of the EEZ in peacetime is the primary task of the coast guard, in addition to its statutory duties. In view of the vast expansion of sea area, it is imperative to monitor developments closely. However, the current force level of the coast guard, comprising 11 offshore patrol vessels (OPV) (with helicopters), 23 coastal patrol craft (CPC) and 18 inshore patrol craft (IPC), along with 16 Dornier Do-228 MR planes and about a dozen helicopters, is clearly insufficient to satisfactorily survey the EEZ of 2.8 million square kilometres. This would require a force level of at least 45 MR aircraft and about 70 surface vessels, as envisaged by the service.¹⁵ As a result, additional acquisitions of aircraft and ships are expected to take place in the near future. In the meantime, the coast guard chooses to maintain effective surveillance over certain limited areas of sea, where propensity for action exists. This could take place with regard to problems over the demarcation of maritime boundaries, or the statutory duties of the service.

¹³ Ministry of Defence, *Annual Report 1996-97*, p.37.

¹⁴ 'Thailand seizes illegal arms bound for Manipur', *Jane's Defence Weekly*, 26 March 1997, p.11.

¹⁵ See Rahul Roy-Chaudhury, 'The Indian Coast Guard in the 1990s', *Indian Defence Review*, October 1993, p.65.

International Cooperation

India has ratified the Articles of Association of the South Asian Cooperative Environment Programme (SACEP) of the United Nations Environment Programme (UNEP), which became a legal entity in January 1982. In March 1995, the DOD was designated the nodal Indian agency for its action plan. This plan emphasises the formulation of integrated coastal zone management, national and regional oil and chemical spill contingency planning, human resource development, and control of land-based sources of marine pollution.¹⁶

Conclusion

Closely integrated ocean/marine management in India requires major new legislative enactments, and cooperation amongst organisations and agencies at both the central and provincial levels. Although the implementation of such planning appears doubtful at present, in view of India's federal political structure and the number of organisations involved, crucial developments in this area are taking place. These essentially relate to the extension of regulatory zones to the limits of the territorial waters, with an impact area even further into the ocean. It is very important, therefore, to monitor the progress of the draft notification on the ORZs, not only as a fundamental step towards integrated ocean/marine management, but also as a potent symbol for the future.

¹⁶ M. Sudhakar and B.V. Kumar, 'A New International Order on Oceans - Indian Perspective', *Current Science*, September 1996, p.437.

CHAPTER 4

INDONESIA

Hasjim Djalal

This chapter examines the challenges that Indonesia faces in protecting its maritime borders. The chapter has two parts. The first lists the different types of maritime borders and the respective rights of Indonesia and other states in relation to them. The second outlines both the challenges that Indonesia faces in protecting its maritime borders and the means that Indonesia intends to employ to meet those challenges.

Indonesia's Maritime Borders

Indonesia's maritime borders fall into six categories:

- 1 Archipelagic waters enclosed by archipelagic baselines, over which Indonesia exercises territorial sovereignty. These comprise internal waters where there is no right of innocent passage; and archipelagic waters over which other states exercise certain rights, such as:
 - the right of innocent passage throughout the archipelagic waters, except in internal waters;
 - the right of archipelagic sealanes passage in certain designated archipelagic sealanes;
 - '(t)raditional fishing rights and other legitimate activities of the immediately adjacent neighbouring states in certain areas falling within archipelagic waters';¹
 - the rights specified in existing agreements with other states; and
 - the right to maintain and replace existing submarine cables.

¹ UNCLOS 1982, Article 51.

30 *Regional Maritime Management and Security*

- 2 The 12 nautical mile territorial sea measured from archipelagic baselines, over which Indonesia also exercises territorial sovereignty, but recognising the rights of other states of innocent passage through that territorial sea as well as the right of archipelagic sealanes passage through certain parts of the territorial sea which connect the archipelagic sealanes with the exclusive economic zone (EEZ) or the high seas beyond.
- 3 The 12 nautical mile contiguous zone outside the territorial sea or 24 nautical miles from the archipelagic baselines, over which Indonesia may exercise the control necessary to prevent and punish any infringement of its customs, fiscal, immigration or sanitary laws and regulation within its territory or territorial sea.²
- 4 The 200 nautical mile exclusive economic zone (EEZ) measured from the archipelagic baselines, over which Indonesia exercises:
 - sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living;
 - jurisdiction with regard to the establishment and use of artificial islands, installations and structures; marine scientific research; and the protection and preservation of the marine environment; and
 - other rights and duties provided for in the United Nations Convention on the Law of the Sea (UNCLOS) 1982.

Subject to the sovereign rights and jurisdiction of Indonesia over its EEZ, other countries have certain rights in the EEZ, such as freedom of navigation and overflight;³ and some possibility of access to the surplus of the allowable catch of the fisheries in the EEZ, to be regulated by bilateral agreement.⁴

- 5 The continental shelf through the natural prolongation of Indonesian land territory to the outer edge of its continental margin, or to a distance of 200 nautical miles from its

2 UNCLOS 1982 Article 33.

3 UNCLOS 1982 Article 87.

4 UNCLOS 1982 Article 62.

archipelagic baselines. The outer edge of the continental margin could be 350 nautical miles from the archipelagic baselines or 100 nautical miles from the 2500 metres isobath. Over the continental shelf Indonesia exercises sovereign rights for the purpose of exploring for and exploiting its natural resources,⁵ 'exclusive rights' to construct, and to authorise and regulate the construction, operation, and use of artificial islands, installations and structures, as well as 'exclusive jurisdiction' over such artificial islands, installations, and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.

In the continental shelf, other states have freedom of navigation, the International Seabed Authority shall share the benefits of the continental shelf beyond 200 nautical miles, and other states are entitled to lay submarine cables and pipelines, subject to the right of Indonesia to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources, and the prevention, reduction, and control of pollution from pipelines.

- 6 Straits used for international navigation, such as in the straits of Malacca and Singapore, where Indonesia recognises the existence of the right of transit passage, namely 'freedom' of navigation and overflight, solely for the purpose of continuous and expeditious transit through the straits.⁶

The Challenges

In the second part of this chapter we examine the four major challenges that Indonesia faces due to the extensive nature of its maritime borders. These are: the enormous task of identifying and defining its maritime borders; the implementation of a number of national measures to protect its maritime borders; the achievement of greater cooperation with its neighbours; and, most importantly, finding the resources, both human and material, to meet these challenges.

⁵ UNCLOS 1982 Article 77 (1).

⁶ UNCLOS 1982 Article 38.

32 *Regional Maritime Management and Security*

One of the major challenges that Indonesia faces with regard to its maritime borders is to clearly identify and define the various maritime zones and their boundaries. This will require:

- The determination of base points and archipelagic baselines. For years Indonesia has been conducting surveys on its base points and some adjustment to the location and coordinates of the base points and the archipelagic baselines may have to be made in order to comply with or implement the provisions of UNCLOS 1982 regarding baselines of archipelagic states. Consequently, some adjustment to its 12 nautical mile territorial sea may also have to be made.
- The designation of certain archipelagic sealanes through certain parts of the archipelagic waters, which are necessary for continuous, expeditious and unobstructed transit through the archipelagic waters.
- The definition of Indonesia's contiguous zones, EEZ and continental shelf beyond the territorial sea.
- The negotiation of various maritime boundary agreements with neighbouring countries in areas where Indonesian maritime zones overlap with those of its neighbours. Indonesia has concluded an agreement with Malaysia over the Malaysian need to communicate between east and west Malaysia through the Indonesian Natuna Sea. It has also concluded a territorial sea boundary agreement with Malaysia in the Strait of Malacca, and similar agreement with Singapore in certain parts of Singapore Strait. Yet agreements between Indonesia, Malaysia and Singapore still have to be negotiated and agreed upon in the area west and east of the Singapore Strait. Indonesia has concluded various agreements on the boundaries of its continental shelf with India, Thailand, Malaysia, Papua New Guinea and Australia, but has not concluded an agreement with Vietnam in the South China Sea nor with the Philippines in the Celebes Sea and south of Mindanao. Indonesia has not yet concluded any agreement with any of its neighbours on the delimitation of their respective contiguous zones. Nor has it concluded any agreement with its neighbours on the limits of its EEZ, except with Australia. It is yet to define the outer limits of its

continental margin in the Indian and the Pacific oceans. Indonesia has concluded an understanding with Australia on its traditional fishing rights north-east of Australia but has not concluded similar agreement with its other neighbours.

A second major challenge facing Indonesia is the implementation of a number of national measures to protect its maritime borders. To do this it will first have to monitor, supervise and control (MSC) the movement of submarines, aircraft and surface vessels⁷ exercising the right of archipelagic sealanes passage so as to ensure that they do not navigate outside the sealanes or violate Indonesian sovereignty, territorial integrity, national unity, or law and order, and do not damage the resources and the marine environment of Indonesia. It will also have to monitor, supervise and control the exercise of the right of innocent passage of submarines, aircraft and surface vessels throughout the archipelagic waters.

Indonesia will also have to enforce its laws and regulations within its maritime borders. Indonesia does not visualise any full-scale invasion of its territory or maritime zones in the foreseeable future. It is, however, taking certain steps to counter any violation of its laws and regulations in its EEZ, archipelagic waters, and territorial sea as well as on the continental shelf and the high seas. Indonesia will have to ensure adherence to its laws and regulations with regard to its sovereign rights over the resources of its EEZ and continental shelf as well as its various jurisdictions in the EEZ dealing with marine scientific research, the protection of the marine environment, and the construction of structures, installations, and artificial islands in the EEZ and on the continental shelf. Safety regulations governing installations and structures at sea will also have to be enforced.

Fisheries regulations will also have to be enforced, either in the archipelagic waters, territorial sea or EEZ, or even on the high seas in accordance with the UN Agreement on Implementation of the Law of the Sea Convention 1982 on High Seas Fisheries. The marine environment will have to be protected from pollution originating from ships or installations at sea, or from coastal zone development.

⁷ These include nuclear warships, oil tankers, fishing vessels, vessels carrying nuclear or dangerous cargoes, nuclear-powered vessels or research vessels.

34 *Regional Maritime Management and Security*

In the contiguous zone, Indonesia must also prevent any infringement of its laws and regulations dealing with customs, fiscal matters, immigration and sanitation. More specifically, action will be needed to prevent smuggling, piracy, the illegal traffic in drugs, illegal border crossing and potential subversive activities.

Indonesia will also need to protect its interests on the high seas beyond the EEZ and in the international seabed area beyond its continental shelf and continental margin. Finally, it will have to ensure that ships navigating through the Straits of Malacca and Singapore do not prejudice the interests of the coastal states concerning the safety of navigation and the protection of marine environment.

Indonesia believes that the best way to protect its borders is through greater cooperation with its neighbours. A third challenge then is to reach agreement with neighbouring countries on the boundaries of the various maritime zones; border-crossing arrangements; the conduct of joint patrols; and devising various areas of cooperation dealing with maritime issues.

The final challenge will be to find the resources, both human and material, to meet the challenges outlined above. Indonesia now has maritime zones three times as large as its land territory. It therefore requires a much larger maritime capacity to protect its expanding maritime resources and space. Indonesia needs a more maritime-oriented policy in facing the twenty-first century. Consequently more attention and budget will have to be devoted to maritime and ocean affairs and development.

There will have to be an increase in the quantity and quality of human resources development to manage the very large maritime space and abundant maritime resources, particularly in areas such as fisheries, mining, communication, tourism, defence, and the environment. Greater use will have to be made of modern science and technology to deal with increasingly more complex maritime and ocean issues. Both the software and hardware components of Indonesia's law enforcement capability at sea will also have to be increased.

Domestically, a more effective and efficient institutional and administrative mechanism will be necessary to deal with increasingly more complex maritime and ocean issues, to coordinate cross-sectoral

activities in maritime affairs, and to conclude various agreements with neighbouring countries.

CHAPTER 5

JAPAN

Sumihiko Kawamura

This paper describes how Japan manages its maritime interests in areas such as shipping, the protection of the marine environment, fisheries, safety, and the prevention of smuggling and other criminal activities at sea. It has as its particular focus national arrangements for undertaking surveillance and law enforcement at sea.

The Japan Maritime Safety Agency (JMSA), an agency of the Ministry of Transportation, is primarily responsible for ocean and marine management. The JMSA consists of 12,000 personnel, 518 ships (140,057 tons) and 70 aircraft.

Shipping

Hydrographic Service

The East Asia Hydrographic Committee (EAHC), a member of the group of regional hydrographic committees in the International Hydrographic Organisation (IHO), has as its aim the promotion of mutual cooperation in the exchange of information concerning hydrographic survey and development plans and technological development in East Asia. The EAHC consists of eight regional countries including Japan, the People's Republic of China (PRC) and the Republic of Korea (ROK).

The JMSA has been chosen as the location for the permanent secretariat of the EAHC and is promoting close cooperation among the member nations. After earlier discussions on how to assure the efficient promotion and stable operation of a long-range radio navigational system in the Far East, in October 1995 operating agencies from Japan, the PRC, the ROK and Russia met in Tokyo to determine the operating procedures for the LORAN-C international cooperation chain, which began operation in January 1996. These agencies continue to determine the development and enhancement of other navigational

38 *Regional Maritime Management and Security*

systems, such as satellite navigational systems in addition to LORAN-C.

Ship-Reporting System

The 1979 Search and Rescue (SAR) Treaty recommended the introduction of a ship-reporting system to enable SAR units to respond more rapidly to an emergency. In October 1985, the JMSA introduced the Japan Ship Reporting System (JASREP), which is compatible with the US Automated Mutual Assistance Vessel Rescue System (AMVER) ship-reporting system. By March 1996 about 260,000 ships had used the system. Because data is transferable between the US and Japanese systems JASREP can provide participating ships with the same service as AMVER.

The JMSA has introduced new communication systems including digital selective calling (DSC) and narrow-band direct printing (NBDPC) which are compatible with the Global Maritime Distress and Safety System (GMDSS) at shore stations.

Preservation of the Marine Environment

The preservation and protection of the marine environment in the semi-enclosed seas in Northeast Asia is complicated by conflicting claims to marine jurisdiction and by the lack of agreed maritime boundaries.¹ In order to maintain and improve the quality of the marine environment, the JMSA administers programmes in accordance with national laws and international protocols to prevent the accidental or intentional pollution of the marine environment by oil and hazardous substances.

International Cooperation

In order to minimise any adverse impact on the marine environment by large-scale oil spill accidents, in 1990 the International Maritime Organisation (IMO) adopted the International Convention

¹ See also Jin-Hyun Paik, 'Exclusive Economic Zone and Maritime Boundary Delimitations in Northeast Asia' in Sam Bateman and Stephen Bates (eds), *The Seas Unite: Maritime Cooperation in the Asia Pacific Region* (Strategic and Defence Studies Centre, Australian National University, Canberra, 1996), pp.195-210.

on Oil Pollution Preparedness, Response and Cooperation (OPRC). The convention requires a strengthening of the national countermeasures scheme and the establishment of an international cooperation scheme. Japan ratified the treaty in January 1996.

The JMSA is working hard to ensure that the initial response to oil spill accidents is prompt and that the geographic specific spill recovery resources are distributed in a timely and efficient manner. It regards international cooperation in the areas of training, technical assistance and collaboration as critical to the achievement of these objectives.

Northwest Pacific Action Programme (NOWPAP)

As part of the Northwest Pacific Action Programme (NOWPAP), which aims at protecting the marine environment in the semi-enclosed seas under the United Nations Environment Programme (UNEP), in December 1995 the JMSA and the Ministry of Transportation invited specialists from the concerned countries adjacent to the semi-enclosed seas of the Yellow Sea and the Sea of Japan (the PRC, the ROK and Russia) to a Maritime Environment Monitoring and Data Management Workshop in Tokyo to discuss the current status of a marine pollution survey. The JMSA is using the best of integrated technologies and know-how to establish the monitoring programmes and build a database for NOWPAP.

Bilateral Cooperation on Oil Spills Removal Programmes

The JMSA has also promoted cooperation with the US Coast Guard (USCG), particularly since the International Convention on OPRC was adopted by the IMO in 1990. So far there have been three oil spill removal specialists' meetings to exchange information between the JMSA and the USCG.

As part of its cooperation efforts with the ROK, the JMSA hosted the Third Japan-ROK Specialist Meeting for the Prevention of Marine Pollution in July 1996. At the meeting information regarding the present status of oil spill removal systems in both countries was exchanged and bilateral cooperation in preparing responses to oil spills was discussed. Cooperation with the ROK is to be further promoted in the future.

40 *Regional Maritime Management and Security*

There have also been moves towards greater cooperation with Russia. The First Japan-Russia Specialist Meeting for the Prevention of Marine Pollution was held in Tokyo. Both countries exchanged information concerning the present status of oil spill removal systems and agreed to further promote bilateral cooperation on this matter.

Recently there was a disastrous oil spill off Japan's coastline caused by the break-up on 2 January 1997 of the 13,157 ton Russian tanker *Nahodka*. The tanker was carrying some 19,000 kilolitres of fuel oil from China to Russia when it sank in rough seas off the coast of mainland Japan. At least 5,000 kilolitres leaked into the sea, polluting vast stretches of the coast adjacent to the Sea of Japan.

On 6 May 1997, a Ministry of Transportation panel investigating the case released an interim report in which it is claimed that the tanker broke apart because its ageing frame was unable to withstand the pounding of high waves. But the report does not rule out Russia's claim that the tanker broke in two after hitting a partially submerged object.

Japan and Russia remain at odds over the cause of the accident. The panel is scheduled to work out a final report by the end of July 1997. Tests conducted by the panel on sample steel sheets taken from the ship's hull show that the ship's bottom was on average 23 per cent thinner and that the sides were 30 per cent to 50 per cent thinner than their initial thickness. Based on a videotaped image of the sunken portion of the tanker, the report also suggests that the break-up may have resulted from a crack near the bottom of the vessel.

This particular accident has not only aroused nationwide concern in Japan about the need to clean up spills in a timely and efficient manner but has also resulted in strong demands for the protection of Japan's ports and waters from the hazards of unsafe ships. The Japanese public has been shocked to learn that the Japanese coastline can be threatened by ships whose hulls, crews, machinery and equipment are substantially below the standards required by Japanese laws and international conventions.

Since the *Nahodka* accident, Japan has widely acknowledged the necessity of some international initiatives to protect waters in the region from the hazards of unsafe ships.

Fisheries

The current fisheries regime in Northeast Asia consists mainly of a web of bilateral agreements and unilateral restraints.²

Fisheries in the Sea of Japan, as well as in the Yellow and East China seas, are regulated by bilateral agreements that were concluded before the UN Convention on the Law of the Sea (UNCLOS) III entered into force. The 1965 Japan-Korea Fisheries Agreement is still in force and regulates fishing operations mainly in waters between Japan and the Korean peninsula. The Japan-Korea treaty authorises each nation to adopt an exclusive 12 nautical mile fishery zone along its coast and to establish a joint control zone adjacent to the Korean exclusive zone. With regard to law enforcement in the joint control zone, the flag state principle is applied, therefore denying the coastal state the right of visit and arrest in cases where the other state is in violation of the treaty.

Both this treaty and the 1975 Japan-China Fisheries Treaty had been originally drafted to regulate Japanese fishing, because at the time Japan's fishing fleet was much larger than that of other nations. However, since the late 1970s, there has been an increase in the number of Korean fishing vessels off waters around Hokkaido, which are not regulated under the treaty. These Korean vessels compete with Japanese fishermen and recently the increase in the number of Korean fishing ships has led local fishermen to demand the establishment of an exclusive Japanese fishery zone that would exclude both Korean and Russian fishing vessels.

Fishery relations between Japan and China are mainly regulated through consultations under the 1975 Japan-China Fisheries Agreement. However, China has expanded its distant-water fishing operations since the middle of the 1980s. Consequently, many Japanese and Chinese fishermen presently compete for the same resources in the areas of the East China Sea, the Sea of Japan and the Western Pacific, often causing damage to each other's resources.

² See also Jin-Hyun Paik, 'Exploitation of Natural Resources: Potential for Conflicts in Northeast Asia' in Sam Bateman and Stephen Bates (eds), *Calming the Waters: Initiatives for Asia Pacific Maritime Cooperation* (Strategic and Defence Studies Centre, Australian National University, Canberra, 1996), p.172-9.

42 *Regional Maritime Management and Security*

The waters around the Northern Islands off Hokkaido are claimed by both Japan and Russia. Since Russia adopted the 200 nautical mile exclusive economic zone (EEZ) in 1977, Japanese fishing vessels have been confined in the areas west of the median line between Japan and the islands occupied by Russia. Recently the Japanese fishing fleet has been faced with the threat of seizure and armed attack by Russia when fishing close to the boundary line.

In general, in Northeast Asia there is little international cooperation in the field of marine resources conservation and management, and there are few networks of scientists and relevant agencies. The existing regime, which is based on a web of bilateral agreements and unilateral restraints, has proven to be far less than what is required for the effective conservation and management of fisheries. The countries concerned should therefore begin to investigate the possibility of an arrangement that will ensure the effective management of fishery resources in regional seas.

With the entering into force of UNCLOS III, the government of Japan decided to proclaim its EEZ, thereby establishing a new fishery regime with neighbouring countries, even though it is anticipated that this will give rise to many difficulties.³

Safety

In order to aid navigation and minimise the loss of life, personal injury and property damage on, over, and under the seas and other waters subject to Japan's jurisdiction, the JMSA marks waterways and manages a national system that regulates navigation aids such as lighthouses, fog signals and radar reflectors.

Waterway Management

The JMSA coordinates vessel movements in selected waterways to reduce the risk of accidents, facilitate the movement of commerce and protect the environment. Waterways management also

³ For a detailed discussion of these difficulties, see Jin-Hyun Paik, 'Exploitation of Natural Resources', pp.176-81 and 'Exclusive Economic Zone and Maritime Boundary Delimitations in Northeast Asia', pp.195-210.

includes the routing and restricting of traffic, and the limiting of vessel size in certain waterways.

The JMSA has sent its representatives to various IMO meetings such as the Marine Safety Committee and the Sub-committee for Navigation Safety. With respect to safe navigation in the Malacca Strait, Japan has made some new proposals for traffic management and traffic rules to ensure a safe and smooth flow of traffic. In concert with the JMSA, the Japan Marine Accident Prevention Association has established a liaison office in Singapore to conduct studies into the development of measures for navigational safety in Southeast Asia.

Indonesia, Malaysia and Singapore have established a joint programme to promote the construction of navigational aids that aims to reduce the risk of accidents and to facilitate the movement of large ships in the Strait of Malacca. In Japan, the Malacca Strait Council of Japan and the Japan International Cooperation Agency (JICA) are assisting this joint programme in concert with the JMSA, which provides Indonesia, Malaysia and Singapore with technical assistance in areas such as construction and management of navigational aids. The JMSA has also taken part in a programme for the hydrographic re-survey of the Strait of Malacca, with the aim of ensuring navigational safety.

Search and Rescue

Search and rescue (SAR) is one of the JMSA's most recognised functions. Since Japan joined the SAR Convention in June 1985, it has sought to promote an international cooperative SAR regime by concluding SAR agreements with neighbouring countries.

The SAR Convention urges participating countries to conclude agreements that establish areas of SAR responsibility for conducting SAR operations. To comply with these requirements, Japan concluded a US-Japan SAR Agreement in October 1986. Under this agreement, Japan's area of responsibility was increased to a distance of 1,200 nautical miles from the mainland of Japan. The US Coast Guard (USCG)-JMSA Guidelines for SAR Cooperation were adopted in January 1989.

In October 1993, the Memorandum of Understanding for Search and Rescue at Sea was exchanged between Japan and Russia to

44 Regional Maritime Management and Security

further promote efficient and smooth cooperation. The Guidelines for SAR at Sea between the JMSA and the Russian Maritime Rescue Coordination Headquarters were adopted in July 1994. Since September 1994, Japan and Russia have twice conducted joint SAR exercises.

The Japan-ROK SAR Agreement was concluded in February 1990. Since the ROK joined the SAR Convention in September 1995, SAR cooperation between Japan and the ROK has been accelerated.

In June 1996, representatives from three countries (Japan, the ROK and Russia) which are adjacent to the Sea of Japan took part in an SAR working-level meeting for the first time.

With regard to cooperation with China, negotiations on an SAR agreement are in progress.

Japan's Area of SAR Responsibility

Since September 1986, Japan's area of SAR responsibility has been increased to a distance of 1,200 nautical miles from the mainland of Japan. Ships which sail north of latitude 17 degrees north and west of longitude 165 degrees east are encouraged to report their position to JASREP, which is operated by the JMSA. A computer generates and maintains a record of a vessel's position throughout its voyage.

JASREP is a voluntary movement report system that keeps records of the location of merchant vessels at sea to help mariners provide assistance to one another. During an emergency, estimated locations and relevant characteristics of all AMVER/JASREP participating vessels known to be in a given area are furnished to recognised SAR agencies of any nation upon request. Currently, upon the request of a vessel's master, JASREP shares vessel reports with the AMVER system.

Prevention of Smuggling and Other Criminal Activities at Sea

The JMSA is responsible for the enforcement of all applicable national laws on the high seas and waters subject to Japan's jurisdiction.

The number of illegal Chinese immigrants arrested in Japan has surged nationwide since December 1996. According to the National Police Agency (NPA), 726 people, usually in groups, were arrested in various locations in Japan between January and May 1997, surpassing the number arrested for the whole of 1996. There has been an increase in the smuggling of large groups of Chinese through the southern part of Japan, and the NPA has detected indications of criminal involvement in the maritime smuggling of Chinese immigrants.

The JMSA plays a major role in implementing a comprehensive national policy that has been established to deal with the recent emerging threat of smuggling and other criminal activities at sea. By conducting surveillance over waters around Japan, particularly in the East China Sea and the Sea of Japan, Japan Maritime Self-Defense Force (JMSDF) assets such as the maritime patrol aircraft (MPA) constitute a useful complement to the JMSA's interdiction capability

Because the task of controlling and suppressing transnational crime is too complex and cumbersome for one nation, Japan has actively sought bilateral agreements with other countries in order to combat illegal immigration and the maritime shipment of drugs and weapons destined for Japan. In September 1995, the JMSA held a meeting of the Japanese and Russian maritime security agencies to facilitate exchanges of information concerning the trafficking of drugs and/or weapons at sea. In November 1995, the JMSA held a specialists meeting on the prevention of smuggling with Thai authorities.

The JMSA has recognised the importance of maintaining a dialogue with its counterparts from the PRC to ensure the safety of navigation as well as to control and suppress a massive surge in criminal activities at sea. For the time being, the JMSA will continue to make good use of a 'hotline' for the purpose of prevention of criminal activities at sea. The hotline has already proved quite effective in reducing piracy. Following its establishment in 1993, Japan and the PRC succeeded in diminishing the surge of piracy incidents in the East China Sea.⁴

⁴ See Sumihiko Kawamura, 'Maritime Transport and Communications - Including Marine Safety and SLOC Security' in Sam Bateman and Stephen Bates (eds),

46 *Regional Maritime Management and Security*

Joint patrols by neighbouring countries in areas of overlapping or adjacent jurisdictions are likely to become more important in the near future, not only in the prevention of transnational criminal activities, but in the protection of the environment and natural resources as well. In order to prevent mutual interference and to ensure safety, some procedures for flight safety and information exchange must be established among interested countries.

CHAPTER 6

REPUBLIC OF KOREA

Sang Don Lee

On 31 May 1996, the Republic of Korea's first Ocean Day, President Kim Young Sam declared that his government would establish a cabinet-level ministry for the management of maritime and ocean affairs. On 8 August 1996 the Ministry of Maritime Affairs and Fisheries (MOMAF) was formally established. This chapter briefly outlines the history of maritime administration in the Republic of Korea (ROK) and the more recent developments in maritime affairs of the late 1980s and early 1990s that preceded the establishment of MOMAF. It concludes with an overview of the functions of MOMAF.

History of Maritime Administration in the Republic of Korea

Although the ROK is a peninsular country surrounded by sea, government activity in maritime affairs had been rare before the 1970s. In 1955 the government established the Maritime Administration, a sub-cabinet-level agency, with authority to supervise shipping and port operations, and fisheries. The administration also supervised the maritime police.

However, for reasons that are not certain, the administration was dismantled in October 1961 by General Park Chung Hee, the then chairman of the omnipotent Supreme Council for National Reconstruction that had been established after the May 1961 coup. Functions previously handled by the Maritime Administration were divided up among the Ministry of Commerce, the Ministry of Agriculture and Forestry, and the Ministry of Transportation, while the maritime police was placed under the Ministry of Home Affairs.

1966 saw the establishment of the Fisheries Administration as a separate sub-cabinet agency under the Ministry of Agriculture and Forestry. In 1976 the Maritime and Port Administration was also established as a separate sub-cabinet agency under the Ministry of Transportation.

48 *Regional Maritime Management and Security*

Thus from 1976 onwards many sub-cabinet agencies had been engaged in making policy on marine affairs. The Maritime and Port Administration handled shipping and port operations while the Fisheries Administration managed all fishing operations. The maritime police under the Ministry of Home Affairs had authority to conduct surveillance operations and enforce safety measures at sea, and to handle oil pollution. Within the Environment Administration, established as a sub-cabinet agency in 1980, an office for the marine environment was set up to monitor ocean pollution and to coordinate the functions of other agencies that affected the marine environment. As a result, though many agencies had functions that dealt with certain aspects of maritime affairs, there was no 'lead agency' in ocean affairs.

Developments in the late 1980s and early 1990s

Since the mid-1980s several oil pollution incidents have occurred in coastal areas. Red tides were often experienced in the near coastal sea, resulting in serious damage to aquaculture operations. However, the Government was unable to respond adequately to such incidents. Lack of a 'lead agency' or lack of policy coordination was one of the reasons given for this poor response. Even the officials in the agencies concerned acknowledged that a decent marine environment could not be achieved by such a fragmented approach.

In the autumn of 1991, the Prime Minister's Office established a task force to conduct research into how the administration of marine affairs could be improved. The task force, which consisted of several researchers in ocean affairs and policy, recommended that government integrate all government functions concerned with ocean affairs through the establishment of a Ministry of Marine Affairs. However, the recommendation of the task force met with only a weak response from the Roh Tae Woo government, which was in its final months of office.

In the presidential election of December 1992, the ruling party's presidential candidate, Kim Young Sam, pledged that if elected he would establish a Ministry of Marine Affairs. Kim won the presidential election but failed to carry out the much-needed administrative reforms.

It was only in December 1994 that President Kim introduced some drastic government reforms. The Economic Planning Board and the Ministry of Finance were integrated into a new super-ministry, the Ministry of Finance and the Economy, and the Ministry of the Environment was given full cabinet status. However, the Ministry of Marine Affairs was not established, leading many to believe that the moment for reform in ocean affairs had passed.

In the autumn of 1995, a tanker belonging to a major Korean oil company ran aground causing a major oil spill and environmental damage. There was also an unprecedented red tide in the south coastal sea. Aquaculture operations were devastated and public opinion once again turned angry. There was widespread criticism of the government's lack of preparedness and poor handling of the incidents. Some blamed the government's lack of a long-term marine policy. The Prime Minister's Office responded by reviving its proposal to establish a Ministry of Marine Affairs.

Establishment of MOMAF

On 31 May 1996, President Kim declared that his government would establish a Ministry of Ocean Affairs. The ministry has the following functions:

- development and integration of marine policy;
- safety of ships and development of shipping industries;
- port operation and development;
- promotion and development of fisheries;
- conservation of the marine environment;
- development of marine science and technology; and
- development and conservation of the coastal zone.

It is also noteworthy that the maritime police, which had been a unit of the national police under the supervision of the Ministry of Home Affairs, was transferred to MOMAF. Thus MOMAF now has a fleet of coastguard ships.

The Korean Maritime Institute (KMI) was established as the research arm of MOMAF by integrating the former Korea Institute of

Shipping Industries, the fishery research units of the Korea Agricultural Economics Institute, and the policy research unit of the Korea Ocean Research and Development Institute.

The establishment of MOMAF represented a major development in Korean ocean affairs. However, the real question is the kind of ocean policy Korea will pursue into the twenty-first century with this new agency.

CHAPTER 7

MALAYSIA

B.A. Hamzah

Introduction

Malaysia has realised that if it is to fulfil the aspirations of its leaders and become a fully fledged maritime nation, the country has to transform its way of thinking about the maritime sector. To expedite the process of making Malaysia into an industrialised nation by the year 2020, a total rethink about maritime affairs has taken place. Reforming the maritime sector is as important as it is unique. While other sectors might be important in bringing about changes to the industrial landscape, not all have the linkages that are necessary to bring about comprehensive change across the entire Malaysian economic and political landscape to the same extent as the maritime sector.

The Malaysian sea area is almost twice as large as its land mass and its contribution to the economy is considerable. In 1987, for example, the sector contributed about 13 per cent of GDP, and the potential for expansion is large. Although there are no statistics to substantiate this, the Maritime Institute of Malaysia (MIMA) believes the contribution from the maritime sectors has reached 20 per cent of GDP. All of Malaysia's exports - except those that go to Singapore via the causeway or that trickle across the border into Thailand or Indonesian Borneo - go by sea. In 1977 Malaysia produced on average 670,000 barrels of oil and 4.2 million cubic feet of natural gas a day and every drop of oil and every cubic foot of natural gas in Malaysia comes from offshore. The sea is also an important source of food and about 400,000 households in Malaysia depend on the marine fishing industry.

However, the maritime sector will have to be re-organised and restructured if its full economic potential is to be realised. At present the maritime sector is too fragmented and too poorly organised to play its part in achieving the goals of Vision 2020 set down by Dr Mahathir, the prime minister. This fragmentation will also make it difficult to

devise a comprehensive ocean technology programme that will fit into the billion-dollar Multimedia Super Corridor (MSC) project on which Malaysia has recently embarked.

This chapter begins with an examination of the weaknesses of the present sectoral approach to ocean policy planning in Malaysia. It goes on to describe the type of coordinated planning that Malaysia has opted for. It then outlines the minimum policy goals that long-term integrated ocean governance should achieve and lists the specific policies that the Malaysian government will implement to achieve those goals. Finally, it concludes with a detailed description of one of those policies, the expansion of the national fleet.

Weaknesses of the Sectoral Approach

The administrative structure which oversees ocean policy in Malaysia lacks comprehensiveness and, as we have seen above, is highly fragmented. There are currently more than 19 ministries and agencies responsible for the ocean sector. These bodies have a variety of functions and often act on their own, paying little attention to possible horizontal or vertical impacts. As a result, the present administrative structure lacks the integrative capacity that is required for efficient ocean policy planning.

Institutional fragmentation has not only resulted in considerable duplication and inefficiency in resource utilisation, it has also led to a narrowly focused, sectoral-based approach to planning.

One of the most glaring shortcomings of the sector-by-sector approach in ocean planning is the growing deficit in the services account of the nation's balance of payments. While the government has effectively managed the balance of payment problem at the macro level, the deficit due to the maritime sector has expanded over the years: RM4.2 billion in 1992, RM4.8 billion in 1993, RM7.3 billion in 1994, RM9 billion in 1995 and RM8.4 billion in 1996. Whilst part of this deficit is cyclical, most of it is structural.

The present fragmented approach to ocean planning in Malaysia will be unable to solve the following problems:

- *Multiple-use conflicts.* Because of the multiple use of Malaysia's seas by different organisations, the potential for conflict is ever

present. In the absence of any coordination, this multiple use will result in overlapping jurisdiction and poor resource allocation, leading to multiple-use conflicts.

- *Marine pollution.* Much of the degradation of the marine environment stems from land-based activities. To be effective, then, efforts to curb marine pollution must also be directed at activities on shore. Currently there is no single overarching agency that coordinates activities in the coastal zone. The proposed review of public institutions will hopefully address this problem. Under the proposed integrated approach to ocean planning, not only are sectoral linkages emphasised, but the artificial division between land and sea is also removed. One cannot plan for the sea without taking into account activities on land, especially where pollution management is concerned.
- *Deficits in the services sector of the balance of payment account.* These deficits are increasing, mainly because of Malaysia's high dependence on foreign ships to carry its trade. About 85 per cent of the volume of Malaysia's trade is transported in foreign vessels and about 24 per cent of Malaysian exports and imports are transhipped through Singapore. While the present practice of purchasing new vessels from foreign shipyards will aggravate the deficit in the service sector of the balance of payments (since it requires more foreign exchange to be spent outside the national economy), it is hoped that in the long run the expansion in national carriage capacity will help reduce the deficit.
- *Investment in the maritime sector.* There has been a significant shift in investment focus worldwide towards the ocean sector. Investment is flowing not only into shipping and ports, but also into resource exploitation and technology development. Unless there is greater 'order' and coordination at sea, the potential for investment in the maritime sector will not be realised. While most of this investment is expected to come from the private sector, the private sector will not invest in an area where the infrastructure - for example, the legal infrastructure - is inadequate to ensure predictability and transparency. And this infrastructure has to be provided by

the public sector. In the case of Malaysia, in order for this to happen, institutional capacity must be strengthened.

- *Conflicting maritime claims.* It is anticipated that a more structured institutional arrangement will have a better chance of managing conflicts over maritime boundaries in Malaysian waters.
- *Cost-sharing problems in the Strait of Malacca.* While there is every chance that the principle of 'user pays' will be an integral part of any solution to the problems in the Strait of Malacca, the situation there would certainly benefit from a more integrated approach, particularly as the problems in the Strait of Malacca relate not only to navigational safety and pollution management but also to the management of multiple uses in this vital artery.
- *Enhancing maritime defence.* An integrated approach to ocean planning would certainly enhance Malaysia's defence capacity through greater efficiency in resource utilisation and in enforcement and monitoring activities. Although the navy will continue to play a dominant role, defence at sea can no longer be conducted by any single organisation.

Coordination

Coordination is the key to integrated ocean planning and resolving policy fragmentation. This coordination will be exercised from the highest level - that is, from the cabinet or parliament, as in the case of the Netherlands. A Cabinet Committee on Ocean Affairs is now in the final process of being formed in Malaysia to formulate and oversee the implementation of an integrated national ocean policy. As well as having an oversight function, this committee will become the planning mechanism that facilitates coordination. High on the committee's agenda will be an assessment of the problems arising from the multiple use of the sea and finding solutions to the sustainable use of the ocean sector. This committee will also provide guidelines for an investment and technology framework to assist the private sector.

Streamlining the administrative institutions would be an extremely complex and daunting task without the emanation of persuasion and support from the highest authority. No sub-sector

would be willing to give up its decision-making powers. The idea is not to force institutions to change direction but to persuade them to work together and harmonise their overlapping activities.

Malaysia has examined in some depth the ocean management policies adopted in South Korea, Japan, the Netherlands, Canada and France. Whilst the Malaysian proposal for integrated ocean planning is a mix of the policies of all these countries, it draws mainly on the positive experiences of the Netherlands and Japan. Clearly, the present sectoral approach as practised in Malaysia will be reviewed to allow for greater linkages vertically and horizontally. Some sectors are likely to remain intact, because they can function very smoothly on their own without having an adverse impact on other sectors. For example, there is little to be gained from revamping the administrative structure in the oil and gas sector, where only minor adjustments may be necessary to minimise possible conflicts with the environment sector. The operational aspect of the navy will not be tampered with, as it can stand on its own. But its enforcement and surveillance functions may have to be fine-tuned to reduce any overlap with other agencies.

To complement the present sectoral approach, Malaysia will most likely adopt a policy which is a balanced mix of the bottom-up approach that is practised in the Netherlands and Japan and the top-down approach practised in Korea and France. This balanced mix calls for integration only where, and to the extent that, it is necessary to deal with existing problems. This approach will build on the strength of sectoral mechanisms by keeping control of the actual operations in the hands of specialists, while imposing a thin overlay of coordination at the top level. This approach can give Malaysia a new direction in ocean planning and encourage investment in the maritime sectors, particularly in the area of new technology. The authority of cabinet will be necessary to prevent any institutional deadlocks or impasses which could block policy harmonisation.

Policy Goals

Long-term integrated ocean governance should achieve the following minimum goals:

- a more efficient government machinery that minimises duplication in the administrative and jurisdictional functions

56 *Regional Maritime Management and Security*

and strives for greater predictability, especially in the area of enforcement, and more efficient resource utilisation;

- a prosperous, dynamic ocean sector that offers secure and steady employment and fosters economic development, particularly in the industrialised coastal region, which contains over 70 per cent of the population and is responsible for over 75 per cent of national industrial productivity;
- world-class expertise and capability in ocean-related science, technology and engineering, which together form the basis for the future economic development of the maritime sector;
- better management of ocean resources in a sound and sustainable manner to ensure the continued prosperity of present and future generations;
- protection of Malaysia's sovereignty at sea; and
- increased productivity at sea.

Specific Policies

Within this general institutional framework, the government plans to do the following:

- expand the national fleet;
- enhance trade facilitation programmes, including the privatisation and expansion of ports in the country: more ports will be built to cater for an expanding economy;
- convert Port Klang into a hub port to take advantage of economies of scale;
- reduce the deficits in the marine transport sector by encouraging firms to sell on a cost insurance freight (cif) basis and import on a free on board (fob) basis;
- enhance naval capability, mainly to protect and secure Malaysia's resources at sea; and
- improve the quality of enforcement and monitoring mechanisms.

Expansion of the National Fleet

The remainder of this chapter will highlight those policies aimed at expanding the national fleet since, apart from the reform of the institutional structure administering the maritime sector, these policies are the most pressing government concern in the ocean sector.

An effort is being made to expand the national fleet. As of 1995, there were some 2132 vessels on the Malaysian Registry with a combined tonnage of 3.6 billion GRT. This represents a minute proportion of the world fleet - about 0.5 per cent. Currently over 85 per cent of Malaysia's cargo by volume is carried on foreign vessels. This means the national fleet has a limited lifting capacity of only 15 per cent. Some of the policies that the government is introducing to encourage the expansion of the national fleet are:

- The introduction of a ship-financing facility. In 1994 the government grant was RM1.1 billion - representing an increase of RM300 million since 1992. The Shipping Fund is administered by the Bank of Industry and is comprised of the Shipping Venture Facility (SVF) of RM500 million, the purpose of which is to mobilise institutional funds to raise the private shipping capacity in Malaysia; and a Ship Financing Facility (SFF) of RM600 million, established to provide long-term financing for the acquisition of ships to ply the domestic and international routes. The Shipping Venture Facility (SVF) is managed by a company called *Global Maritime Ventures Bhd. Since its formation in 1992, Global Maritime Ventures Bhd, together with its partners Malaysian Bulk Carriers and Wawasan Shipping (a subsidiary of the IMC), have acquired over 20 vessels which cater to the bulk and tanker trade. By the end of 1995, a total of RM390 million was approved under the Ship Financing Facility (SFF). The government is likely to expand the SFF to provide more capital to those who want to venture into ship management or ship owning.
- Encouraging shipping companies to raise capital from the public through the public offer of their shares. A few shipping companies have taken advantage of this by listing their shares on the Kuala Lumpur Stock Exchange. It is hoped that through such an exposure shipping lines will become more efficient and be subject to greater transparency with regard to their

financial operations. Liberalising investment in the shipping sector means that the burden of funding the expansion of the national fleet is now in the hands of the private sector. All the shipping lines which are listed on the Kuala Lumpur Stock Exchange have started to expand their business and all have acquired new vessels which will invariably expand the national carrying capacity. The Malaysian International Shipping Corporation (MISC), Perkapalan and OHM, to name a few, have bought new ships and some have entered into joint ventures with other shipping lines.

- The liberalisation of cabotage policy. Foreigners are now allowed to participate in the cabotage trade in certain sectors to overcome the national shortage. Foreigners are also allowed to participate in the lucrative supply of logistics to offshore installations. Elsewhere this sector is reserved for citizens of the country.
- Increasing the equity share holding of foreign lines to a maximum of 70 per cent. This policy, together with some other tax breaks, should encourage foreign lines to operate in Malaysian waters.

The planned expansion of the national fleet will come to nought without an adequate supply of skilled manpower. At present, 75 per cent of the crew on Malaysian ships must be Malaysian nationals. However, with the country experiencing a tight labour market, this will have to be scaled down towards a more practical 'mixed manning' ratio. To reduce dependence of the shipping industry on foreign manpower, in 1981 the government set up the Maritime Academy of Malaysia (ALAM), with the sole purpose of training seafarers. This institute was privatised in 1996 and it is now owned by four companies with a paid-up capital of RM30 million. The government is encouraging the private sector to establish technical or vocational institutions in the maritime industry through a tax investment allowance for a period of 10 years. This means that institutions like ALAM that undertake additional investment to upgrade equipment or expand their capacity are exempt from import duties, sales tax and excise duties on materials, machinery and equipment used for training. A Human Resource Development Fund has also been set up to provide employees with incentives to upgrade

the skills of their workers. Fiscal incentives have also been introduced to encourage the expansion of the shipping industry. These incentives include exemption from import duties, accelerated depreciation on ships and tax exemption for ship crews.

CHAPTER 8

PHILIPPINES

Emma Sarne

This chapter is divided into two parts. The first deals with the specific activities the Philippines has undertaken to manage and protect its ocean space and its resources. The second part deals with the inter-departmental mechanism (the Cabinet Committee on Maritime and Ocean Affairs) set in place to administer, oversee and facilitate the oceans-related activities of the various government and even non-governmental institutions.

The Philippines is an archipelagic nation; a unity of land, water and people. It is not an accurate statement to merely say that the Philippines is surrounded by water. That the Philippines has more water area than land, and more marine wealth than land-based resources, would be more precise. As such, the task of protecting and preserving the marine environment becomes all the more important. The country must ensure that its marine and coastal resources are properly managed and its environment safeguarded from any threats of possible pollution from both marine- and land-based sources.

The Philippines is also a responsible member of the international community. It is a signatory to various maritime-related agreements which seek to manage, protect and conserve the resources of the world's oceans. The Philippines is a signatory to the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and the agreements reached at the United Nations Conference on Environment and Development (UNCED) and is pursuing sustainable development as a strategy in the management of its natural resources and environment.

Philippine Initiatives in Oceans Management

Oil Spill Response Policy

Because of the dependence of the Philippines on its marine resources, stringent measures will have to be adopted to protect the marine environment. A major oil spill could potentially endanger the country's food security and interrupt its sea harvests for up to a decade. Should such a catastrophe take place, the nation's seafood, 80 per cent of which comes from Palawan and Sulu, would be the first casualty.

The National Operation Center for Oil Pollution (NOCOP) of the Philippine Coast Guard (PCG) was created by Presidential Decree 602 of 1974 to monitor and control all types of water pollutants, not just oil, in Philippine territorial waters. Its principal tasks are to apprehend those responsible for water pollution and to work together with other government agencies and the private sector in the areas of technical assistance and research to find economical and practical methods of preventing and controlling pollution.

The straits and passages of the archipelago used by oil tankers, primarily the San Bernardino and Balabac straits, are dangerously narrow and sea currents are unpredictable. Various proposals to prevent a major oil catastrophe are being reviewed. These include ship re-routing to deeper channels, traffic separation schemes, escort plans, requirements of conveyance in double-hulled vessels, satellite tracking and communications protocol that would inform the other agencies concerned, such as the National Security Council, the ASEAN Response Team, the field command units and the affected communities, of a major oil spill within two hours of it occurring. The proposals also include the study of the use of bamboo, cotton, rice-hull and other indigenous materials as oil spill booms and clean-up materials.

Marine Environment Protection

Philippine initiatives on marine environment protection in the West Palawan waters include:

- *Marine Science Program for the Kalayaan Islands.* A University of the Philippines-Marine Science Institute (UP-MSI) project on

the subject areas of marine biodiversity, marine ecosystem, and oceanographic and seismic studies covering the Kalayaan Islands. Funding for this project, amounting to 7 million Philippine Pesos, will be provided by the Department of Science and Technology (DOST).

- *SAIL-SCS (Stewardship Alliance through International Linkages in the South China Sea)*. This is a project proposal submitted by the UP-MSI covering the areas of marine biodiversity and marine information management. The project is aimed, among other things, at complementing the overall marine science programme for the South China Sea. The original intention was to invite the South China Sea littoral states and regional stakeholders to provide the seed-money for the implementation of the project. When this did not materialise, funding was obtained from DOST, which included the project in its 1997 programme.

Regional arrangements on marine environment protection are underway. One is the International Maritime Organisation/United Nations Development Programme/Global Environment Facility (IMO/UNDP/GEF) Regional Programme on Marine Pollution Prevention and Management in the East Asian Seas. Demonstration projects on Integrated Coastal Management System are being undertaken in Batangas Bay, the Philippines and Xiamen, China. Another component of the GEF Regional Programme is Pollution Risk Assessment Management in the Malacca Straits.

Safety of Shipping

The Philippines believes that seaborne trade is vital to the development of the national and regional economy. The Philippines recognises that major cause of shipping disasters is human error. It is a party to the STCW 78/95 (International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers), which aims to raise international standards for the training and certification of seafarers.

Being the world's leading supplier of seafarers for global shipping, the Philippines must maintain this lead by complying with STCW 95. The Cabinet Committee on Maritime and Ocean Affairs

(CabCom-MOA) considers it as in the national interest to maintain and preferably enhance the country's position as the world's leading supplier of seafarers. This can only be achieved by significantly improving the quality of the Philippines' maritime education and training system.

The Asian Shipowners Forum (ASF) has urged regional governments to introduce unified and consistent guidelines on the interpretation and application of the STCW 95 convention. It should be noted that Asia is the world's largest supplier of crews, with the Philippines estimated to supply 20 per cent of the manning market, while Asians own or operate about 40 per cent of the world fleet. The ASF is developing a common marketing strategy for the employment of seafarers from the region who will meet shipowners' requirements. The ASF has also been developing links with training institutions in order to provide a unified Asian position on the training and educating of internationally acceptable crew members.

The Philippines recently established the National Maritime Safety Coordinating Council.¹ The Council aims to provide the necessary efficient and effective mechanism to coordinate the formulation and implementation of policies and programmes affecting maritime safety.

Piracy in Philippine Waters

Presidential Decree (PD) 532, entitled Anti-Piracy and Anti-Highway Robbery Law of 1974, establishes the definition, required policy action and penalties for the crime of piracy committed in Philippine waters. PD 532 also provides the basis for the rules of engagement by the Philippine Navy (PN), the Philippine Coast Guard (PCG) and PNP-MARICOM in actions against piracy. It defines piracy as an attack upon or seizure of any vessel, or the taking away of the whole or part of its cargo, equipment or personal belongings of its complement or passengers, in Philippine waters.

Three types of penalties are established by this decree. Long-term imprisonment for piracy could be raised to life imprisonment if physical injuries are caused and other crimes are committed as a result

¹ Executive Order 314, 28 March 1996.

of piracy. The mandatory penalty of death shall be imposed if rape, murder or homicide is committed as a result of, or on the occasion of, piracy, or when the offenders are found to have abandoned their victims without any means of saving themselves, or when the seizure is accomplished by firing upon or boarding a vessel.

The Philippines complements its action against piracy on the national level with commitments to comply with its obligations under international law, such as the 1982 UNCLOS. The Philippines is a state party to the convention which sets down in the relevant articles of Part VII the measures to combat piracy.

It has been observed that pirates operate in total disregard of the maritime boundaries of coastal states. For this reason, the Philippines has joined its neighbours in cooperative measures such as the border patrol agreements with Malaysia and Indonesia. These agreements provide for coordinated border patrols by the navies and coastal aircraft of the Philippines, Malaysia and Indonesia aimed at curbing, within their respective areas of operation, illegal activities such as piracy, smuggling, drug trafficking, illegal entry, hijacking, the poaching of marine resources, and marine pollution.

The problem of piracy in the South China Sea was discussed during the First and Second Meeting of the Technical Working Group on the Safety of Navigation, Shipping and Communication (TWG-SNSC) in the South China Sea, held in 1995 in Indonesia and 1996 in Brunei respectively. Through the meetings of the TWG-SNSC, the Philippines envisions a multilateral approach to combating piracy in the South China Sea which should not infringe on the national laws and other sovereign maritime rights of the state. There is a tripartite arrangement among Indonesia, Malaysia and Singapore on patrolling the Malacca Strait for purposes of safety of navigation (in general), which inadvertently addresses the problem of piracy. There is to date, however, no region-wide action against piracy due to the difficulty of addressing the sovereignty problem.

The Cabinet Committee on Maritime and Ocean Affairs (CabCom-MOA)

As an archipelagic country at the dawn of its hundredth year of independence, one might think that the Philippines would have its

maritime house in proper order. However, it was only recently that a nationwide, inter-agency, effort was launched to effectively coordinate and monitor all the maritime-related activities of the country.

Using as a starting point one of the paragraphs in the preamble to the 1982 UNCLOS, it was decided that an independent Philippine Maritime and Ocean Affairs Center (PMAC) would be created to coordinate the maritime-related policies and studies of existing institutions involved in the various aspects of oceans governance. The mandate of the centre would be to 'consider the problems of ocean space as a whole'.

Pending the creation of such an entity and keeping in mind the coming into force of the 1982 UNCLOS, the Department of Foreign Affairs proposed the creation of a transitional network to prepare the way for the establishment of the PMAC. The network utilised an interdisciplinary approach that maximised the participation of all concerned agencies and institutions while minimising any additional expenses and administrative obligations on the part of the government. At the same time, such a network actively sought the involvement of the private sector in building a constituency for a national oceans policy.

The transitional network came in the form of the Cabinet Committee on Maritime and Ocean Affairs (CabCom-MOA), which was created through Executive Order 186² signed by the president on 12 July 1994. The CabCom-MOA is mandated to:

- formulate practical and viable policies that address the various concerns which affect the implementation of the 1982 UNCLOS and other marine-related matters; and
- encourage the participation in maritime policy formulation of government and private academic and research institutions involved with marine and ocean-related concerns. The avenue of participation is the Marine Affairs Research Community (MARC).

2 Executive Order 186: Expanding the Coverage of the Cabinet Committee on the Law of the Sea and Renaming It as the Cabinet Committee on Maritime and Ocean Affairs, 12 July 1994.

The CabCom-MOA is empowered to create sub-committees and/or working groups as it deems necessary to ensure the efficient and effective discharge of its responsibilities. It can also call on any department, bureau, office and instrumentality of the government for appropriate assistance.³

Under Executive Order 186, the Secretary of Foreign Affairs acts as Chair, and the Secretary of Environment and Natural Resources is Vice-Chair. Member agencies are the Departments of Justice, Agriculture, National Defense, Trade and Industry, Transportation and Communication, Science and Technology, Finance, Energy, Labor and Employment, Interior and Local Government, and Budget and Management, the National Security Council, the National Economic and Development Authority and the Office of the Executive Secretary. The Department of Foreign Affairs provides secretariat support to the CabCom-MOA through the Maritime and Ocean Affairs Unit (MOAU), which was specifically created for this purpose.⁴

The CabCom-MOA is supported by a Technical Committee (Tech-Com) and the Maritime Affairs Research Community. Tech-Com is composed of technical experts on oceans issues from the CabCom member-agencies and formulates policy and programme options for the CabCom-MOA.

The MARC serves as the research arm of the CabCom-MOA and is composed of agencies of government, academia and non-governmental organisations that are engaged in maritime or ocean-related research. It is also through the MARC that the CabCom-MOA conducts its consultations with the maritime sectors of society. It is grouped into four clusters:

- law, administration and enforcement;
- marine economy and technology;
- diplomacy and security; and

³ Emmanuel C. Lallana, PhD, The Cabinet Committee on Maritime and Ocean Affairs, paper presented at the MCS System Design Workshop for Integrated Ocean Planning and Management Strategies and their Implementation for Philippine Fisheries, 14-16 November 1994, Shangri-La's EDSA Plaza Hotel, Mandaluyong, Metro Manila.

⁴ Department Order No. 36-94: Creating the Maritime and Ocean Affairs Unit in the Department, 5 September 1994.

- environment, coastal management and education.

In November 1994, President Fidel V. Ramos signed and approved the National Marine Policy (NMP), which had been formulated by the CabCom-MOA through a series of nationwide consultations with the maritime sectors and coastal communities.

The NMP is basically a development framework which emphasises the country's archipelagic nature. It recognises that urgent development needs demand that the country mobilise its vast marine resources in the service of economic growth, and further argues that these resources should not be seen as mere additions to the current development strategy.

The NMP views coastal marine areas as a locus of resources, community and ecology. These three systems are interdependent and their dynamic balance and mutual reinforcement are at the centre of the NMP.

Finally, the NMP recommends a framework and strategy for the country to comply with its obligations under UNCLOS 1982. It argues that UNCLOS 1982 should be implemented within the framework of the NMP.

In a very real sense, UNCLOS 1982 has significantly contributed to further revolutionising current maritime-related reform efforts by the government, by bringing to the fore the need for a shift in the developmental paradigm from one that is purely terrestrial in its orientation to an archipelagic one, and the necessity to sort out national priorities and find a balance among them.

CHAPTER 9

SINGAPORE

Kevin Santa Maria

Singapore's Maritime Interests

As with all countries, Singapore has maritime interests and will promote and protect these interests both on its own and in cooperation with other countries. As a sovereign state, Singapore will safeguard its sovereignty, territorial integrity and jurisdiction over its territorial waters, and protect its coastal and marine environment.

In addition, the economic development of Singapore has been and will continue to be dependent on its maritime trade. The value of Singapore's total trade is more than three times its GDP and a large proportion of this trade is carried by sea. Like Singapore, many other Asia Pacific countries are also dependent on the sea for the import and export of manufactured goods and raw materials. Singapore therefore shares the same commitment as other Asia Pacific countries to ensuring that maritime trade is developed to its fullest potential. The development of maritime trade is inextricably linked to the economic development of the Asia Pacific.

As the sea is the main medium of Singapore's trade with the rest of the world, Singapore places great importance on freedom of navigation, unimpeded access to sealanes and security from criminal interference at sea. Singapore is committed to the United Nations Convention on the Law of the Sea (UNCLOS), as these principles are embodied in this document. It believes that freedom of passage through the international seaways of the world should be guaranteed, as provided by UNCLOS and international law. For example, the dispute over ownership of the Spratly Islands is not only a question about sovereignty, but also has implications for the right of international shipping to navigate the waters around the Spratlys. Any restriction on continued access to the waters around the islands will be of concern, as access to these sea passages is of vital importance to trading nations, including Singapore. Singapore hopes that the dispute will be resolved peacefully.

70 *Regional Maritime Management and Security*

Within the critical and congested sea routes of the Malacca and Singapore straits, Singapore's immediate concerns and activities are focused on the secure and unimpeded passage of ships, the safety of navigation, pollution control and the protection of the environment.

These concerns are not only those of Singapore; they are shared by Singapore's other littoral neighbours, Indonesia and Malaysia, and by other countries which use the straits. The various measures, programmes and activities undertaken to address these concerns have been carried out in cooperation with Malaysia and Indonesia, user countries and the relevant international organisations. In fact, the success of many programmes, in particular those concerned with the safety of navigation, law enforcement and pollution control, is due to the close cooperation among the three littoral states of Singapore, Malaysia and Indonesia, the other countries which use the straits, and international organisations such as the International Maritime Organisation (IMO).

Singapore's Approach in Managing Maritime Interests

Singapore undertakes individual and cooperative measures, programmes and activities in the management of its and regional maritime interests. These fall into three main categories: navigational safety; anti-sea-robbery measures; and pollution control.

Navigational Safety

The Port of Singapore is the busiest port in the world and both the Malacca and Singapore straits are among the busiest sealanes in the world. In 1995, more than 104,000 vessels called at Singapore. About 300 vessels use both the Malacca and Singapore straits per day. The very high shipping density and the narrowness of the Singapore Strait require a stringent vessel traffic enforcement scheme and a good surveillance system to ensure that collisions at sea do not occur. Such marine accidents would have an adverse impact on the three littoral states of Indonesia, Malaysia and Singapore, and their marine environment.

- *Traffic separation schemes.* With regard to the routing of ships, Indonesia, Malaysia and Singapore have worked in tandem with the IMO to develop a traffic separation scheme in the

Malacca and Singapore straits. Implemented in 1981, the scheme has been very effective in reducing the number of shipping accidents in the two straits.

- *Vessel Traffic Information System (VTIS)*. The Maritime and Port Authority of Singapore operates a chain of radars in the Singapore Strait to monitor shipping in the area.¹ The main aim of this system is the prevention of vessel collisions. The VTIS operators monitor all shipping traffic and they are responsible for ensuring that vessels observe the various safety rules and keep to their designated separation schemes. If there is any likelihood of or potential for an accident, the operators will warn the relevant ships of the impending situation. Such forewarnings have prevented collisions in the past. A diagram of the traffic separation scheme and chain of radar stations is found in Figure 9.1.

Working in tandem with the VTIS is the Maritime and Port Authority of Singapore's vessel-reporting system. This system encourages masters of vessels to report the positions of their ships to the VTIS operators when they are transiting the Singapore Strait. This will allow the VTIS system to effectively track the ships. It is compulsory, however, for ships to report their positions and identity to the VTIS operations centre if they are calling at Singapore.

There has recently been a major cooperative effort between Indonesia, Malaysia and Singapore to establish a vessel traffic services and ship reporting system covering the Malacca and Singapore straits from One Fathom Bank to the eastern approaches of the Singapore Strait. This proposal has been submitted to the IMO for endorsement. Essentially, it is a proposal to combine Malaysia's Vessel Traffic Surveillance System in the Malacca Strait with Singapore's VTIS system so that vessels can be tracked when they are transiting the Malacca and Singapore straits. The aim is to establish a joint traffic information system, principally to ensure that ships adhere to the traffic separation schemes and to provide warnings of potential collisions. A diagram of the proposed vessel services and ship

¹ See also Lui Tuck Yew, 'Regional Efforts in Handling Marine Emergencies: A Singapore Perspective' in Sam Bateman and Stephen Bates (eds), *Calming the Waters: Initiatives for Asia Pacific Maritime Cooperation* (Strategic and Defence Studies Centre, Australian National University, Canberra, 1996), p.111.

Figure 9.1: The Traffic Separation Scheme and Chain of Radar Stations in the Singapore Strait

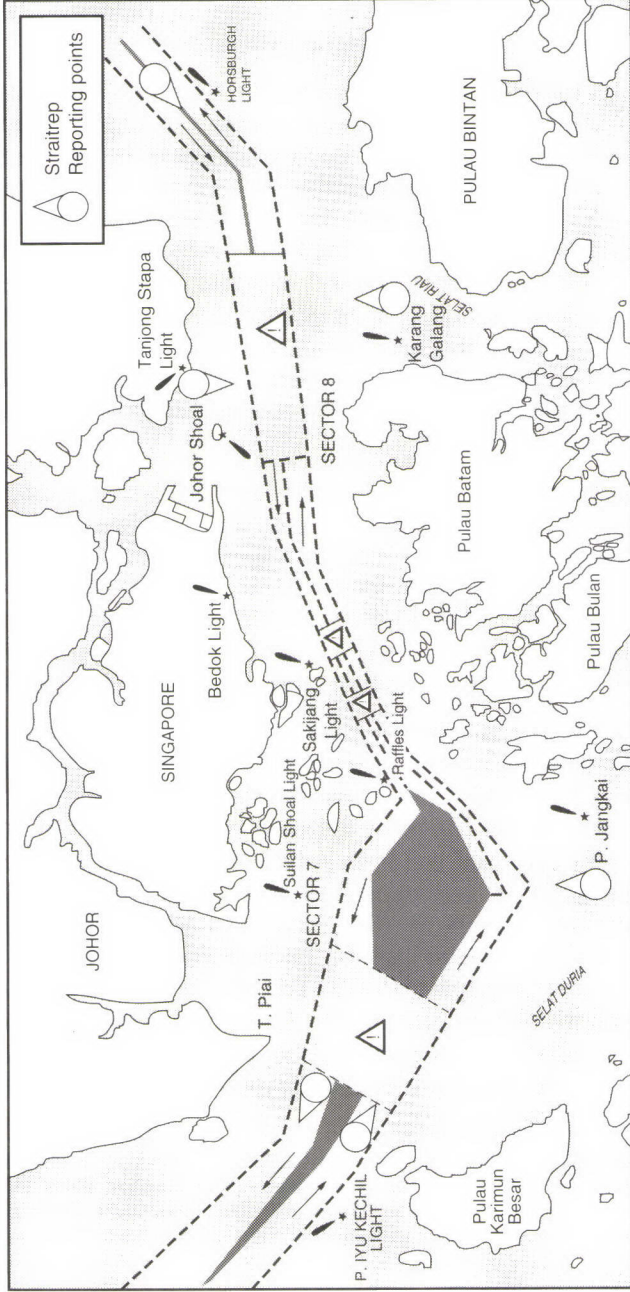
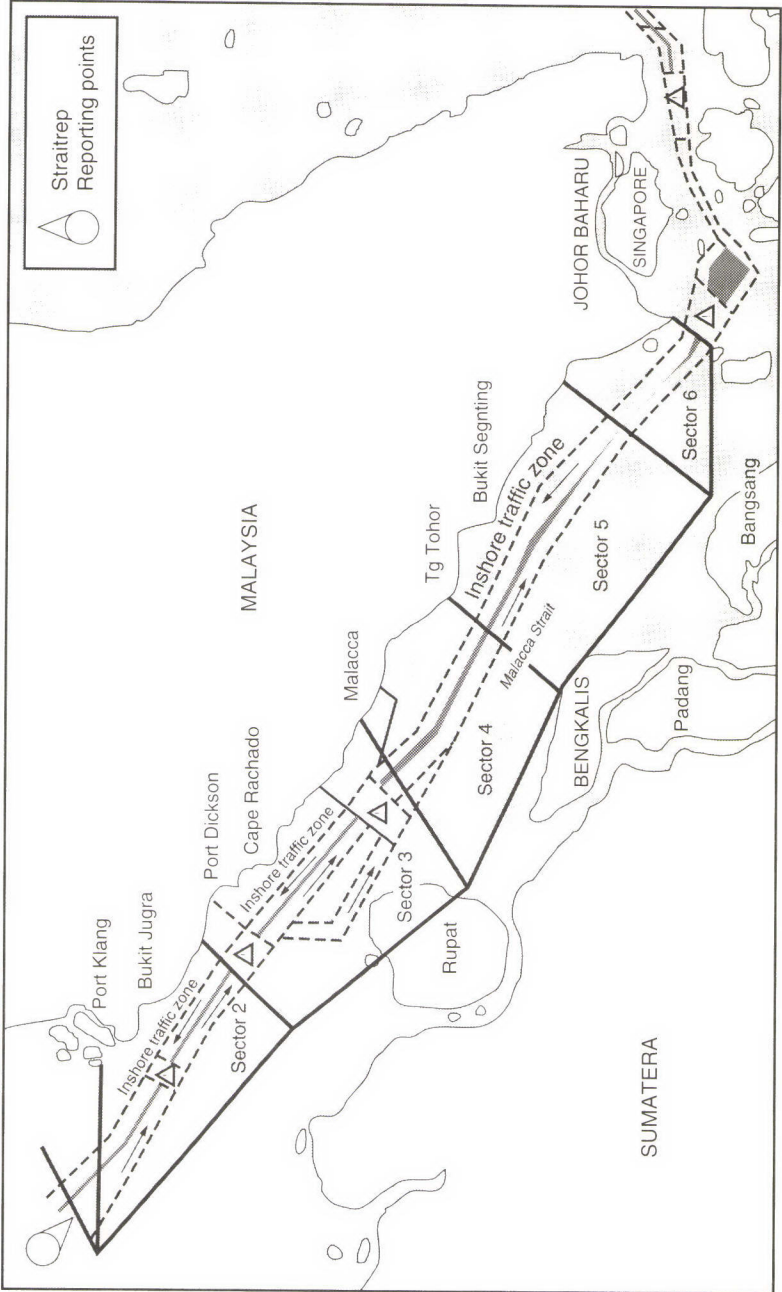


Figure 9.2: Proposed Vessel Services and Ship Reporting System in the Malacca and Singapore Straits



reporting system in the Malacca and Singapore straits is found in Figure 9.2.

Singapore has been very active in both unilateral and regional cooperative programmes and activities in ensuring the safety of navigation in both the Singapore and Malacca straits. Such programmes will not only guarantee the safety of shipping, they will also ensure the smoother flow of maritime traffic and reduce the chances of maritime pollution caused by marine accidents. The success of Singapore's navigational safety programme would, however, not have been possible without the close cooperation of the maritime authorities of Malaysia and Indonesia and the international shipping community.

Anti-Sea-Robbery Measures

There was a time when merchant ships transiting the Singapore Strait and Philip Channel were vulnerable to sea robbers. However, the Singapore authorities have been successful in the efforts they have undertaken, both unilaterally and in cooperation with the Indonesian authorities, to end this menace to shipping.

- *Unilateral measures taken by Singapore's law enforcement agencies against sea robberies.* There are several agencies in Singapore responsible for keeping Singapore's territorial waters safe from sea robberies. They include the Maritime and Port Authority (MPA) and the Singapore Police Coast Guard (PCG) as well as the Republic of Singapore Navy (RSN). The PCG and RSN conduct regular 24-hour patrols of Singapore's territorial waters and the Singapore Strait. The PCG is responsible for all maritime enforcement tasks in the Singapore Strait while the RSN assumes a supporting role to the PCG.

In the Singapore Strait, the PCG has taken on the duties of maritime law enforcement. The PCG was formed a few years ago, from an entity then known as the marine police. It has a variety of vessels that it uses to maintain 24-hour surveillance over different parts of Singapore's territorial waters.

The RSN deploys one ship in the Singapore Strait throughout the day to conduct patrols. These patrols are meant to support PCG vessels in their maritime law enforcement duties in the

Singapore Strait. This is because there may be situations where the PCG may need the assistance of more or larger ships to help stop and apprehend vessels suspected of conducting illegal activities such as smuggling or sea robbery.

The PCG and RSN ships are assisted in their maritime enforcement tasks by the VTIS, which is under the authority and control of the MPA. As was mentioned earlier, this comprehensive surveillance system is able to monitor the movement of all shipping in the Singapore Strait. If the operations centre in MPA notices the movement of any small suspicious vessels, it will provide warnings to the merchant vessels and the PCG and RSN ships at sea.

The MPA includes in its regular Notices to Mariners warnings on the dangers of sea robberies and piracy in the strait and provides advice on some precautionary measures. For example, they advise ships to brighten up their quarter-deck and have water jets on stand-by ready to spray sea robbers who may attempt to climb aboard the merchant ships.

- *Cooperation with Indonesia - the Indo-Sin coordinated patrols.* While Singapore has made considerable efforts to curb the incidence of sea robberies, by themselves these efforts may not be effective enough. This is because sea robbery is a transnational problem that respects no international boundaries. Successful action against sea robberies requires the close cooperation of the littoral states. With this in mind, Singapore and Indonesia signed an agreement in July 1992 to coordinate patrols between their respective navies and police coast guards in the Singapore Strait. Their objective was to prevent and suppress sea robberies in the Singapore Strait and Philip Channel.

Under the agreement, vessels of each country's navy or police coast guard are responsible for their respective territorial waters within the area of operations. The patrolling vessels remain in constant communication with the operations centres of the two countries. Because of this constant communication and coordination and a 'hot pursuit' agreement, sea robbers have found it difficult to prey on slow-moving merchant ships and then escape into the territorial waters of either Indonesia

or Singapore. The sea robbers can no longer find sanctuary by crossing territorial boundaries.

The cooperative efforts of Indonesia and Singapore have been successful in deterring and suppressing sea robberies within the area of operations. In the seven months before the commencement of the coordinated patrols, there were 33 reported cases of robberies. Since July 1992, the area has been virtually free of any such sea robberies.

Pollution Control

With an ever-increasing number of ships using both the Malacca and Singapore straits, there has been growing apprehension that the chances of marine accidents occurring and causing widespread pollution will also increase. There is also the possibility that ships will illegally discharge sludge and waste, which pollute the waters and destroy the environment of the littoral states.

- *Regional cooperation.* In the area of regional cooperation, Singapore has been an active participant in the several regional initiatives aimed at preventing and dealing with pollution.

Singapore, Indonesia and Malaysia maintain resources to deal with oil pollution in both straits. Major oil companies have also set up the East Asia Response Limited (EARL), which has bases equipped with oil-spill-combating equipment in Singapore and Port Dickson. In addition, the Petroleum Association of Japan maintains a stockpile of anti-oil-pollution equipment in Singapore and Port Klang.

Singapore, Indonesia and Malaysia jointly maintain and manage a revolving fund donated by Japan. The fund was established to provide in advance the funds needed to contain and clean up oil pollution from ships. These advances are repaid when compensation is received.

As was mentioned earlier, Singapore works closely with Malaysia and Indonesia to improve navigational safety in both the Singapore and Malacca straits.

National-level pollution control programmes. Singapore has undertaken many initiatives with regard to pollution control. Domestic legislation has been passed, contingency plans developed, equipment stockpiles (both public and private) have been established. As was mentioned above, proper traffic-management and collision-avoidance measures have also been successfully implemented.

Singapore has enacted a number of laws that make pollution illegal and punishable. The following acts are considered as acts of pollution from ships and are punishable by law: the disposal or discharge of refuse, garbage, waste matter, trade effluent or plastics; the discharge of oil and oily mixtures; and the discharge of noxious liquid substances.

The provisions of the acts are enforced by the Maritime and Port Authority of Singapore, with the assistance of the Republic of Singapore Navy, the Police Coast Guard, the Republic of Singapore Air Force and the Civil Aviation Authority of Singapore.

The acts, however, oblige Singapore to establish reception facilities where ships can discharge their sludge, oil and other waste residues. Singapore has the right to collect from parties found guilty of causing oil pollution the cost of clean-up operations, compensation for damages caused and the penalties imposed.

Singapore has an Oil Spill Response Contingency Plan that is part of the ASEAN Oil Spill Response Action Plan (OSRAP).² In the event of an oil spill, the MPA will activate this contingency plan and oversee and coordinate the mobilisation and deployment of the manpower and resources of the Port of Singapore Authority, private companies, EARL and other national agencies.

² See also Lui Tuck Yew, 'Alternative Perspectives from Singapore' in Sam Bateman and Stephen Bates (eds), *The Seas Unite: Maritime Cooperation in the Asia Pacific Region* (Strategic and Defence Studies Centre, Australian National University, Canberra, 1996), p.43 and 'Regional Efforts in Handling Marine Emergencies', p.110.

Conclusion

Singapore's maritime interests are its sovereignty, territorial integrity and jurisdiction over its territorial waters, the protection of its coastal and marine environment, and the freedom of navigation and safe and unimpeded access to searoutes. While Singapore could undertake a number of measures to manage its maritime interests, it is only through close cooperation with its neighbours, Indonesia and Malaysia, the international shipping community and international organisations that such measures will enjoy a higher degree of success. This bodes well for greater cooperative efforts in similar and even new areas of shared maritime interests.

CHAPTER 10

THAILAND

Chart Navavichit

Maritime Interests

Thailand is dependent on the sea for the import and export of 95 per cent of the volume of its manufactured goods, agricultural products and raw materials. Vital imports include oil and gas, of which 60 per cent comes from the Middle East and 15 per cent from neighbouring countries, while some ninety gas platforms in the Gulf of Thailand provide nearly all the gas produced locally. The sea also provides important fishing grounds for more than 30,000 fishing boats, whose catches rank among the world's top ten and provide related industries with a vital raw material. Furthermore, the sea plays an increasing role in tourism, which is currently Thailand's top-earning industry.

Maritime Problems

Growth in the importance, and increased use, of the sea have brought many problems for the predominantly land-minded officials. Overlapping exclusive economic zone (EEZ) issues with Myanmar, Malaysia, Cambodia and Vietnam have not been completely solved. Rapid industrialisation has seen an increase in congestion, particularly in the vicinity of Bangkok and other deep-sea ports along the east coast, to the point where collisions and oil spill accidents have become serious threats. A major concern is the risk of accidents involving tankers, which have increased both in size and number. The fact that more liquefied natural gas (LNG) tankers and very large crude carriers (VLCC) now pass through the Gulf of Thailand on a regular basis has been a source of deep concern for the Royal Thai Navy (RTN), which has been given the responsibility of combating oil spills at sea. But up to now the government has not allocated any money in the budget to equip the RTN for this task. Another serious concern stems from the fact that ships under the Thai flag carry only 10 per cent of the country's imports and exports, thereby placing the country in a

80 *Regional Maritime Management and Security*

potentially difficult economic situation, should safety of navigation not prevail.

The inability of the Thai government to control the number of fishing boats - a result of outdated laws requiring only vessels of 18 metres in length and above to be registered - has caused overfishing and threatens efforts to conserve fish stock in Thai waters. Piracy, robberies at sea, the smuggling of illegal goods and immigrants, and drug trafficking and environmental damage remain challenging problems. Natural disasters caused by a few typhoons now regularly cut the country in half, leaving the southern part devastated by strong winds and floods. At present, only the armed forces, and in particular the navy, are organised and equipped to provide effective relief.

There are far too many government agencies and authorities charged by various laws with carrying out the same duties in overlapping areas of responsibility. However, many laws are outdated and have not been extended to cover the EEZ in anticipation of the problems that might occur. The RTN, which is the only agency with both the authority and capability to cover all areas of responsibility, is empowered by some twenty-nine laws to carry out almost the full spectrum of law enforcement functions. This situation has reduced the already constrained fiscal and manpower resources available for traditional naval roles, which, in peacetime, appear to take a back seat to the RTN's law enforcement duties. The steady decline in budget levels has now forced the RTN to make a serious effort to determine what truly constitutes its core and non-core business.

Together, the leading agencies such as the RTN, the marine police, the Harbour Department and the Customs and the Fishery department have more than 400 patrol vessels either in service or planned for acquisition. However, law enforcement at sea is far from effective and the high number of vessels is actually an indication of a lack of coordination and cooperation.

Measures to Improve Ocean/Marine Management

After years of campaigning for the adoption by Thailand of a clear set of policies and strategies on ocean/marine management, the RTN was finally rewarded with a cabinet decision on this issue on 11 May 1993. Under these policies Thailand is committed to:

- Abiding by international laws governing the use, the exploitation and the sharing of natural resources from the sea with neighbouring countries. Peaceful negotiation shall be the means for resolving conflicts. In this respect Thailand has accelerated negotiations on overlapping EEZ issues with its neighbours with great success - the latest agreement was with Vietnam in 1997. In areas where there is still some question concerning sovereignty, Thailand and Malaysia have successfully negotiated a joint development agreement, which now serves as a model for discussions with other neighbours.
- Promoting and fully supporting an effective seaborne transportation system that has sufficient supporting infrastructure to enable Thai goods and raw materials to compete in international markets. A national shipping line will be established and laws are being amended to lure back Thai-owned ships that are under other national flags. Incentives are being offered to shipping companies and dockyards and tax exemption is also being sought for the hiring of crews.
- promoting coastal and deep-sea fishing while paying great attention to the conservation of fish stocks. The number of fishing vessels will be controlled to ensure that annual yields remain constant. All necessary measures have been taken to conserve fish stocks in Thai waters. The government is giving its full support to legal fishing in local and international waters as well as to joint fishing operations with other countries.

CHAPTER 11

VIETNAM

Pham Hao

Maritime Jurisdiction

Legislation

In Vietnam, certain provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) have been included in national maritime regulations and applied in marine affairs. Since 1977, Vietnam has issued a number of laws, rules and regulations concerning its maritime zones and the activities therein. Among these are:

- Statement of 12 May 1977 by the Government of the Socialist Republic of Vietnam on the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of Vietnam;
- Decree No. 30/CP of 29 January 1980 of the Government Council of the Socialist Republic of Vietnam on regulations for foreign ships operating in Vietnam's maritime zones;
- Declaration of the Government of the Socialist Republic of Vietnam on the territorial sea baseline, 12 November 1982;
- Ordinance on the conservation and management of Vietnam's maritime resources, 25 April 1989;
- Decree No. 437/HDBT of 22 November 1990 of the Council of Ministers of the Socialist Republic of Vietnam on the regulations governing fishing operations by foreigners and foreign fishing vessels in Vietnam's maritime zones;
- Maritime Code of 30 June 1990;
- Decree No. 242/HDBT of 5 August 1991 of the Council of Ministers of the Socialist Republic of Vietnam on the regulations governing foreign parties and foreign ships and

other equipment conducting scientific research in Vietnam's maritime zones;

- Petroleum Law of 6 July 1993; and
- Environmental Protection Law of 1994.

Vietnam's maritime legislation is still far from sufficient and awaits further improvement, as many of its rules and regulations were drawn up before the conclusion of the 1982 UNCLOS and its ratification by Vietnam.

Enforcement

Responsibility for the monitoring, surveillance and enforcement of these regulations is divided among various institutions. The task of maritime surveillance is shared by military and civilian authorities. The military, the navy and the border guard have responsibility for the suppression of illegal activities at sea, such as illegal fishing and illicit drug trafficking. The navy is responsible for the prevention and suppression of piracy. The 'paramilitary' also plays a role in monitoring and surveillance through the enforcement by customs officials of laws against smuggling at sea and in ports.

The Ministry of Fisheries is responsible for the licensing of vessels and the monitoring of all fishery-related activities. However, in those areas where some research support is required, for example in determining the total allowable catch or the effect of chemical pollution or other activities on living resources, the Ministry of Fisheries usually consults other national authorities, whose responsibility it is to conduct research into the effects of pollution, chemicals and other activities on marine resources.

The Ministry of Transport and Communications is responsible for providing a support system for navigation by maintaining lighthouses and lighted buoys in Vietnamese territorial waters.

Vietnam's National Maritime Bureau and the Port Authority have set up radio systems to help guide ships to pilot stations. Port officials have the responsibility of ensuring that vessels entering Vietnamese ports observe national and international maritime regulations. The methods of monitoring and surveillance that they

employ include the physical inspection of vessels by civilians; sea and air patrols by the military; and harbour sightings by the border guard.

Maritime Cooperation

Article 128 of the 1982 UNCLOS provides that:

(s)tates bordering on an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organization:

- (a) to co-ordinate the management, conservation, exploration and exploitation of the living resources of the sea;
- (b) to co-ordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;
- (c) to co-ordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;
- (d) to invite, as appropriate, other interested States or international organizations to co-operate with them in furtherance of the provisions of this article.

The South China Sea is a semi-enclosed sea. It contains numerous jurisdictional problems that are potential sources of conflict. There are a number of disputes, either over the ownership of many of the islands or over sea boundary delimitations between states with facing or adjacent coasts. The South China Sea is also one of the world's most strategic waterways, being extensively used for navigation and shipping. *Such a situation requires cooperation among the states concerned.*

Conflict Management

Since 1991, Vietnam has actively participated in the Workshops on Managing Potential Conflicts in the South China Sea

86 *Regional Maritime Management and Security*

and their Technical Working Groups, contributing constructively to the discussions as well as to the formulation of a number of concrete cooperative projects. The Vietnamese participants have been involved in preparing the draft project for biodiversity studies and have assumed responsibility for coordinating the implementation of this project.

At a bilateral level, Vietnam and the Philippines agreed on 7 November 1995 on the basic principles for a code of conduct in the contested area. In particular they agreed that:

- they will settle disputes relating to the Spratlys through peaceful negotiations in the spirit of friendship, equality, mutual understanding and respect;
- while endeavouring to promote negotiations for a fundamental and long-term solution to the Spratlys dispute, they will exercise self-restraint, refrain from using force or threat of force, and desist from any act that would affect the friendship between the two countries and the stability of the region; and
- they will solve their disputes on the basis of respect for international law, including the 1982 UNCLOS.

Sea Boundary Delimitation

In the 1977 statement on maritime zones, Vietnam expressed its willingness to negotiate with the countries concerned a solution to problems relating to overlapping maritime areas on the basis of mutual respect for the independence and sovereignty of the countries involved and in conformity with international law and practice. So far Vietnam has embarked on the negotiation of a number of bilateral agreements on maritime issues with its immediate neighbours - Cambodia, Indonesia, Malaysia and Thailand. As a result of these negotiations, Vietnam has signed agreements with both Cambodia and Malaysia.

On 7 July 1982, Vietnam and Cambodia concluded the Agreement on Historic Waters between the Socialist Republic of Vietnam and the People's Republic of Kampuchea. Article 3 provided that, pending agreement on the delimitation of the sea boundary, both

sides would conduct joint patrols and surveillance operations, and that the exploration and exploitation of natural resources would be agreed upon later.

On 5 June 1997, Malaysia and Vietnam signed the Memorandum of Understanding (MOU) on the Exploration and Exploitation of Petroleum in a Defined Area of the Continental Shelf Involving the Two Countries, which is very favourable to ensuring long-term joint efforts in the development of oil and gas in the overlapping area in question. According to the MOU, pending the final settlement both sides have agreed to enter into an interim arrangement for the exploitation of petroleum for a period of 40 years. This MOU came into force following an exchange of Diplomatic Notes on 4 June 1993. In a speech marking the occasion, H.E. Mr Kamil Jaafar, Secretary General of the Foreign Ministry of Malaysia, emphasised that:

the cooperative venture in the overlapping area reflects the desire of our two countries to cooperate wherever possible and avoid conflicts ... this MOU is a testimony of our political will to do so. We have succeeded in turning potentially contentious issues into an area of cooperation.

Marine Resources Exploitation and Conservation

In the past few years, unfettered access to fishery resources, combined with an increase in fishing activities and the absence of effective measures of conservation and management, have led to biological overfishing in some areas of the South China Sea. These problems should be settled in a reasonable manner and there is an urgent need for some form of cooperation between the countries concerned, both to ensure a fair distribution of the living resources and to carry out the necessary conservation measures.

In April 1989 the State Council of Vietnam adopted the Ordinance on the Conservation and Development of Aquatic Resources, covering all living resources of economic and scientific value found in the inland waters, internal waters, territorial sea, contiguous zone, exclusive economic zone and continental shelf of Vietnam. Under the ordinance, all activities harmful to these resources and their living environment are strictly prohibited and foreign

organisations and individuals are encouraged to invest in the exploitation, conservation and development of aquatic resources on the basis of the Law on Foreign Investment in Vietnam. Foreign vessels passing through or operating in Vietnam's maritime zones are also subject to the provisions of this ordinance concerning the conservation of marine resources and their living environment.

The recent practice of granting fishing rights to foreign companies on the basis of a licensing fee in Vietnam has been found to be financially disadvantageous to Vietnam because of, among other things, Vietnam's poor coastal monitoring and management.

The foremost constraint is illegal fishing by others in Vietnamese waters. The destructive methods of fishing employed by these poachers are causing damage to Vietnam's fisheries. While it is absolutely essential that Vietnam develop its capacity to control such illegal activities, it believes that dialogue and effective coordination between the regional governments concerned will be more helpful.

There have also been some developments in the field of joint assessment and management of marine resources. Vietnam and Thailand have agreed to conduct a joint survey in the waters above the overlapping continental shelf in the Gulf of Thailand between the two countries. The first meeting of the Vietnamese-Thai Working Group was held in Hanoi in 1996 and both sides agreed that the second meeting, to be held in Bangkok in July 1997, would finalise the plan so that the joint survey could be conducted by the year's end.

Maritime Safety

The implementation of exclusive economic zones has converted almost all of the sea area in the South China Sea into the jurisdiction of its littoral states. This situation has an effect on navigation, shipping and communications, because the regime of navigation, to some extent, depends on the legal status of the waterways.

The increasing attention being given by regional states to economic development and seaborne trade will necessitate greater cooperation to enhance navigational safety. Rationalised, integrated management recognises the presence of conflicting interests and the need to find ways and means of solving them. One solution would be

to ensure the orderly flow of maritime traffic and to facilitate the smooth operation of maritime activities by enhancing navigational safety and the protection given to navigational aids and facilities.

With the growth of seaborne trade, there has been an increase in the size of fleets and in competition. The amount of cargo being carried by vessels has increased by over 50 per cent, posing hazards of varying degrees to maritime safety and the marine environment. The attempt by many shipowners to maximise profits at the expense of safety requirements has resulted in serious disasters. There is now grave concern for the safety of life and property at sea and a need for a maritime safety strategy to be formulated and adopted at national, sub-regional, regional and global levels.

Vietnam lacks both the expertise in integrated marine planning and policy making and the technological and human expertise for modern and efficient monitoring and surveillance systems. Among the reasons for this are the high cost of surveillance equipment; poor communications systems; the lack of cooperation among bordering states due to conflicts of interest; and the lack of cooperation between the paramilitary and the military and the civilian administrators involved in navigation monitoring and the inspection of foreign vessels.

Law and Order at Sea

Since 1996 there have been three meetings of the Vietnamese-Thai Joint Committee on Order at Sea and Fisheries. The committee provides a basis for cooperation between both the two countries aimed at establishing law and order at sea. There has been some progress on preparations for the establishment of a joint patrol and a contact channel between the Royal Thai Navy and the Vietnamese Defence Force.

- *The joint patrol.* Both sides have agreed that the mission of the joint patrol should be to regulate fishery activities in the patrol area - the areas of superjacent waters above the overlapping continental shelf claimed by both countries; protect and preserve the marine environment; repress piracy in accordance with the 1982 UNCLOS; suppress narcotic and drug smuggling; and conduct search and rescue (SAR) operations at

90 *Regional Maritime Management and Security*

sea. It is hoped that this Joint Patrol will start operating by the end of 1997.

- *Contact channels.* Both sides have agreed to establish contact channels between the Vietnamese Navy and the Royal Thai Navy at headquarters, regional and operational levels.
- *Naval cooperation.* In September and November 1996, there were exchanges of visits between the Royal Thai Navy and the Vietnamese Defence Force. Both sides agreed that these visits should be continued as they contributed to the strengthening of relations between them.

Search and Rescue

On 20 February 1997 Vietnam decided to accede to the ASEAN Agreement for the Facilitation of the Search for Ships in Distress and the Rescue of Survivors of Ship Accidents, which had been signed in Kuala Lumpur on 15 May 1975 by the governments of Indonesia, Malaysia, the Philippines, Singapore and Thailand, and the ASEAN Agreement for the Facilitation of Search for Aircraft in Distress and the Rescue of Survivors of Aircraft Accidents, which had been signed in Singapore on 14 April 1972 by the same five countries. Following its accession Vietnam set up the Centre for Maritime SAR Activities (VMRCC).

Marine Scientific Research

Vietnam and the Philippines have made considerable progress in the field of marine scientific research. At their Fourth Annual Bilateral Consultations in Hanoi on 7 November 1995, both sides agreed to promote suitable forms of bilateral and multilateral cooperation and to designate their respective experts to discuss concrete forms of cooperation in marine scientific research. The first Vietnam-Republic of the Philippines Joint Oceanographic and Marine Scientific Research in the South China Sea was conducted in April and May of 1996 (JOMSRE-SCS 96), and a conference was held in Hanoi on 22-23 April 1997 to evaluate the results of JOMSRE-SCS 96. Both sides have agreed to conduct the second JOMSRE-SCS in 1998.

Protection and Preservation of Marine Environment

There is also an urgent need for regional cooperation among the South China Sea littoral states to protect the marine environment. Because environmental problems transcend national boundaries, cooperation in this area is highly desirable. There are many seas, gulfs and straits, and the coastal states in the region have rushed to develop the oil and gas reserves on their continental shelves. Any solution to these problems will require the improvement of existing laws and regulations, and a recognition of the obligation of the countries concerned to cooperate with each other.

In Vietnam, environmental protection and sustainable development have become more complex and their management requires appropriate policies, strategies, legislation and education, and an awareness of the problem on the part of the general population. In recognition of this, Vietnam actively participated in the 1992 Rio Conference and adopted its Environmental Protection Law in 1994.

Environmental Legislation

Environmental legislation in Vietnam has developed on a gradual scale, along with increasing social awareness of the problems affecting the environment. In the past decade, laws and regulations have been enacted to conserve marine resources, the living environment and nature, in relation to matters such as health and sanitation, and working conditions. However, it was only in 1994 that legislation was enacted that dealt directly with environmental issues. The Environmental Protection Law (EPL) was approved by the IX Session of the National Assembly on 27 December 1993.

As a state party to a number of international conventions affecting maritime safety, such as the International Convention for the Prevention of Pollution from Ships, 1973, and its Protocol of 1978 (MARPOL 73/78), the International Convention for the Safety of Life at Sea (SOLAS 74), and UNCLOS 82, Vietnam has incorporated in its EPL the principles contained in those documents and the 1992 Rio Declaration. The EPL consists of seven chapters and is preceded by a preamble. Chapter I stipulates the responsibilities and obligations of the state and people to protect the environment and to contribute to the protection of the regional and global environment. Chapter IV

92 *Regional Maritime Management and Security*

provides that the Ministry of Science, Technology and the Environment (MOSTE) is responsible for implementing the state management functions in the area of environmental protection. Other ministries, subject to their defined statutory mandates, are responsible for their corresponding tasks with regard to environmental protection. Chapter IV also defines activities and functions of the Environmental Monitoring System. Chapter V stipulates the obligations of the government to cooperate with the international community on the matter of global environmental protection.

Besides the EPL and the other national maritime legislation mentioned above, Vietnam has also promulgated a number of laws, ordinances and decrees: Decree on People's Health Protection, 1989; Law on the Protection and Development of Forests, 1991; Decree on Mineral Resources, 22 March 1992; Law on Land, 14 July 1993; and Labour Code, 23 June 1994.

National Programmes

During the last two decades, the Vietnamese government and people have carried out various activities for environmental rehabilitation and protection. Systematic and integrated studies on the environment in Vietnam started in 1981 with the establishment of the National Research Programme on Resources and Environment by the Council of Ministers. The programme, which brought together researchers from leading universities and research institutes throughout the country to work on 20 projects, was divided into two phases: Phase One (1981-85) and Phase Two (1986-90). On 12 June 1991, following the completion of Phase Two, the chairman of the Council of Ministers issued Decision No. 187-CT, which expanded the Implementation of the National Plan on Environment and Sustainable Development (National Action Plan). The plan focused on:

- establishing a management office on the environment;
- developing environmental policies and law;
- forming a network to collect data and manage environmental information;
- setting up an integrated plan for resource development;

- developing a strategy for sustainable development in all branches; and
- managing environmental risk.

Based on these directions, the National Scientific and Technology Programme for Environmental Protection (1991-95), one of the major national research programmes, was formulated by the State Committee for Science under Decision No. 246-CT of 8 August 1991 by the chairman of the Council of Ministers. The overall objective of the programme is to identify the resources and the environmental problems that constrain the sustainable development of Vietnam, and to propose scientific and technological solutions to these problems. Under the programme, 17 research projects were to be conducted by 30 leading universities and research institutes. These projects were of four types: environmental control and monitoring; environmental engineering; ecosystems management; and socio-economic problems of environmental protection.

In 1992, following the formulation of the National Action Plan, the Government of Vietnam set up the Ministry of Science, Technology and the Environment. In December 1995 it approved the National Programme on the Biodiversification of Vietnam. MOSTE is developing a new national programme to respond to oil spills and will submit the plan to the government for approval in the near future.

Another development in the field of marine environmental protection was the establishment of the Vietnamese Association for Marine Resources and Environmental Protection on 5 June 1989. The objectives of this independent organisation are:

- to raise the common awareness and knowledge of the general population with regard to marine environmental issues;
- to mobilise and coordinate the activities of all local organisations in research, the application of the results of research and the elaboration of rules and regulations concerning the issues; and
- to seek assistance from foreign organisations and individuals and from Vietnamese nationals living abroad to further the cause of conservation and the development of marine

resources and their living environment in Vietnam's maritime zones.

This association has been expanding its network throughout the country and has set up a Centre for Scientific Consultation which is willing to provide an information service on the marine environment to different organisations in Vietnam.

Coastal and Marine Environmental Management

Vietnam has a coastline over 3,260 kilometres long and an exclusive economic zone of almost one million square kilometres. Like other countries in the region, Vietnam also faces a number of resource and environmental issues within its coastal and marine zone, such as urban and industrial pollution, loss of biodiversity, overfishing, and wetlands destruction.

The government of Vietnam recognises the need to protect its rich coastal and marine resources, as is demonstrated in its 1992 National Report to the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil:

Vietnam is well aware of the fact that seas and oceans hold a special significance to the life on our planet, and it supports the fight against turning seas or oceans into dumping places for rubbish or waste as this will rapidly damage the marine ecosystems and natural resources, consequently creating direct impacts on human health. It is necessary to take integrated measures to manage the seas and oceans through strengthened international and regional cooperation and through concerted efforts, in order to mitigate marine pollution and conserve marine biodiversity.

Unfortunately there is as yet no clear overall national plan in Vietnam to manage coastal and marine environmental programmes within a framework of clearly identified priority problems and existing and upcoming programmes and projects.

The Prevention of Marine Pollution

Nowadays, the South China Sea has become one of the most active sites for oil and gas exploration and exploitation, and drilling

concession lots cover the Gulf of Tonkin and the Gulf of Thailand. Normal activities associated with the transport and production of oil generate significant amounts of oil pollution.

Oil spills occur for a number of reasons: increasing tanker traffic, lack of traffic control, inadequate safety measures on some tankers, and the flushing of tanker storage tanks with seawater. A certain degree of oil spillage also occurs during the ongoing exploitation and processing at oil drilling sites and coastal port facilities.

Approximately 200 million tonnes of oil per year travel through Vietnam's offshore waters *en route* from the Middle East to Japan and Korea. Exploration and exploitation activities associated with Vietnam's offshore oil and gas industry are increasing every year.

In Vietnam, 12 oil spills have been documented by the National Environment Agency since 1989. The most significant of these occurred in October 1994 when a Singaporean oil tanker rammed a pier at Cat Lai port in the Saigon River near Ho Chi Minh City, resulting in a spill of 1,700 tonnes of diesel oil. The affected area included the port and a 30,000 hectare area of paddy fields and fish and duck farms. The damages associated with the spill have been provisionally estimated at US\$40 million.

MOSTE is cooperating with the Canadian International Development Agency (CIDA) in developing a national contingency plan for oil spill response and has recently produced oil spill sensitivity maps for the entire coastline of the country.

At present, local governments and VIETSOVPETRO are responsible for mounting a response to any oil spill. However, these agencies are not familiar with the complicated task of oil spill mitigation, and they lack the experience and the equipment to deal with oil spills.

Rivers are the primary avenue for transport of pollutants into the coastal and marine zone. Untreated sewage, domestic solid waste, and industrial solid, liquid and hazardous waste are being dumped into Vietnam's rivers. They eventually flow into the sea, contaminating the marine and coastal environment. The most systematic and large-

scale Vietnamese study on pollution in river estuaries is 'Marine Pollution Caused by Riverine Input'.¹

Party to International Conventions

Vietnam is a state party to the following international conventions:

- the United Nations Convention on the Law of the Sea (UNCLOS 82);
- the International Convention for the Prevention of Pollution from Ships, 1973, and its Protocol of 1978 (MARPOL 73/78);
- the International Convention for the Safety of Life at Sea (SOLAS 74/78);
- the International Convention on Tonnage Measurement of Ships;
- the Convention on the International Regulation for Preventing Collision at Sea (COLREG 72);
- the International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW 78); and
- the Convention on the International Maritime Satellite Organisation (INMARSAT 76).

¹ This study is part of the National Programme of Marine Science and Technology, 1992-95.

PART TWO
REGIONAL ARRANGEMENTS
FOR COOPERATIVE
MARITIME MANAGEMENT

CHAPTER 12

SOUTHEAST ASIA: SEAPOL

Frances Lai

Background

The Southeast Asian Programme in Ocean Law, Policy and Management, better known as SEAPOL, is the child of the UN Convention on the Law of the Sea (UNCLOS) III. It was established with the major support of the International Development Research Centre (IDRC) of Canada in 1981 to better understand the impact of UNCLOS III on the countries in the region and to assist the Southeast Asian countries to be better prepared for the eventual adoption of the Law of the Sea and harmonisation of domestic and international laws. Various national studies were carried out by teams of experts from their respective countries.

At the time when SEAPOL was being established the peaceful use of the seas was perceived as one important way to maintain the peace and stability of post-Cold War Southeast Asia. Because of the diversities in the region, much emphasis was placed on the networking of experts and top officials. From its inception, SEAPOL has benefited from the friendship that had developed among some of the experts and officials during the ten years of UNCLOS negotiations. It has had the unique support of many key policy makers and architects in the area of the law of the sea. They include Ambassador Tommy Koh, the chairman of UNCLOS III, Dr Mochtar Kusuma-atmadja, the then foreign minister of Indonesia, Dr Arun Panupong, the then deputy foreign minister of Thailand, and Judge Florentino Feliciano, judge of the High Court of the Philippines. (We also have the honour of having quite a number of participants here as SEAPOL associates.) These persons are not only highly influential officials, they are also world-class experts in the law of the sea in their own right.

This SEAPOL network is perhaps one of the earliest examples of two-tier diplomacy in the region. By 1996, we had already built a network of more than four hundred associates, mostly in Southeast Asia but also around the world.

As mentioned above, SEAPOL is a child of UNCLOS III. The focus of its activities has been on the law of the sea and various issues related to the law of the sea, such as shipping and navigation, marine pollution, fishery, offshore hydrocarbon development, boundary making and boundary disputes. These activities are both diverse and comprehensive. Though SEAPOL may tackle specific issues, such as the harmonisation of domestic law with international law, fishery management in the Gulf of Thailand, and the South China Sea disputes, it believes that specific issues can best be resolved within a broader framework of understanding and trust. While it is important to resolve regional conflicts, SEAPOL has placed more emphasis on the positive side of regional cooperation and compliance.

New Challenges

Sixteen years have passed since SEAPOL's inception in 1981. New development and new non-binding instruments have evolved, such as the United Nations Conference on Environment and Development (UNCED)'s Agenda 21, the 1995 Straddling Stocks Convention and the various framework conventions of regional seas. The end of the Cold War has allowed a broader and more cooperative approach to ocean security and management, and numerous unilateral, bilateral and multilateral arrangements have been attempted. Some have been successful, while others have yet to prove their effectiveness. New programmes or national centres have also emerged. SEAPOL sees these developments as new challenges and new opportunities to promote better ocean management and closer regional cooperation in the region.

In September 1996, SEAPOL began a five-year programme in the promotion of ocean law, policy and management, funded by the Canadian International Development Agency (CIDA) for Asia Pacific Ocean Governance (APOG). The three basic themes of the programme are:

- increasing the ability of states to comply with international maritime obligations;
- improving the ability of states to manage the marine environment in the Gulf of Thailand; and

- strengthening the capability and capacity of institutions on marine affairs in the region, including SEAPOL itself.

Compliance with International Obligations

Through a series of workshops, SEAPOL aims to promote a better understanding of the growing number of global, regional and bilateral ocean-related arrangements, including international law, regional institutions, and conventions, regulations, and binding and non-binding agreements on ocean affairs. It will examine the relative impacts of these arrangements on the effective and equitable management of the ocean and coastal area in the Southeast Asian and Asia Pacific Economic Cooperation (APEC) forum regions. In addition to the law of the sea concerns, ocean governance, maritime security, and issues related to Agenda 21 of UNCED will also be addressed.

The first workshop will be held in December 1997 at Rayong, Thailand. It will be an overview of the degree and problems of compliance with international marine affairs obligations in the Southeast Asian and Asian Pacific region. It will offer a forum for the discussion of system compliance concepts between political science and security specialists on the one hand and international law experts on the other. Issues such as the precautionary principle and regime building are some of the current thinking and on-going debates which we would like to see on the agenda. Given the comparative and interdisciplinary nature of this framework of study, SEAPOL would like to extend its coverage from its present base in Southeast Asia to the APEC region.

Management of the Marine Environment of the Gulf of Thailand

When it comes to policy recommendations and implementation, it is evident that competing and often conflicting uses of the coastal and offshore ocean resources can only be managed through reliable scientific data. After years of looking at the basic legal framework, SEAPOL decided to take a lead in facilitating marine cooperative management in the complex environment of a semi-enclosed sea in Southeast Asia, the Gulf of Thailand. Consultants will be contracted to conduct specific studies relating to management issues and the results of these studies will then be deliberated and

102 *Regional Maritime Management and Security*

discussed among legal and policy experts, marine scientists and relevant officials of the four littoral states of the Gulf - Cambodia, Malaysia, Thailand and Vietnam. Based on the studies and discussions, it is hoped that the consultants and participants will be able to come up with realistic recommendations and plans of action that are not only consistent with new scientific evidence but also practicable within the specific economic and socio-political situations of each of the littoral states.

The First Gulf of Thailand Expert Meeting is scheduled to be held on 20-21 October 1997. Consultants have been identified and the following four studies commissioned:

- Framework for Cooperative Ocean Management: Institutional and Legal Concepts, Objectives and Relevant Models;
- Fishery Management Needs and Issues in the Gulf of Thailand;
- Physical Oceanography of the Gulf of Thailand: Implication for Ocean Management; and
- Chemical Oceanography: Implication for Ocean Management.

Another important task for this project is to identify key officials, policy experts and scientists in the relevant fields from the four littoral states. While the consultants can provide analysis and data, it is the expert participants from the littoral states who can make the best use of the studies and discussions and who can provide the most workable recommendations for action. It is hoped that through scientific analyses, discussions and the exchange of ideas, sufficient mutual understanding and political will should emerge to permit effective and equitable ocean and marine resource management in the Gulf of Thailand.

Institution- and Capacity-Building in Marine Affairs

One of the most exciting developments in Southeast Asia and the APEC region is the emergence of various kinds of programmes and institutions related to marine affairs. APEC itself has several committees on marine-related themes, such as transportation, marine conservation, fisheries, tourism, and energy. The CSCAP Maritime Cooperation Working Group is another relatively new institution

devoted to marine affairs. At the national level, the Maritime Institute of Malaysia (MIMA) is the envy of marine advocates in the region, with its direct channel to policy making and generous government funding. The Philippine Institute of Marine Affairs (PHILMA) and the Thailand Institute for Marine Affairs (TIMA) Development Foundation have also recently been established.

In view of these developments, SEAPOL is giving a high priority to assisting these programmes and centres and to coordinating regional activities among them. SEAPOL provides them with experts from the SEAPOL network and co-organises and co-sponsors with them joint projects on regional issues. Recently, SEAPOL organised three half-day symposia on land-based marine pollution in Kuala Lumpur, Singapore and Bangkok. A key speaker at the symposia, Professor David Van Der Zwaag, is one of the consultants that SEAPOL has commissioned to carry out a study for its Gulf of Thailand project. This was a great opportunity for him to present his views and to solicit local inputs from the three cities. In each city, SEAPOL relied on a marine programme or institution to host the event, thereby strengthening the capacity and cooperation of all the institutions involved in the process, including the SEAPOL secretariat itself. With an efficient secretariat, SEAPOL also offers to assist, as part of both APOG and non-APOG initiatives, any events or projects that promote marine cooperative management.

Another important aspect of institution building for SEAPOL is the conversion of itself into a broader network, based on Southeast Asia but extended to the entire APEC region. While SEAPOL may continue to receive funding from CIDA for specific projects, the sources of its future funding will be in the region and will most probably be more diversified. To ensure that this happens, especially in the case of non-APOG initiatives, SEAPOL is extending some of its programmes and regional cooperation to include the entire APEC area.

Information Exchange

Aside from the activities stated above, SEAPOL also tries to promote marine cooperative management through an active information strategy. As people who have done work in regional cooperation in Southeast Asia know from their own experience, it is not easy to get information on on-going activities. The problems are

104 *Regional Maritime Management and Security*

multiple. First there is the language problem, as not all documents and notices are available in different languages used in the region. Then there is the problem of privileged information. Finally, even if the information is not privileged, there is still the problem of dissemination. Some programmes do not have newsletters. And even those which do publish newsletters, often do so infrequently or at irregular intervals. In order to facilitate better coordination among programmes, SEAPOL has gone electronic.

While the SEAPOL newsletter is still available on a quarterly basis, the SEAPOL E-News is sent out at more frequent intervals.¹ News items are shorter, often in newsbrief format for easy reading. But, since SEAPOL has started the e-mail service only very recently, it has yet to compile an e-mail address list for wider dissemination. SEAPOL is also constructing a home page with possibly a bulletin board where users can post their own news and chat rooms where they can exchange ideas and opinions directly with one another.² In the meantime, SEAPOL welcomes requests by other groups working in the same field to inform its associates about their activities.

¹ The SEAPOL e-mail address is <seapsank@samsorn.stou.ac.th>.

² The SEAPOL home page address (URL) on the World Wide Web is <<http://www.seapol.net/HOMEPAGE.HTM>>.

CHAPTER 13

SOUTH PACIFIC

Grant Hewison

This chapter begins with a brief description of the South Pacific region. It then goes on to identify maritime cooperative efforts in the South Pacific while seeking to highlight those areas of cooperation that have been successful and those where problems have arisen. Finally, some overall observations are made and conclusions drawn that might be further pursued in the development of new ideas about cooperative management of the regional seas of the Asia Pacific region.

The South Pacific Region

The South Pacific Region comprises some 22 self-governing states scattered over 30 million square kilometres of ocean.¹ The exclusive economic zones (EEZs) of most Pacific island states are huge compared to their land areas with the exception of Papua New Guinea, Solomon Islands and Fiji. The immense responsibilities placed on very small island states to manage their EEZs, together with the challenges of controlling access by distant-water-fishing states to trans-boundary fish stocks and highly migratory species, have necessitated the creation of a climate of cooperation and regional initiative that is unmatched elsewhere.

Although the countries of the region may generally be placed into three ethnically distinct sub-regions, comprising Melanesia, Micronesia and Polynesia, there is, nonetheless, a strong sense of collective identity, particularly when the region is exposed to threats from outside. Regional solidarity is further enhanced by an approach

¹ American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna and Western Samoa.

to decision making based on consensus, which is often referred to as the 'Pacific way'.

The population of the region is currently about 6.4 million, with a growth of 2.0 per cent per annum. The countries of the Pacific are separated from each other by vast areas of ocean. Apart from Papua New Guinea, most Pacific island states suffer from their small size and remoteness, resulting in high transport costs and isolation. In addition, natural disasters such as cyclones add to these difficulties. The threat of global warming and consequent climate change and sea level rise also threaten these countries.

Fairbairn has characterised four categories of Pacific island states.² In the first are the relatively large countries of Papua New Guinea, Fiji, Solomon Islands, New Caledonia and Vanuatu. They make up 84 per cent of the region's population, possess significant agricultural lands, are economically diverse - forestry, agriculture, fisheries, tourism and minerals - and have large EEZs. In the second category are Western Samoa and Tonga. These countries have a reasonable resource base, small areas under agriculture, no minerals and restricted potential for tourism. The third category of countries are the resource-poor countries of the Cook Islands, Kiribati, Niue, Tokelau and Tuvalu. They generally lack the ability to exploit their comparatively large EEZs and have little land resources. In the fourth category are those countries whose particular circumstances have overcome otherwise meagre prospects. These include Nauru with its phosphate resources, Guam, the Northern Marianas and Palau - all of which are strategically placed and are the recipients of large grants from the United States, and American Samoa with its major fish processing and canning operations.

The South Pacific is also heavily assisted through overseas aid, with an estimated annual total of \$A1,637 million. In recent years, strong partnerships have been formed with Asia. Aid is now flowing at increasing rates from Japan, the People's Republic of China, South Korea and Taiwan.

² T.I.J. Fairbairn, 'Pacific Island Economies: Structure, Current Developments and Prospects' in N. Douglas and N. Douglas (eds), *Pacific Islands Yearbook*, 17th Edition (Fiji Times, Suva, 1994), pp.11-24.

Regional Cooperation

Regional cooperation has been an important element of regional politics in the South Pacific since the creation of the South Pacific Commission in 1947. Intergovernmental regional organisations have been established to provide support, advice and high levels of cooperation across political, economic, social and cultural spheres. Regional cooperation has been particularly successful in the areas of fisheries, shipping and the environment. Information exchange and technical training have also benefited from significant regional linkages.

Institutional Arrangements

There are six principal intergovernmental organisations: the South Pacific Forum, the Forum Fisheries Agency, the South Pacific Commission, the South Pacific Applied Geoscience Commission (SOPAC), the University of the South Pacific (USP), and the South Pacific Regional Environmental Programme.

There are also a significant number of other specialised intergovernmental organisations in the region, such as the Conference of Pacific Chiefs of Police, the Pacific Islands Tourism Development Council and the Regional Committee on Trade. In addition, non-governmental organisations, churches, and other informal groups play an important role in boosting regional cooperation.

The South Pacific Forum

The South Pacific Forum was established in 1971 by the independent self-governing countries of the Pacific. It includes Australia and New Zealand. The Forum meets annually, with a permanent secretariat based in Suva, Fiji. Its work programme includes: economic development; fellowship support; short-term advisory services; administration of the smaller island country fund; energy; telecommunications; maritime and aviation affairs; trade and investment; and international political matters of regional concern. There is an annual heads of government meeting of the Forum, where regional political issues of significance are debated. An opportunity for past-colonial powers and other developed nations to discuss regional matters is also provided through the post-Forum dialogue.

Forum Fisheries Agency (FFA)

Established in 1979, the FFA has its headquarters in Honiara, in Solomon Islands. It aims to maximise the financial benefits from the fisheries of the region. The FFA performs a wide range of functions, including the gathering of data, analysis, and the dissemination of information. It advises its member countries on scientific, technical, commercial, and legal aspects of fisheries management. The FFA is also responsible for assisting its members in registering the vessels of distant-water-fishing nations, monitoring their use of EEZs, negotiating regional access agreements, and working with other relevant international fisheries organisations. Membership of the FFA is restricted to states within the region and consequently excludes distant-water-fishing nations. This has led to some criticism that the FFA is too introspective in its orientation and does not operate as a 'Law of the Sea Article 64'-type fisheries organisation.

South Pacific Applied Geoscience Commission (SOPAC)

SOPAC was initially a United Nations project designed to assist South Pacific states by exploring their non-living resources, coordinating marine geological and geophysical studies, and obtaining baseline data to determine design criteria for coastal engineering and development. It has since become a permanent regional organisation. SOPAC also provides technical training. It has been involved in a range of offshore projects, including oil and mineral prospecting, resource surveys, as well as near-shore activities - the assessment of sand and aggregate resources for construction. Currently, SOPAC is promoting joint development agreements in an effort to overcome disputes over maritime boundaries. These agreements allow the joint exploration, exploitation and management of resources within the disputed boundary area without prejudice to the final outcome of the boundary's legal issues.

South Pacific Commission (SPC)

The South Pacific Commission was formed in 1947 by the six colonial powers of the region - Australia, France, New Zealand, the United Kingdom, and the United States - along with their non-self-governing territories in the South Pacific. In 1983, membership was

extended to all Pacific island states. The SPC's role is consultative and advisory. It provides technical advice, training, information, and other assistance across the economic, social, resource, environmental and cultural sectors, to governments of the region.

South Pacific Regional Environmental Programme (SPREP)

SPREP is the regional coordinating and technical organisation responsible for environmental matters across the Pacific region. It was established to give effect to the Action Plan for Managing the Natural Resources and Environment of the South Pacific, which was adopted in 1982. SPREP's major work programmes include climate change, biodiversity, protected areas and species, coastal management and pollution control.

University of the South Pacific (USP)

The USP was established in Suva, Fiji in 1969 and is a unique 'regional university'. It provides a wide range of marine-oriented programmes, mainly through the Institute of Marine Studies, the Ocean Resources Management Programme, the Institute of Marine Resources and the International Ocean Institute Operational Centre for the South Pacific.

The Pacific Forum Line

The Pacific Forum Line is a commercial venture. Due to the absence of any regional shipping operation, ten countries set up the Pacific Forum Line in 1977 to operate a commercial shipping service to meet specific regional needs. The venture is jointly owned by several Forum countries. Since 1985, the line has operated on three routes which maintain a profit while also running a fourth route, which, though not profitable, provides an essential service to more remote member countries.

The South Pacific Organisations Coordinating Committee (SPOCC)

SPOCC was set up in 1988 to study and make recommendations on the rationalisation and coordination of the

principal intergovernmental regional organisations. It is composed of the heads of the regional organisations and meets annually.

Treaty Arrangements

As well as the institutional arrangements that link the region and coordinate regional activities, there is also a framework of treaty arrangements that bind South Pacific states and provide a legal basis for regional cooperation.

Of greatest significance are: the Forum Fisheries Agency Convention; the Rarotonga Treaty; the SPREP Agreement and Convention; the US-Multilateral Fisheries Treaty; the Wellington Convention; the Niue Treaty; and the Nauru Agreement. While not a treaty, it is also worth mentioning here the Regional Register.

The Forum Fisheries Agency Convention

The FFA Convention establishes the Forum Fisheries Agency and sets the framework for regional cooperation matters relating to fishery resources. It also seeks to address the national responsibilities of fisheries management accorded to coastal states through the United Nations Convention on the Law of the Sea on a regional basis. All the states of the region have claimed maritime zones and through the FFA and the FFA Convention are undertaking collective measures to properly manage their marine environment and the fishery resources therein.

The Rarotonga Treaty

Nuclear testing has been a very significant issue for the countries of the region. Testing has been undertaken in the South Pacific by France, the United Kingdom and the United States. The French continued to test nuclear weapons in the region up until 1995.

The Treaty of Rarotonga establishes the South Pacific Nuclear Free Zone. Under the treaty, South Pacific island states have agreed not to manufacture, possess or have control over any nuclear explosive device, not to acquire any nuclear explosive device, and not to take action to encourage the manufacture or acquisition of any nuclear explosive device. In addition, countries in the South Pacific have

agreed under the treaty to take measures to safeguard nuclear materials used for peaceful nuclear activities and not to dump radioactive waste in the region.

The five nuclear powers have accepted the same obligations by way of Protocols to the Treaty of Rarotonga, and have also agreed not to test nuclear weapons in the region.

The SPREP Agreement and Convention

The Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, together with its related Protocols, is known as the SPREP Convention. The Convention is typical of other 'regional seas' conventions established in other parts of the world.

The objective of the convention is to protect the natural resources and environment of the region. The convention makes broad provisions for preventing, reducing and controlling pollution from vessels, land-based sources, seabed activities, atmospheric sources, the dumping and storage of toxic and hazardous wastes and the testing of nuclear devices, as well as damage caused by mining and coastal erosion. There is also provision for cooperative efforts to combat pollution in cases of emergency, a duty to develop and promote contingency plans, and an undertaking to notify other countries if they are likely to be affected by the pollution. General duties exist for countries to cooperate on the exchange of scientific and technological data as well as monitoring.

The US-Multilateral Fisheries Treaty

In 1987, the South Pacific states signed a unique multilateral or 'regional' fishing agreement with the United States (as opposed to individual bilateral agreements). Under the US-Multilateral Fisheries Treaty the United States recognises the Pacific island states have sovereign rights over fisheries resources in their EEZs and consequently pays for fishing licences for US-flagged vessels to operate in the region. The South Pacific island states, on the other hand, have the right to enforce the treaty under their legislation without penalty under the United States Fisherman's Protective Act or the threat of an export ban under the Magnuson Act.

112 *Regional Maritime Management and Security*

Provisions of the treaty include access by US fishers to the EEZs of South Pacific island states subject to certain regulatory conditions and control. For instance, US fishing vessels do not have access to the entire EEZs of the Pacific states, but only to the 'Limited Area' which excludes internal waters, territorial seas and archipelagic waters. The conditions of access include: procurement of a fishing license; permission to catch only tuna; use of only licensed purse-seiners, and the observation requirements of the Regional Register of Fishing Vessels.

It seems that similar multilateral agreements will soon be adopted by other distant-water-fishing nations. Japan and Taiwan are now engaged in negotiations with Pacific island states on multilateral treaties. South Korea, however, has not been so forthcoming and continues to seek individual bilateral treaties. This appears to have isolated South Korea and threatens to upset its long-term access to the fisheries of the region.

The Wellington Convention

The Wellington Convention, or Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, arose out of the Tarawa Declaration of July 1989. The convention encapsulated the regional response to the dramatic increase in the number of Japanese, Taiwanese and Korean gillnet fishers operating in the region in the late 1980s. The Wellington Convention bans driftnet fishing in the South Pacific and has stimulated the present United Nations moratorium on driftnet fishing on the high seas.

The Niue Treaty

The Niue Treaty encourages Pacific island states to formally cooperate and rely on each other for the control and enforcement of fisheries regulations within their EEZs. The capacity of South Pacific island states to enforce their laws has been greatly enhanced through developments under the treaty. These have led to the development of air and surface surveillance capacity in the region; the provision by Australia of Pacific patrol boats; and the establishment of a computer-based mapping system and the Regional Maritime Surveillance Communications Network.

The Nauru Agreement

The Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest was established in November 1991 as a sub-regional fisheries arrangement. The main objectives of the treaty are to establish minimum uniform terms and conditions of access by foreign fishing boats, and to standardise licensing procedures and cooperation in the fields of surveillance and enforcement.

The Regional Register

The Regional Register for Fishing Vessels is an example of another unique cooperative development from the region. Under the Regional Register, South Pacific island states will not license foreign tuna-fishing vessels unless they are in good standing on the Register.

All tuna-fishing boats in the region are required to register and once registered are first given good standing. The withdrawal of good standing may be initiated by any member nation should a vessel infringe against its fisheries laws and regulations. Once a vessel's good standing is withdrawn it may no longer be licensed to fish in the EEZs of member states. Through a tracking system, a vessel retains this negative status even if it is sold, renamed or re-flagged. Vessels may have their good standing reinstated, but only with the agreement of ten of the member countries.

Observations Arising from Regional Cooperation in the South Pacific

Although the South Pacific ocean does not fit neatly into any geographical or physical concept of a regional sea (or enclosed or semi-enclosed sea), cooperation among the states of the region based on their economic and technical needs, their common history and their pursuit of peaceful and sustainable use of the oceans, means that the South Pacific can be regarded as a useful example of successful regionalism.

One of the key elements of the South Pacific approach has been to clearly separate socio-economic and political issues. The

'Pacific way' of negotiating and making decisions only by consensus has also been invaluable in avoiding discord between the members of the region.

The enduring influence of colonial powers in the South Pacific has at times impeded regional progress on issues of political importance to the island states, such as the South Pacific Nuclear Free Zone. On the other hand, the strategic importance of the South Pacific has, particularly in the past, meant that these small states have been supported heavily through bilateral and multilateral aid programmes.

Because of their relative obscurity as individual states on the international scene, the South Pacific states have often taken a strategic 'regional approach' to common global concerns. This has been particularly evident in global climate change negotiations, but is also an approach utilised by Pacific island states in other forums, such as at meetings of the London Dumping Convention.

Some Concerns about South Pacific Regional Organisations

The countries of the region have benefited enormously from the operations of the regional organisations which have been significant in establishing the framework for a regional approach. Their work programmes cover a wide range of matters, including fisheries, non-living marine resources, environment, economics, social issues, transport and trade. There are, however, some concerns about the regional organisations.

Regional countries need to further coordinate the work and funding programmes of regional organisations to avoid duplication of work and overlapping responsibilities and to ensure that they meet the needs of their member countries. While the creation of the informal South Pacific Organisations Coordinating Committee to undertake this role has been welcomed, it needs to be given more formal authority. It seems that there is potential here for a 'regional oceans policy' or 'blueprint' that might pull together the marine sector programme objectives for individual countries and institutions in the region.

There is concern about the dominance of larger Pacific island countries over the smaller in determining the role of regional institutions and, indeed, the overall Pacific regional approach. To provide some balance and overcome the potential for inequity within

the regional institutional framework, it has been common practice to appoint as directors of regional organisations people from smaller island countries.

Concern has also been expressed over the differing memberships of the various South Pacific regional institutions and treaties. Not all states in the region belong to all of the bodies or all of the regional treaties. This has been the cause of some difficulties, including the potential for dividing regional responses, differing legal responsibilities and competition for donor funding.

There has also been a tendency for Pacific island states to renege on their financial contributions to the regional organisations. The tremendous reliance on aid agencies and past colonial powers for financial support has the potential to undermine the regional organisations or direct their work away from the immediate needs of the Pacific island states themselves.

The development of regional institutions to deal with a range of governance activities at the regional level has also to some extent meant that the smaller Pacific island states have not focused enough attention on their own national capacity building.

There is also concern that the political desire in the region to decentralise regional institutions by locating them in a number of countries across the region has proved to be very expensive and has undermined the potential for coordination and the individual performance of the regional organisations.

Finally, while all regional institutions offer training in the marine sector, again there is a need for better coordination, better follow-up and better identification of the training needs.

Conclusions

The South Pacific model of regional maritime cooperation is certainly worthy of considerable study by those seeking to develop maritime cooperation in the Asia Pacific region.

While there are certain aspects of South Pacific regionalism peculiar to the region, there is also much that will translate to other areas - both in terms of 'things to avoid' and 'things to emulate'.

116 *Regional Maritime Management and Security*

Particularly successful approaches taken in the South Pacific include:

- the clear separation of socio-economic matters from those that are highly politicised;
- the encouragement of informal regional linkages at both governmental and non-governmental levels;
- the establishment of formal regional organisations operating at a technical level that meet the needs of both the region and individual states;
- the development of regional international law;
- the development of collective regional policy (including research, monitoring and analysis) to meet the needs of the region rather than the particular needs of individual states;
- the role played by the Regional Register of Fishing Vessels; and
- the collective strategic regionalism demonstrated at the international level - as in the climate change negotiations - or at the region-bilateral level - as in multilateral fisheries agreements.

CHAPTER 14

SOUTH CHINA SEA

Ian Townsend-Gault

Introduction

In the world of marine affairs, the status quo in the South China Sea appears wholly inimical to the very idea of cooperative ocean management. The dispute concerning sovereignty over the Spratly and Paracel islands and adjacent ocean-space has led to a build-up of the naval and military forces of China/Taiwan, the Philippines, Malaysia and Vietnam, and there are signs that Indonesia is sufficiently perturbed by the apparent threat of the Natuna gas fields that it is taking precautionary measures.¹ Undertakings to protect national positions, licensees such as oil companies, and fishers, take the form of thinly veiled threats to other claimants. The language used is that of force, and the tone adopted shrill and uncompromising.²

It goes without saying that this state of affairs is incompatible with cooperation in any shape or form, much less the forms of collaboration that are required in a semi-enclosed marine area such as the South China Sea. Arguably, jurisdictional dispute does the greatest disservice not to peace and security in the region, but to the protection and preservation of the very objects of the confrontation: the sea, its environment, and its resources.

1 Whether or not there is an actual arms race in the area is at least debatable: see Clive Schofield and William Stormont 'An Arms Race in the South China Sea?' in Elisabeth Borgese, Norton Ginsburg and Joseph Morgan (eds), *Ocean Yearbook*, Vol. 12 (University of Chicago Press, Chicago, 1996), p. 286. However, the decision of the government of the Philippines to seek additional naval power following the stand-off with the People's Republic of China on Vanguard Bank in May 1997, if followed by other governments, could well put the region on the road to something like an 'arms race'.

2 Obviously, it is unwise to place much reliance on the perceptions of journalists as a class, since their primary concern is selling their product. However, the tone of the more serious articles in the *Asian Wall Street Journal* and the *Far East Economic Review* over the past few years testifies to the extent to which the more seasoned observers are alarmed by recent developments.

What Actually Is at Stake in the South China Sea?

There are two answers to this question. The first is comprised of the catalogue of living and non-living resources, and the environment that gives rise to and nurtures them. The second is less palpable, but nonetheless real for all that - national *amour propre*.

What Do We Know of the Resources of the South China Sea?

The short answer here is: less than we should, and certainly less than the littoral states need for adequate marine management. This difficulty is compounded by the continuing focus on the potential for commercial petroleum production from the continental shelf of the South China Sea, and especially in the Spratly area. The fact that this preoccupation has monopolised the debate has virtually precluded any serious discussion of other resource management issues, including those that, unlike petroleum, are known to exist, and thought to be at risk. Indeed, I have heard otherwise intelligent commentators dismiss such issues as essentially peripheral, mainly because they are not - apparently - in contention between the parties.

But this view is clearly mistaken on many grounds. First, the tens of millions of people who, living in the coastal zone of the littoral states, depend on the resources of the South China Sea for nutrition, livelihood, and cultural survival, if not survival pure and simple. The human, economic, social and therefore political consequences of a significant depletion of living resources, or a deterioration in the quality of the marine environment, are not difficult to conjecture, though they are probably impossible to quantify.

National *Amour Propre*

This is the factor that bedevils virtually all aspects of South China Sea discussions. When states make claims to maritime jurisdiction, they nearly always back up such positions in various ways that are wholly commonplace and totally accepted as part and parcel of the national strategy. Details of the claim are published, usually with maps. Oil and gas concessions can be let, though actual activities are rarely required of licence holders. Fishers are urged to treat a disputed area as one in which they have rights, and are often protected by patrol or naval vessels.

This is precisely what happened in the dispute between Canada and the United States in the Gulf of Maine. From the commencement of negotiations for boundary delineation in the 1960s, until the submission of the dispute to a Chamber of the International Court of Justice (ICJ) in 1982, the two states published revised claims (reflecting the labyrinthine twists and turns of judicial logic as the ICJ and other arbitral bodies invented and discarded new criteria for justifying whatever set of lines had been arrived at as case succeeded case) that were clearly posited upon radically different legal criteria.³ Each side demonstrated confidence in its position by granting oil and gas leases over it, and these concessions also overlapped.⁴ Fishing interests on both sides were encouraged to demonstrate their economic reliance on the fishery of George's Bank, thus enabling counsel on both sides to suggest to the Chamber that such dependence should be reflected in its decision, a suggestion that the Court rightly rejected. The casualty in this war of statistics was of course the fishery, which took years to recover from this irresponsible onslaught.

This scenario replicated and has in turn been replicated by others. The situation in the South China Sea is distinguished not only by the aggravating impact of territorial disputes (the Spratly and Paracel islands), but also the fact that blood has been spilled over them. Given regional tensions dating back to the Second Indochinese War, Sino-Vietnamese history (with heavy accretions of myth) dating rather further back, and Vietnam's former isolation from and opposition to its ASEAN and other neighbours with the sole exception

³ This is not really an exaggerated view. By the time the judicial process had began, Canada had evolved an equidistance line, while the US claim was based on the extent of the natural prolongation of the Canadian continental margin. This produced two sets of lines that were drawn from radically different and indeed opposing views, *but both were equally valid given the then state of the law*. The Court preferred the Canadian approach - equidistance - but modified the application of that concept in light of the dominance of the US coast in the Gulf.

⁴ The position of oil companies in such a situation is an interesting one. Clearly, a licence holder cannot enjoy title superior to that of the state, and so, if the state has no rights, the license is worthless. In some special cases, maritime boundary lines have been drawn around petroleum discoveries - such as the boundaries between Germany and Denmark and Germany and the Netherlands in the North Sea; there is at least one example in the Arabian Gulf also. But these were agreed anomalies; both the State Department and Canada's Ministry of External Affairs took the view that, once the boundary was fixed by the court, licenses granted by the other on what would then be the 'wrong' side of the boundary would be void, as indeed transpired.

of Laos, it is not surprising that the South China Sea dispute has assumed alarming and disproportionate levels.

This lack of proportion is everywhere apparent. The national positions are reinforced in every conceivable way: all maps of Vietnam published in or by that country, no matter how small and basic, always include an insert showing the Spratly and Paracel islands. The same is true of maps published in China. This applies to every national representation, on television, in-flight magazines of national airlines, tourist brochures. No opportunity is lost to push the official line with nationals (schoolchildren especially) and foreigners alike. This 'ups the ante' quite considerably, to the point where any deviation from the uncompromising stance is virtually impossible without connoting retreat if not surrender. While a vigorous espousal of national claims is not only expected but essential, the wisdom of doing so in such a manner that room for manoeuvre is eliminated is surely open to question. The problem, of course, is that international practice forces states to make claims in terms that seem to preclude cooperation. International law current from 1945 to 1975 suggested the wisdom of such a course, but the development of the law since then regards such attitudes as unfortunate examples of dysfunctional inflexibility.

It is, however, one thing for international law to take a new turn in its development, and quite another for governments (and their advisers and officials) to throw the gears into reverse so as to espouse or promote policies which had seemed either unnecessary or anathema a short time previously. We know that this is incompatible with the established modes of state behaviour. Even when the members of the international community affect to discover and/or adopt a new cause - greenhouse gas emission, sustainable development, anti-personnel mines - the mere fact that an international meeting is called and a document produced does not necessarily mean that policies and practices will change; or not, at any rate, in the shorter term. Where sensitive issues of jurisdiction are concerned, the grounds for optimism are reduced yet further. Even when the need for change is beyond question, political considerations can be relied upon to ensure that the pace will be slowed as much as possible, a point developed further below.

Cooperative Imperatives

Those working in the area of ocean management do not doubt that cooperation in various forms is likely to be an essential ingredient in performing their task. Put simply, where an area of ocean forms part of a marine ecosystem over which neighbouring states also enjoy rights, or where activities taking place in one zone of national jurisdiction impact on those taking place in another, a transnational relationship exists that may require some form of cooperation. The test in all cases is purely functional: given that a particular action is required, does its optimum execution depend on something other than unilateral action?

It can of course be argued that coordinated unilateralism short of interventionist cooperation can achieve the same results. In other words, the goals can be loosely expressed leaving each state to achieve them in its own way. It is worth examining this argument closely, for it is often used in an attempt to divert moves towards closer forms of joint activity. As such, it appears to counter functionally based arguments for integrated forms of approach. This alone renders it suspect, because it is an argument based on a politically acceptable form of continued disengagement, being used to defeat approaches based on science and utility.

This problem can be seen all too clearly in the South China Sea. It should come as no surprise to find countries which make, or suggest that they might make, extravagant claims to be resisting moves towards integrated approaches, for this would seem to counter the jurisdictional approach they either take, or may wish to take. If there is sole jurisdiction, why is there a need to cooperate? It is at this point that optimum management collides with politically derived approaches, and the chances are obviously good that the latter will prevail, for all the wrong reasons identified above.

It seems extraordinary to say so, but it appears that some individuals (and this approach can be found in all parts of the world) view the degradation of ocean space with something approaching complacency, so long as long-term political goals are not compromised. Of course, such individuals are usually in foreign ministries: they are not responsible for marine environmental quality, or fish stocks, or marine scientific research, so problems in these sectors are of little relevance to them or their minister. It is becoming

clear to many ocean managers that a sustained campaign of education will be required to displace this primitive thinking.

We in Canada can provide an excellent example of the consequences of allowing politics to obliterate science with respect to our east coast cod fishery, once one of the natural resource wonders of the world. We have proved that it is possible to fish what was thought to be an inexhaustible resource to the point of virtual extinction, and that the socio-economic consequences of doing so are long term and very severe. The natural world shows great resilience, fortunately, but also a decidedly unforgiving side when so disposed.

Similarly, other maritime regions - such as the Baltic - can demonstrate impressive levels of functionally derived willingness to cooperate. It might be argued that the Baltic and the South China Sea are different areas of water. This is true, but perhaps the differences relate more to the presence or absence of political will on the part of the littoral states rather than marked inherent differences in the nature of the water itself, or its resources. Are the challenges and problems so radically different that South China Sea states can really afford to ignore the lesson learned by other marine regions?

Cooperative Arrangements in Place

There is no shortage of maritime initiatives in the South China Sea area, many of which require (or imply the existence of) cooperation, but none applies to all of the South China Sea itself and/or involves all the littoral states. Thus, it appears to be true to say that cooperative work is going forward in ocean management, but, at the same time, the sort of cooperation that is required to implement functionally based management strategies of the South China Sea ecosystem is not really in evidence. This point is surely important: a casual or lay person's analysis might suggest that the position is rosier than it in fact is. Arguably, unless cooperation is geared to functional considerations (as opposed, say, to cooperation with ASEAN members only, or Commonwealth or francophone countries, to take random examples), it is not meeting the needs of the South China Sea.

The question of the utility, efficacy or impact of existing regional initiatives is also important. It can scarcely be doubted that a mere catalogue of 'what is happening' is of limited value, except as a

catalogue to guide those who might wish to make a substantive assessment of a given project. All too often, a review of the literature shows that those intimately involved with a given initiative have been more than happy to mount any platform to inform the world of their project. It is surely wrong to confuse these accounts with anything approaching an assessment, and yet, all too often commentators are apt to mistake what amounts to a presentation of objectives for a record of verifiable accomplishment.

With few exceptions, existing initiatives tend to take one of two forms. The first are projects which provide for cooperation between an international partner and ASEAN (Canada/ASEAN, Australia/ASEAN) in some area of sectoral activity which address the priorities of both - marine scientific research, fisheries, coastal zone management, marine environmental protection. The second are projects that involve a foreign partner and China, often over precisely the same areas. This duality of approach can be explained by reference to the ways in which international development agencies tend to view the Asia Pacific in operational terms: it has to be divided up, so 'Southeast Asia' makes one convenient department, and China another. This tendency will only gather momentum with the expansion of ASEAN to include all of geographical Southeast Asia, giving both foreign ministries and aid agencies two very neat areas of concentration.

Unfortunately, the South China Sea does not really fit into either neat category. Brunei, Cambodia and Vietnam aside, all littoral states can undertake 'marine-related' work without venturing into the South China Sea. However, Vietnam is now recognised as a major ocean player in Southeast Asia, and, as part of its approach to ocean regulation and management, it requires cooperation in varying degrees from its maritime neighbours. There is a tendency to see South China Sea issues more or less solely in terms of China-Vietnam tensions, but Vietnam would claim to be the maritime neighbour also of the Philippines, Brunei, Malaysia and Indonesia in different parts of that ocean area, as well as with Cambodia, Thailand and Malaysia in the Gulf of Thailand. Brunei, Cambodia and Vietnam alone of the South China Sea countries are zone-locked: maritime cooperation for them is obviously a major issue. The problems that may arise here can be illustrated with reference to fishery stock assessment for Vietnam - how is that to be undertaken against the background either of

jurisdictional uncertainty or the refusal of cooperation on the part of neighbouring states? As things stand, the former is more of an issue than the latter, but a future refusal to cooperate in such circumstances might be dictated by a fear of seeming to acquiesce in Vietnamese claims. Once again, therefore, politics intersects with functional requirements and appears to emerge victorious.

This does not have to be the result. It is perfectly possible either for states to conduct joint activities, or for one to countenance unilateral activities of the other in disputed waters, if both parties provide expressly that such operations are without prejudice to the positions of either as regards jurisdiction. This effectively insures each party from any claim made by the other as to the potential significance of any act or omission. Accordingly, at least from the viewpoint of international law, jurisdictional disputes are no bar to research and similar activities, nor indeed would they be with respect to most activities undertaken in furtherance of marine management.

Special note must be taken of the work going forward under the auspices of the United Nations. Participation in the East Asian Regional Seas Programme has now increased to include Vietnam, thus making some effort to break the (pre-Vietnam) ASEAN-East Asia stranglehold, thus giving the initiative more of a genuinely regional character than it enjoyed hitherto. Narrower in scope but hardly in effectiveness, the Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas is administered from Manila.⁵ This programme is tackling major marine pollution issues, focusing on land-based sources through integrated coastal management demonstration projects in Batangas Bay, Philippines, and Xiamen, China, as well as environmental issues arising in the Strait of Malacca. The initiative involves some eleven countries; like the United Nations Environment Programme (UNEP) Regional Seas Programme for the region, it is not specific to the South China Sea: neither initiative involves Taiwan.

⁵ This programme, established in 1994, is supported by the Global Environmental Facility, the United Nations Development Programme, and the International Maritime Organisation.

Functional Imperatives

Given that there is no shortage of projects, programmes and initiatives in the South China Sea region, the question arises: does it matter that none of this activity is directed solely at the South China Sea itself? Are there indeed any lacunae? It might be politically convenient for government officials to suggest that there is little or no need for initiatives to be developed for a particular semi-enclosed area, while the greater region appears to be so well served. Funding agencies also tend to take a broader view, one sharpened by diminishing budgets.

Such views are surely of decidedly limited utility, being based on convenience or expediency, rather than considerations deriving from an assessment of need. To address this question, we must surely look to the views of technical experts. The Indonesia-Canada initiative, *Managing Potential Conflicts in the South China Sea*, has provided the only regular opportunity for such experts to address precisely this issue. Meetings have focused on the need for cooperation in various marine areas (some of which have received a lot more attention than others). The needs and opportunities identified by the different groups of experts are summarised in Table 14.1.

In the light of this information, it seems reasonable to conclude that, despite the plethora of unilateral, bilateral, sub-regional, regional, inter-regional and international initiatives taking place in the South China Sea region, the need for more focused cooperation has been identified by technical experts in a range of marine activities. Can international law assist with the development and implementation of joint activities?

International Law

The role of international law - particularly that part of it usually called the law of the sea - is increasingly contentious in the South China Sea. And, perhaps, increasingly visible. Surveying the literature produced by lawyers and non-lawyers alike, one is struck by the recent emergence and prominence of legal concepts in South China Sea debates. There are good reasons for this. The United Nations Convention on the Law of the Sea (UNCLOS) was ratified by Brunei in

Table 14.1: Summary of Needs and Opportunities Identified by South China Sea Experts

Sector*	Topic	Outcome
marine scientific research	biodiversity protection effects of sea-level rise collection and exchange of information	project formulated and submitted to potential funders; initiation phases being implemented with regional funding basic proposal formulated: will be considered further in 1998 basic proposal formulated: will be considered further in 1998
marine environmental protection	marine environmental monitoring	basic idea formulated in mid-1997, further developed late 1977, to be considered at 8th Workshop
safety navigation and communications		
resource assessment and ways and means of development	fishery assessment for the whole South China Sea	initial proposal made (early 1997): to be developed for further consideration
legal issues	collection and dissemination of legislation	underway

* The 'sectors' identified here are the names given to the Technical Working Groups established by the Project.

December 1996; now, all states of the region with the exception of Cambodia and Thailand are full parties to it. Neither state is in any way hostile to the convention, so it is reasonable to proceed on the assumption that the South China Sea is now an 'UNCLOS lake'.⁶

Which is not to say that we need only to turn to the convention to sort out the jurisdictional and other problems arising here. The role of international law - even the significance of the subject - in international disputes is more complex than this. Put simply, the rules of international law provide states with a means of resolving disputes between them - but not the only one. The primacy of international law is often asserted, for instance, by those who see in it the means of establishing world peace and order. While the leading exponents of these concepts posited sound rationales for their views,⁷ the hortatory nature of international law allows impressionable minds an enormous area of opportunity to manufacture obligations out of the flimsiest material.

Decontextualising the study of international law encourages - if not guarantees - prolexis. In these circumstances, it is hard to see how the law of the sea can be allowed to perform the functions for which it was created. Or, to put it another way, while the international community laboured long and hard during the years of UNCLOS III to produce the convention, the necessary conditions for implementation - political will, foresight, wisdom, courage - are not yet present in the South China Sea arena.

Prognosis

If one accepts that the need for cooperation has been identified by those in a position to know, and whose opinions may be relied upon, and that international law requires some sort of governmental response, the question that arises is simply : now what?

⁶ Since it is not recognised as a state, Taiwan is not eligible to sign or ratify UNCLOS. Which is not to say that it cannot implement the convention in domestic legislation, which it is in the process of doing.

⁷ The high priests of this movement in the second half of this century were the Americans Harold Lasswell and Myers S. MacDougall of Yale Law School. Their thinking is readily apparent in the work of leading law of the sea experts such as Douglas Johnston and William Burke, who studied under and worked with the latter.

It is hard to resist the conclusion that there is ample scope for the continuation of existing informal, 'tract-two' activities, and indeed the development of new initiatives. The Managing Potential Conflicts project and the work of the CSCAP Maritime Working Group provide unique opportunities for contributions to be made to a range of issues arising directly and indirectly out of the jurisdictional impasse in the South China Sea. For example, issues such as state of knowledge concerning the resources of the South China Sea and its environmental health are being addressed in a way that may become more comprehensive, and their impact on broader issues of regional security assessed. In other words, the status quo is being examined and re-examined from different points of view. Previously obscured information or perspectives are coming into prominence, and hitherto dominant issues are perhaps in the process of relegation.

Some evidence of this can be seen in the quality of media coverage of South China Sea issues. The *Far East Economic Review*, for example, seems finally to have grasped some of the basic issues of international law applicable here. Though its writers do not always use this information correctly, there is at least some appreciation that the situation is perhaps more complex than was suggested by articles published in the 1994-96 period. Articles published in the leading newspapers - the *Straits Times*, *Jakarta Post*, *Bangkok Post*, *New Straits Times* - show an increasingly sophisticated awareness of a broad range of issues. Of particular note is the call in an editorial in the *Bangkok Post* of early 1997 for all parties in the South China Sea to respect undertakings voluntarily entered into, and suggesting that for larger powers to act in selfish self-interest in disregard of such undertakings was incompatible with their status.

It would seem that the value of the various initiatives, opinions, and papers lies in the fact that the boundaries of the debate are being pushed forward. Much of the undergrowth that previously obscured the issues is being burned off. In these circumstances, decontextualised debates about 'rights', and the doings of sailors in the distant past, seem increasingly sterile and pointless. If this process continues, then the prognosis need not be pessimistic. Of course, should countries prefer to subordinate South China Sea management and conservation issues to narrow domestic political agendas, progress will be imperceptibly slow.

CHAPTER 15

BALTIC AND MEDITERRANEAN SEAS

Glen Hearn

The Baltic and Mediterranean seas are as dissimilar to the marine areas in the CSCAP region as they are to each other, but there are good reasons for considering comparative experiences with marine issues in other parts of the world, especially as regards cooperation. There are also important areas or issues where experiences and problems in these two areas and, say, the South China Sea, converge rather than diverge. All three marine areas are semi-enclosed seas with relatively large population bases in relation to the size of the water body. All are enclosed by various states, with diverse cultural values, which are at different stages of economic and industrial development. Human impact is the leading problem for all three: there are common problems of pollution, over-exploitation of living marine resources, and degradation of coastal zones and marine habitats.

The Baltic and Mediterranean seas have a great deal of experiences regarding regional programmes in monitoring and pollution prevention, as well as successful financial mechanisms for implementing activities. Indeed, the Baltic is probably the most advanced region in the world as regards collective action and negotiation of common concerns. These two regions furnish examples (not models) of joint action for those marine areas which have yet to achieve the necessary degree of cooperation as regards ocean management.

This paper summarises cooperative experience in one sector — marine environmental management — in these two regions. The primary aim is the presentation of information. While problems, and achievements, are also identified, the paper makes no claim to be a comprehensive analysis of the topic.

The Baltic Sea

The Baltic Sea is possibly the most polluted body of sea water in the world. The situation is so dire that in the introduction to the Baltic Sea Joint Comprehensive Environmental Action Plan (JCP) in 1993, the Helsinki Commission states that 'pollution now threatens the waters, land and air in the entire catchment area - and ultimately the health and well being of the 80 million people who live there'.

The major pollution problems are:

- *Agriculture.* The principal concern is nutrient-loading of nitrogen and phosphorous, creating algal blooms and the resultant oxygen depletion of the waters. During this century, and predominantly in the latter half, the nitrogen and phosphorous loading has increased four-fold and eight-fold respectively.¹ There is intensive agriculture throughout the area, and approximately 40 per cent of all nitrogen and 10 per cent of phosphorous come from agricultural run-off. As a result, there is a deoxygenated area which represents one-third of the entire sea floor.²
- *Industrial effluent.* Oil, heavy metals, organochlorines (residues in fish have been found to be 3 to 10 times higher than in the North Atlantic)³ are all in high concentrations. Some trace elements such as mercury have stabilised (not decreased) since the late 1980s, while others such as DDT (dichlorodiphenyl trichlorethane)⁴ and alpha-HCH (hexachlorocyclohexane) have increased. Much of the industrial waste comes from the huge pulp and paper mills which not only introduce chemical wastes, such as organochlorins, but also oxygen-consuming wastes (organics and sulphur dioxide or SO₂).
- *Municipal effluent.* There is little to no sewage treatment in much of the eastern part of the Baltic. The Gulf of Finland,

¹ R. Fern, 'Integrated Management of the Baltic Sea', *Marine Pollution Bulletin*, No. 23, 1991, p.536.

² Helsinki Commission, 'The Baltic Sea Joint Comprehensive Environmental Action Programme', *Baltic Sea Environmental Proceedings*, No. 48, 1993, p.3-1.

³ *ibid.*

⁴ There has been an increase in DDT despite HELCOM Recommendation 3/2: Elimination of Discharges of DDT, as early as 1982.

the Gulf of Riga, the Eastern Gotland and the Bornholm basins all receive excess sewage, and often toxic substances are fed into municipal systems. Furthermore, uncontrolled dumping of solid wastes in the eastern part of the Baltic has created serious problems in some locations.⁵

- *Atmospheric emissions.* Both industrial and municipal - cars still have leaded petrol in much of the east - atmospheric pollution contribute greatly to the pollution of the Baltic Sea. Approximately 40 per cent of all nitrogen enters the water through air emissions, through both point sources and non-point sources.
- *Coastal wetlands destruction.* The destruction of coastal wetlands has been cited as a major cause of an upset in nutrient load balances.

While these problems are characteristic of much of the coastal areas of the world, they are exacerbated in the Baltic due to:

- *Population.* There are some 16 million inhabitants of the coastal zone and a further 80 million inhabitants in the catchment area.⁶
- *Economics.* The economies of Estonia, Lithuania, Latvia, Russia and Poland are 'economies in transition' and have limited funds to spend on environmental protection. Furthermore, whereas the traditional market economies such as Sweden and Germany have become increasingly interested in the marine environment since the mid-1970s, prior activities in the region continue to haunt contemporary mitigation efforts.
- *The physical environment.* The environment of the Baltic Sea has played a major role in developing policies and programmes for the protection of the marine environment in the region. The dynamics of the Baltic are unfavourable for cleaning the water body. Salinity factors keep the fresh water on the surface and there is little mixing. Oxygen is provided

⁵ Helsinki Commission, 'The Baltic Sea Joint Comprehensive Environmental Action Programme', *Baltic Sea Environmental Proceedings*, No.48, 1993, p.3-1.

⁶ Helsinki Commission, 'The Baltic Sea Joint Comprehensive Environmental Action Programme', <<http://www.helcom.fi/>>, May 1997.

to the lower regions through interchange with the North Sea and is thus insufficient to oxidise the pollutants and enrich the waters of the Baltic. The sea is quite shallow, with a mean depth of 56 metres, and the mixing with the ocean waters of the North Atlantic only occurs through the narrow sill of Øresund. Thus, the Baltic is a brackish body of water with fresh water from the catchment area floating on the denser saline ocean water. Inflows, which replenish the deeper oxygen-poor waters, are driven by climactic conditions and only occur in a major way every 10-12 years. However, in 1993 the Helsinki Commission noted that there had not been a significant inflow for over 17 years.⁷

- *Pollution.* Pollution has increased dramatically both in volume and in composition in the last 25 years.⁸ Toxins include high levels of PCBs (polychlorinated biphenyls), DDT (dichlorodiphenyl trichlorethane), PC-camphenes, PCTs (polychlorinated terphenyls), and PAHs (polycyclic aromatic hydrocarbons). Not only are these toxins harmful, but issues such as bioaccumulation and toxins in combination have hit the agenda.

History of Cooperation: The Need to Cooperate

Prior to the 1950s, pollution did not pose a serious threat to the environmental stability of the Baltic region. Since then, industrial and coastal development has burgeoned. The increasing pollution problems galvanised the nations of the Baltic to develop what is now the world's most comprehensive monitoring programme for protecting the marine environment: the Baltic Marine Environment Protection Commission, otherwise referred to as the Helsinki Commission (HELCOM). HELCOM was set up to deal with the protection of the marine environment of the Baltic Sea in response to the deteriorating state of the marine environment and to surmount the basic inadequacies of other international conventions and organisational bodies.

7 Helsinki Commission, 'The Baltic Sea Joint Comprehensive Environmental Action Programme', *Baltic Sea Environmental Proceedings*, No.48, 1993, p.2-2.

8 *ibid.*

Up to 1974 there were several international conventions which dealt specifically with marine pollution. The London Oil Pollution Convention (1954), the London Dumping Convention (1972), the International Convention for the Prevention of Pollution from Ships (1973), as modified by the Protocol of 1978 (MARPOL 73/78), and customary law aspects of the United Nations Convention on the Law of the Sea (UNCLOS) were enforced to greater or lesser extents within the Baltic Sea, principally by the Nordic nations and the Federal Republic of Germany (BRD).

Although the states party to these various conventions generally complied with their provisions, their efforts were inadequate to deal with all the aspects associated with pollution in the Baltic. Often the agreements themselves were inadequate or did not deal with certain pollutants. Moreover, the western side of the Baltic Sea is subject to the effects of activities in the east, and not all Baltic states were parties to the conventions or complied with their provisions. Consequently, despite international and numerous bilateral agreements on pollution control, the overall effectiveness of marine environmental protection in the Baltic was wholly deficient.

The continual deterioration of the marine environment of the Baltic Sea prompted the formulation of the Nordic Environmental Protection Convention (NEPC) in 1974. This was the first agreement which took into account harmful effects by neighbouring countries and through an advisory council introduced the ability of neighbours to take grievances to the judicial system of the polluter. It was also the first agreement to have a regional focus. However, it did not include all the Baltic states.⁹

To address the entire region and cover pollutants not addressed by international agreements, the Convention on the Protection of the Marine Environment of the Baltic Sea Area (1974), hereafter referred to as the 1974 Helsinki Convention, was created to protect the marine environment of the Baltic Sea. It is of particular note as it was:

- the first international convention to specifically focus on the marine environment in terms of ecosystem protection;

⁹ Signed by Denmark, Norway, Sweden and Finland.

- the first international agreement to cover all sources of pollution, both land- and ship-based sources as well as airborne, in a comprehensive regime; and
- notable for its stress on scientific understanding in decision making.

The 1974 Helsinki Convention covers all of the Baltic Sea¹⁰ - with the exception of internal waters - and promotes regional and intergovernmental cooperation to protect the marine environment. It attempts to address pollution issues through recommendations from the Baltic Marine Environment Protection Commission (HELCOM). HELCOM consists of four permanent committees, which advise HELCOM on technical issues, and the Programme Implementation Task Force (PITF). The PITF coordinates the implementation of the Joint Comprehensive Action Programme (JCP). The four committees are the following:

- *The Environment Committee* (EC) works on joint monitoring programmes covering different sectors of the marine environment, the open sea and the coastal waters. The data are compiled into joint databases and are evaluated at regular intervals by experts from the Baltic Sea states, in order to assess the environmental conditions. The EC also coordinates issues related to nature conservation and biodiversity.
- *The Technological Committee* (TC) works on the evaluation of waterborne and airborne pollution loads to the Baltic Sea from land-based sources. It also refines technical measures to reduce discharges into water and emissions into the atmosphere from urban areas, industry and diffuse sources, including agriculture and traffic. Recommendations are prepared on restricting discharges and emissions, and on banning or restricting the use of certain substances.
- *The Maritime Committee* (MC) develops recommendations to combat all kinds of operational pollution from ships and off-shore platforms and deals with facilities in ports to dispose

¹⁰ Signed in 1974 by Denmark, Sweden and Finland, DDR (East Germany), BRD (West Germany), Poland and the USSR.

of ship wastes. It also coordinates activities undertaken to protect the Baltic Sea from pollution by ships.

- *The Combating Committee* (CC) elaborates rules and guidelines for cooperation in combating spillages of oil and other harmful substances.

The Helsinki Commission (HELCOM) meets annually and, from time to time, meetings are held at ministerial level. Decisions taken by HELCOM - which are reached unanimously - are regarded as *direct recommendations* to the governments concerned and are to be incorporated into the national legislation of the member countries.

The major criticisms of the 1974 Helsinki Convention were that:

- HELCOM was simply an advisory body which could only recommend action as no enforcement mechanisms were provided for in the convention: implementation of the recommendations was left to each member state;
- it did not incorporate the grievance concept between neighbours which had been lauded in the preceding NEPC agreement;
- as noted above, it also excluded internal waters, which is where most of the pollution occurs; and
- the unanimity rule in HELCOM provided a stumbling block for advancing standards and future enforcement provisions.

It was felt, therefore, that the 1974 Helsinki Convention lacked an effective enforcement mechanism and a compulsory judicial settlement of disputes,¹¹ and that it did not effectively cover the sources of pollution.

The 1974 Helsinki Convention did, however, provide for the creation of the Baltic Monitoring Programme, which follows long-term changes in selected determinants which are then used as a basis for determining actions. The programme provides for a scientific

¹¹ Boleslaw Adam Boczek, 'International Protection of the Baltic Sea Environment against Pollution: A Study in Marine Regionalism', *American Journal of International Law*, Vol.72, 1978, p.782.

approach to decision making for policy development, which was in keeping with the NEPC agreement.

The monitoring programme was developed in three stages: 1973-83 - initial pilot stage; 1984-88 - increase in coverage of monitoring stations, and frequency and determinants; and 1989-94 - five-year monitoring and modelling.

The Baltic Sea Joint Comprehensive Environmental Action Programme

As the situation continued to deteriorate despite action taken under the 1974 Helsinki Convention, in 1988 the ministers of environment signed a Ministerial Declaration to encourage the reduction of heavy metals, nutrients and pollutants by 1995. Due to the changing political climate of the region, the Baltic states came together again in 1990 and developed the Baltic Sea Joint Comprehensive Action Programme (JCP), which was adopted along with the second Convention on the Protection of the Marine Environment of the Baltic Sea Area (1992), hereafter referred to as the 1992 Helsinki Convention.¹² The key objectives of the JCP are to:

- recognise the importance of a long-term perspective for ecological restoration;
- harmonise economic and environmental objectives;
- control pollution at the source; and
- establish conditions for private sector participation.

¹² Signatories are Denmark, Estonia, European Community, Finland, Germany, Latvia, Lithuania, Poland, Sweden and Russia; representatives of Belarus, the Czech Republic, Norway, the Slovak Republic and the Ukraine; representatives of international financial institutions (the European Bank for Reconstruction and Development or EBRD, the European Investment Bank or EIB, the Nordic Environment Finance Corporation or NEFCO, the Nordic Investment Bank or NIB, and the World Bank) and the International Baltic Sea Fishery Commission; as well as representatives of observer organisations (particularly the Coalition Clean Baltic or CCB, the Standing Conference of Rectors, Presidents and Vice-Chancellors of the European Universities or CRE, the European Union for Coastal Conservation or EUCC, the International Environmental Agency for Local Governments or ICLEI, the International Network for Environment Management or INEM, the Union of the Baltic Cities or UBC and the World Wide Fund for Nature or WWF).

Table 15.1: Baltic Sea Joint Comprehensive Action Programme Elements

Programme Elements	Lead Party	Total Million ECU*
1. Policies, laws and Regulations	Germany	10
2. Institutional Strengthening and Human Resources Development	Germany	210
3. Investment Activities		
A. Point Source Pollution		14,010
Combined Municipal and Industrial Waste Water Treatment	Sweden	
Industrial Pollution Control	Finland	
B. Non-Point Source Pollution		3,500
Agriculture	Poland	
Traffic	Germany	
4. Management Programmes for Coastal Lagoons and Wetlands	World Wide Fund for Nature (WWF)	220
5. Applied Research	HELCOM Environment and Technical Committees	30
6. Public Awareness and Environmental Education	Finland (Coalition Clean Baltic or CCB)	20
TOTAL		18,000

* European Currency Unit.

138 *Regional Maritime Management and Security*

The JPC will be implemented over 20 years (1993-2012) at an estimated total cost of 18 billion ECU. The JCP consists of the components listed in Table 15.1.

The 1992 Helsinki Convention

The 1992 Convention made the following changes to the 1974 Helsinki Convention:

- it was obvious that land-based sources were the main contributor to pollution in the region and consequently, the convention was extended to include internal waters and the entire catchment area;
- new concepts such as 'best available technology' or BAT and 'best available practice' were introduced,¹³ and the precautionary principle¹⁴ and the 'polluter-pays' principle were applied;
- the definition of pollution was modified to include substances which are 'liable to create hazards', thus reflecting the 'precautionary principle';
- municipal and industrial wastes were included;
- pollution from aquaculture and other non-point sources was included;
- nature conservation goals and biodiversity preservation were included;
- shipping regulations approximated those of MARPOL 78, but were even more stringent; and

¹³ See <<http://www.helcom.fi/annex92.html>>, November 1997, Annex II, 'Criteria for the Use of Best Environmental Practice and Best Available Technology', 1992 Helsinki Convention.

¹⁴ According to <<http://www.helcom.fi/conven74.html>>, November 1997, Article 3 (2) 1992 Helsinki Convention, the 'Contracting Parties shall apply the precautionary principle, i.e., to take preventive measures when there is reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects'.

- there was mandatory regular reporting to HELCOM.
- However, the following criticisms continue to be made:
- that HELCOM continues to be a recommending body without any legal teeth;
 - that the grievance clause of NEPC remains absent; and
 - that unanimous decision making is an obstacle to effective recommendations.¹⁵

Some of these criticisms, however, should be viewed in the context of the cooperative action that has emerged as a result of recommendations by HELCOM. One benefit resulting from non-legally binding recommendations is that HELCOM can make recommendations based on scientific information without being constrained by their political ramifications. This also adds credence to the unanimity rule. No representative on HELCOM need base a decision on anything other than scientific data and the precautionary principle. This in turn means that recommendations emerging from HELCOM are considered to be unbiased and ecologically sound. Consequently, it is not only ecologically unsound, but is embarrassing for states in the Baltic not to be seen to implement the recommendations of HELCOM. Furthermore, because the recommendations come from a unanimous body it is difficult to ignore their validity or importance. Consequently, states generally attempt to implement the recommendations. Thus, the non-legally binding recommendations and the unanimity rule provides for a system where recommendations are puissant and unconstrained by political or financial concerns.

Analysis of the extensive list of recommendations emerging from HELCOM over the last thirteen years illustrates the various stages of development of HELCOM and its monitoring programme and corresponding priorities. The recommendations made by HELCOM encompass a variety of issues ranging from the reduction in the discharge of pollutants from agricultural land, industries, municipalities and ships, to the development of pollution-reporting systems and individual species protection. Appendix I contains a

¹⁵ <<http://www.helcom.fi/conven74.html>>, November 1997, Article 19 (5) 1992 Helsinki Convention.

short list of some of the HELCOM recommendations that have been issued since 1982. Because the recommendations are developed through expert working groups they can be extremely technical and detailed. To illustrate this particular aspect of the recommendations, copies of Recommendations 16/5 and 16/7 dealing with chemical effluent and nutrient run-offs respectively have been reproduced in Appendix II.

Is It Effective?

Although not all of the recommendations made by HELCOM have been implemented by all the signatories to the 1974 and 1992 Conventions, there has been an effort by most states to conform with most of them and the results have been encouraging.

So far eleven of the 132 designated 'hot spots' have been taken off the list and, according to the results obtained by the research vessel *Aranda* in 1996,¹⁶ the state of the Baltic Sea is quite good in terms of oxygen levels. For example, practically no traces of hydrogen sulphide were found - even in the Gotland Basin, which was considered one of the most susceptible areas to pulp and paper pollution.

The results were not entirely positive, as it was found that oxygen was almost non-existent in the deepest point of the Gotland Basin. However, the oxygen situation was quite good in most parts of the area covered by the cruise.¹⁷ Water had mixed quite well, especially in the Gulf of Finland, which had previously suffered from a serious loss of oxygen. The oxygen levels in the Gulf of Bothnia had also increased. Unfortunately, the phosphorus content in the Gulf of Finland had risen slightly. This, however, did not indicate an increased loading, but rather, was due to the low level of oxygen at the bottom, which caused the release of phosphorus in the sediment. As the water mixed, it lifted the phosphorus towards the surface. This phenomenon continues to be observed in the whole area of the Gulf of Finland.¹⁸

¹⁶ HELCOM News Release No. 4/96, HELCOM Commission, October 1996.

¹⁷ *ibid.*

¹⁸ Personal communication from Teija-Liisa Lehtinen.

It is important to understand this phenomenon, as it illustrates that the immediate effects of pollution alleviation programmes may be masked by prior pollution loading. Although this can be discouraging for policy makers, it only adds credence to the theory of the loading capacities of ecosystems and to the proposition that just as the deleterious effects of present actions may be manifest in the future, so too may be the effects of mitigation efforts.

Financing

As with many programmes dealing with environmental protection and rehabilitation, the willingness to act is dampened through financial constraints. The Baltic Sea area is no exception. The states with economies in transition find it prohibitively expensive to implement many of the recommendations made by HELCOM. This state of affairs does not derogate from the utility of the recommendations, but rather can be used to secure financing. Loans from international financial institutions - the World Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the Nordic Environment Finance Corporation, and Nordic Investment Bank - are combined with grants from donor countries in the Baltic Sea region and from the EU to create financial packages for investments in countries in transition. In Denmark, Finland, Germany and Sweden, action necessary to address municipal and industrial hot spots both locally and in the countries in transition is being undertaken. The NIB has recently announced the creation of a new environmental loan facility amounting to ECU 100 million to tackle the environmental problems on the eastern shore of the Baltic Sea and in the Barents region.

The Mediterranean Sea

In the wake of the 1972 Stockholm Convention, the United Nations Environment Programme (UNEP) focused on the Mediterranean to develop an action plan to address its degradation. In 1975, 16 of the 18 Mediterranean coastal states¹⁹ invited by UNEP

¹⁹ Morocco, Tunisia, Algeria, Egypt, Lebanon, Israel, Syria, Turkey, Greece, Cyprus, Malta, Yugoslavia, Italy, France, Gibraltar, Spain - Albania, Libya.

convened in Barcelona to adopt a Mediterranean Action Plan (MAP) which would be the framework for their cooperation in the future. A year later three instruments were adopted:

- the Convention for the Protection of the Mediterranean Sea against Pollution, or Barcelona Convention;
- the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft; and
- the Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency.

The countries of the region immediately begin to implement some of the ideas. The following are a list of initiatives which have come into being since the Barcelona Convention (1975):

- The Emergency Protocol became a reality through the setting up of the Regional Oil Combating Centre (ROCC, today known as the Regional Marine Pollution Emergency Response Centre or REMPEC) in Malta in 1976.
- The MAP's 'scientific evaluation' (much like the JCP of the Baltic) component resulted in the launching of MED POL, 'the coordinated programme of pollution monitoring and research' in the Mediterranean Sea. This is the largest effort for the collection and analysis of data on pollution ever carried out at a regional level.
- Land-based sources of pollution were dealt with in a separate 'Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources', which was signed in Athens in 1980. It contains detailed 'black' and 'grey' lists of substances to be eliminated or strictly controlled. It does not, however, list how these substances might be eliminated or the alternatives sought.
- The 'Integrated Development Planning and Management of Resources' component of MAP, has two components:
 - (i) the Blue Plan, a prospective study of the Mediterranean Basin hosted by France in Sophia Antipolis; and

(ii) the Priority Actions Programme headquartered in Split, Yugoslavia.

- In April 1982, a new 'Protocol Concerning Mediterranean Specially Protected Areas' was adopted in Geneva. A regional Centre of the Specially Protected Areas was established in Tunis.
- The Central Unit of the Mediterranean Programme was established in Geneva in 1980 and moved to Athens in 1982. Composed of a small team of 10 persons, the Central Unit forms the nucleus around which five networks develop specific aspects of the Mediterranean Programme. Liaison with the Mediterranean states is ensured by the national 'focal points' which have been assigned to the programme.

Monitoring and State of the Environment

By the time the Mediterranean states convened in 1985, MED POL had been running almost 10 years and an abundance of data had been accumulated. Although much cooperative work had been done in monitoring and assessment, it was evident that not much was being done to actually prevent and mitigate pollution, and the marine environment of the Mediterranean Sea continued to deteriorate. The states of the region subsequently addressed the priority issues of bathing waters and mercury in fish *inter alia*, through the 1985 Genoa Declaration.

The main points of the declaration are:

- establishment of reception facilities for dirty ballast waters and other oily residues received from tankers and ships in Mediterranean ports;
- establishment as a matter of priority of sewage treatment plants in all cities around the Mediterranean with more than 100,000 inhabitants and appropriate outfalls and/or appropriate treatment for all towns with more than 100,000 inhabitants;
- application of environmental impact assessment as an important tool to ensure proper development activities;

144 *Regional Maritime Management and Security*

- cooperation to improve the safety of maritime navigation and to reduce substantially the risk of transporting dangerous toxic substances likely to affect the coastal areas or induce marine pollution;
- protection of endangered marine species such as the monk seal and the Mediterranean sea turtle;
- concrete measures to achieve a substantial reduction in industrial pollution and the disposal of solid waste;
- identification and protection of at least 100 coastal historical sites of common interest;
- identification and protection of at least 50 new marine and coastal sites or reserves of Mediterranean interest;
- increase in effective measures to prevent and combat forest fires, soil loss and desertification; and
- substantial reduction in air pollution, which adversely affects coastal areas and the marine environment with the potential danger of acid rains.

The states meet bi-annually to discuss previous work and adopt new resolutions for pollution control if appropriate. In Cairo, 1991 they added atmospheric pollution to the Annex on Land Based Sources of Marine Pollution.

Is It Working?

MED POL has been rather successful in setting up integrated monitoring systems. All the countries of the Mediterranean now have monitoring activities at some stage of development. The task of acquiring information is quite formidable, however, and many of the countries have been slower to implement mitigation measures. Some of the main criticisms with the Mediterranean Programme are that:

- Many countries have not implemented the resolutions made under the Barcelona Convention (1975), or under the subsequent protocols on land-based sources and protected areas. Neither the Barcelona Convention nor the subsequent protocols have any legal recourse for non-compliance.

- Only the more developed nations of the Mediterranean have the money to implement activities.
- There is a fundamental gap between the developed countries and the less developed countries. This gap is not simply an economic one, but also a cultural one reflecting differences in values and priorities.

Appendix I: Some Recommendations from HELCOM¹

No. and Title	Status
<p>HELCOM RECOMMENDATION 3/2 Recommendation regarding the Elimination of Discharges of DDT - adopted 17 February 1982, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>
	<p>Implemented</p> <p>Yes</p>
	<p>Reporting on implementation</p> <p>Yes</p>
<p>HELCOM RECOMMENDATION 4/2 Recommendation on the Use and Recognition of the Revised Forms of International Oil Pollution Prevention (IOPP) Certificate and Oil Record Book Agreed by the International Maritime Organisation (IMO) (MEPC/Circ.99) - adopted 1 February 1983, having regard to Article 13, Paragraph b) of the Helsinki Convention.</p>	<p>Supplemented by Rec.No.</p>
	<p>Implemented</p> <p>Yes</p>
	<p>Reporting on implementation</p> <p>No</p>

1 For the complete list of HELCOM Recommendations, see <<http://www.helcom.fi/reclist.html>>, November 1997.

<p>HELCOM RECOMMENDATION 6/6 Recommendation concerning limitation of discharges of cadmium from land-based sources - adopted 13 March 1985, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>Partly</p>
	<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 6/14 Recommendation concerning establishing of a pollution reporting system for pollution incidents - adopted 13 March 1985, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>Yes</p>
	<p>Reporting on implementation</p>	<p>No</p>
<p>ELCOM RECOMMENDATION 7/3 Recommendation concerning measures aimed at the reduction of discharges from urban areas by the development of sewerage systems - adopted 12 February 1986, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>Partly</p>

	Reporting on implementation	Yes
HELCOM RECOMMENDATION 9/1 Recommendation concerning protection of seals in the Baltic Sea Area - adopted 15 February 1988, having regard to Article 13, Paragraph b) of the Helsinki Convention	Supplemented by Rec.No.	
	Implemented	Yes
	Reporting on implementation	No
HELCOM RECOMMENDATION 9/4 Recommendation concerning reduction of emissions of lead from combustion of leaded gasoline - adopted 15 February 1988, having regard to Article 13, Paragraph b) of the Helsinki Convention	Supplemented by Rec.No.	
	Implemented	Partly
	Reporting on implementation	Yes
HELCOM RECOMMENDATION 10/2 Recommendation concerning assessments of the effects of pollution on the coastal areas of the Baltic Sea -adopted 14 February 1989, having regard to Article 13, Paragraph b) of the Helsinki Convention	Supplemented by Rec.No.	
	Implemented	Yes
	Reporting on implementation	Yes

<p>HELCOM RECOMMENDATION 13/1 Recommendation concerning disposal of dredged spoils - adopted 6 February 1992, having regard to Article 9, Paragraph 2 of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p> <p>Implemented</p> <p>Reporting on implementation</p> <p>Partly</p> <p>Yes</p>
<p>HELCOM RECOMMENDATION 13/9 Recommendation concerning reduction of nitrogen, mainly nitrate, leaching from agricultural land - adopted 6 February 1992, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p> <p>Implemented</p> <p>Reporting on implementation</p> <p>Partly</p> <p>Yes</p>
<p>HELCOM RECOMMENDATION 14/1 Recommendation concerning monitoring of air-borne pollution load - adopted 3 February 1993, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p> <p>Implemented</p> <p>Reporting on implementation</p> <p>Yes</p> <p>Yes</p>

<p>HELCOM RECOMMENDATION 14/10 Recommendation concerning cooperation and assistance to Estonia, Latvia and Lithuania in the field of combating marine pollution - adopted 4 February 1993, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>
	<p>Implemented</p>
	<p>Partly</p>
<p>HELCOM RECOMMENDATION 15/1 Recommendation concerning protection of the coastal strip - adopted 8 March 1994, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Reporting on implementation</p>
	<p>Supplemented by Rec.No.</p>
	<p>Implemented</p>
	<p>No</p>
	<p>Reporting on implementation</p>
<p>HELCOM RECOMMENDATION 15/2 Recommendation concerning pollution load compilation - adopted 9 March 1994, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>
	<p>Implemented</p>
	<p>No</p>
	<p>Reporting on implementation</p>
	<p>Yes</p>

<p>HELCOM RECOMMENDATION 15/5 Recommendation concerning system of coastal and marine Baltic Sea Protected Areas (BSPA) - adopted 10 March 1994, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>No</p>
	<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 16/2 (supplements HELCOM Recommendations 6/13 and 10/8) Recommendation concerning cooperation in investigating violations or suspected violations of the sewage discharge provisions of the Helsinki Convention - adopted 14 March 1995, having regard to Article 13, paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>No</p>
	<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 16/5 (supersedes HELCOM Recommendation 13/3) Recommendation concerning requirements for discharging of waste water from the chemical industry - adopted 15 March 1995 having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	
	<p>Implemented</p>	<p>No</p>
	<p>Reporting on implementation</p>	<p>Yes</p>

<p>HELCOM RECOMMENDATION 16/11 (supersedes HELCOM Recommendation 8/2) Recommendation concerning measures to reduce pollution by pesticides from agriculture, forestry and horticulture - adopted 15 March 1995 having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	<p>No</p>
<p>Implemented</p>	<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 17/2 Recommendation concerning protection of harbour porpoise in the Baltic Sea Area - adopted 12 March 1996 having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	<p>No</p>
<p>Implemented</p>	<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 17/5 (supersedes HELCOM Recommendation 11/5) Recommendation concerning restriction of discharges from the iron and steel industry - adopted 12 March 1996 having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	<p>No</p>
<p>Implemented</p>	<p>Reporting on implementation</p>	<p>Yes</p>

<p>HELCOM RECOMMENDATION 17/13 (supersedes HELCOM Recommendations 2/5, 2/6 and 4/4) Recommendation concerning use by the Baltic Sea states of the manual on cooperation in combating marine pollution within the framework of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, (Helsinki Convention) - adopted 12 March 1996 having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	<p>Implemented</p>	<p>No/Yes</p>
		<p>Reporting on implementation</p>	<p>Yes</p>
<p>HELCOM RECOMMENDATION 18/4 (This Recommendation supersedes HELCOM Recommendation 13/12) Recommendation concerning managing wetlands and freshwater ecosystems for retention of nutrients - Adopted 11 March 1997, having regard to Article 13, Paragraph b) of the Helsinki Convention</p>	<p>Supplemented by Rec.No.</p>	<p>Implemented</p>	<p>No</p>
		<p>Reporting on implementation</p>	<p>Yes</p>

Appendix II: HELCOM Recommendations 16/5 and 16/9¹

HELCOM RECOMMENDATION 16/5²

Adopted 15 March 1995

having regard to Article 13, Paragraph b)

of the Helsinki Convention

REQUIREMENTS FOR DISCHARGING OF WASTE WATER FROM THE CHEMICAL INDUSTRY

THE COMMISSION,

RECALLING Article 5 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention), in which the Contracting Parties undertake to counteract the introduction of certain hazardous substances, as specified in Annex I of the Convention, into the Baltic Sea Area,

RECALLING ALSO that according to Article 6 of the Helsinki Convention all appropriate measures to control and strictly limit pollution by noxious substances, listed in Annex II of the Convention, shall be taken, and that according to Annex III of the Convention the pollution load of industrial wastes shall be minimised,

RECALLING FURTHER that the Ministerial Declaration of the ninth meeting of the Helsinki Commission calls for a considerable reduction of land-based pollution,

RECOGNIZING that the chemical industry is responsible for an important part of the discharges of hazardous substances into the Baltic Sea,

DESIRING to limit the discharges from this industry with best available technology,

DESIRING ALSO to implement HELCOM Recommendation 9/8 concerning measures aimed at the reduction of discharges from industry,

RECOMMENDS to the Governments of the Contracting Parties that they apply the following requirements to chemical industries³ producing waste water which is discharged into waters or municipal sewerage systems:

1. Requirements in general

Waste water should only be discharged if waste water volume and pollutant load are minimised by the use of the best available technologies, *inter alia*:

- separation of process water from cooling water;

¹ Recommendation 16/5, <http://www.helcom.fi/fullrecs/rec16_5.html>, November 1997; and Recommendation 16/9, <http://www.helcom.fi/fullrecs/rec16_9.html>, November 1997.

² This Recommendation supersedes the present HELCOM Recommendation 13/3.

³ Industrial plants according to the Standard Classification of Chemical Industry (see Appendix [to HELCOM Recommendation 16/5, below]).

- separate pretreatment of waste water containing substances which due to their specific properties should preferably be removed prior to the final treatment;
- combined treatment of different waste waters containing hazardous substances only if an adequate reduction of the pollutant load is achieved compared to the purification of every single waste water stream;
- use of water-saving techniques in washing and cleaning processes such as water circulation and counter-current washing;
- multiple use of process water;
- indirect cooling systems and condensation of vapours and organic liquids instead of direct cooling systems;
- processes for generating vacuum, which do not produce waste water, should be used if there is the possibility that hazardous substances get into the water;
- processing of mother-liquors, e.g. for recovery of materials or energy;
- raw materials and auxiliaries should be selected with environmental aspects taken into consideration;
- adequate equipment for monitoring of effluent parameters should be used, e.g. flow, pH and oxygen concentration.

2. Requirements to the effluent of the plant

The mixing or diluting of different waste waters (i.e. mixing of treated process water with cooling water) for the purpose of compliance with the limit values established for the effluent should not be allowed. The total load of the parameters COD (TOC), AOX and heavy metals should be minimised first according to measures specified in Paragraph 1.

2.1 Chemical Oxygen Demand (COD)

For the plants discharging into water bodies the reduction of COD(TOC)-load in the following pre- and final waste water treatment facilities should be at least 80 per cent. A lower reduction rate might be accepted but only for those waste water streams which are treated by BAT and for which special investigations have shown the reasons for lower reduction rate. This requirement should also be regarded as fulfilled when BAT has been applied and the concentration of COD in the effluent of the plant is lower than 250 mg/l.

2.2 Absorbable Organic Halogen (AOX)

For the plants discharging into water bodies or connected to municipal treatment plants the resulting concentration of AOX should not exceed 1 mg/l.

This requirement should also be regarded as fulfilled if the reduction of the AOX-load in the pre- and final waste water treatment facilities is at least 80 per cent. A lower reduction rate might be accepted but only for those waste water streams which are treated by BAT and for which special investigations have shown the reasons for lower reduction rate.

2.3 *Heavy metals*

For plants discharging into water bodies or connected to municipal treatment plants the resulting concentration in the effluent should not exceed the following values:

Mercury	(Hg)	0.05 mg/l
Cadmium	(Cd)	0.2 mg/l
Copper	(Cu)	0.5 mg/l
Nickel	(Ni)	1.0 mg/l
Lead	(Pb)	0.5 mg/l
Chromium	(Cr)	0.5 mg/l
Chromium VI	(Cr-VI)	0.1 mg/l
Zinc	(Zn)	2.0 mg/l

2.4 *Toxicity of the effluent*

For plants discharging into water bodies the toxicity effect of the waste water should be determined by two toxicity tests which could be chosen out of the following four toxicity tests:

- toxicity to fish
- toxicity to invertebrates (Daphniidae)
- toxicity to algae
- toxicity to bacteria

2.5 *Analysing methods*

Internationally accepted standardised sampling, analysing and quality assurance methods (e.g. CEN-standards, ISO-standards, OECD-Guidelines) should be used whenever available,

RECOMMENDS ALSO that the above requirements and limit values be implemented for new plants by 1 January 1996 and for existing plants by 1 January 2000,

DECIDES that the above requirements be reconsidered in 1998, especially with regard to measures to reduce nutrients and further introduction of parameter TOC,

RECOMMENDS FURTHER that the Contracting Parties report to the Commission every three years starting in 1997.

Appendix to HELCOM Recommendation 16/5

Standard Classification of Chemical Industry⁴

Manufacture of Chemicals and Chemical Products

1. Manufacture of basic chemicals

⁴ This classification is based on 'International Standard Industrial Classification of all Economic Activities', *Statistical Papers*, Series M, No. 4, Rev. 3. United Nations, New York 1989.

- 1.1 Manufacture of basic chemicals, except for fertilisers and nitrogen compounds
- 1.2 Manufacture of fertilisers and nitrogen compounds
- 1.3 Manufacture of plastics in primary forms and of synthetic rubber
2. Manufacture of other chemical products
 - 2.1 Manufacture of pesticides and other agrochemical products
 - 2.2 Manufacture of paints, varnishes and similar coatings, printing ink and mastics
 - 2.3 Manufacture of pharmaceuticals, medical chemicals and botanical products
 - 2.4 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
 - 2.5 Manufacture of other chemical products n.e.c.
3. Manufacture of man-made fibres

Manufacture of Refined Petrochemical Products

REPORTING FORMAT FOR HELCOM RECOMMENDATION 16/5 CONCERNING REQUIREMENTS FOR DISCHARGING OF WASTE WATER FROM THE CHEMICAL INDUSTRY

1. Country
2. Plant and its location
3. Description of capacities and actual production
4. Description of type of plant and production technology
5. Information on measures taken to reduce waste water volume and pollutant load according to Item 1 of the Recommendation
6. Water consumption in m³/year (process water only)
7. Effluent loads:

	Pollution load t/year	Rate of reduction %	Concentration mg/l
COD or TOC			
AOX			

Heavy metals	Concentration (mg/l)	Total load (kg/year)
Hg		
Cd		
Cu		
Ni		
Pb		
Cr		
Cr-VI		
Zn		

8. Results of toxicity tests

9. Information about waste water treatment (pre-treatment and final treatment)

10. Action undertaken for reducing discharges in the last three years.

HELCOM RECOMMENDATION 16/9

Adopted 15 March 1995

having regard to Article 13, Paragraph b)

of the Helsinki Convention

NITROGEN REMOVAL AT MUNICIPAL SEWAGE WATER TREATMENT PLANTS

THE COMMISSION,

RECALLING Paragraph 1 of Article 6 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention), in which the Contracting Parties undertake to take all appropriate measures to control and minimise land-based pollution of the marine environment of the Baltic Sea Area,

RECALLING ALSO Paragraph 1 of Annex III of the Helsinki Convention in which the Contracting Parties agree to treat municipal sewage in an appropriate way so that the amount of organic matter does not cause harmful eutrophication of the Baltic Sea Area,

RECALLING FURTHER HELCOM Recommendation 9/2 in which the use of effective methods in waste water treatment is stressed upon,

RECOGNIZING that nitrogen removal has been found to be necessary in many parts of the Baltic Sea Area,

DESIRING to limit this pollution,

RECOMMENDS to the Governments of the Contracting Parties to the Helsinki Convention that

a) municipal sewage treatment plants, located in areas sensitive to nitrogen, should be equipped with nitrogen removal according to the following stipulations, where values for concentration or for the percentage of reduction are applied:

Size of treatment plant	Concentration tot-N, mg/l ⁶ (yearly average)	Minimum ⁵ percentage reduction	Year (end of)	Countries in transition
10,001 to 50,000 pe	15	70-80	1998	2020
50,001 to 100,000 pe	15	70-80	1998	1020 ⁷
>100,000 pe	10 ⁸	70-80	1998	2010

b) the results of assessments which have evaluated areas for being sensitive or non-sensitive should be reported every three years according to the reporting format to the Commission,

⁵ Reduction in relation to the load of the influent.

⁶ 'tot-N' means the sum of total Kjeldahl nitrogen (organic N + NH₄), nitrate (NO₃)-nitrogen and nitrite (NO₂) nitrogen.

⁷ Most urgent plants should be equipped with nitrogen removal by 2010. Those plants should be specified to the Commission not later than in 1997.

⁸ Alternatively the daily average must not exceed 20 mg/l N. This requirement refers to a water temperature of 12^o C or more during the operation of the biological reactor of the waste water treatment plant. As a substitute for the condition concerning the temperature, it is possible to apply a limited time of operation, which takes into account the regional climatic conditions.

160 *Regional Maritime Management and Security*

RECOMMENDS ALSO that the Contracting Parties re-evaluate the present Recommendation and reconsider it in 1995 taking into account new developments on national or international or EU level for Member States. National and international research on the need, technology and economics of nitrogen removal should be intensified,

RECOMMENDS FURTHER that the Contracting Parties report to the Commission in 2000 and thereafter every three years.

REPORTING FORMAT FOR HELCOM RECOMMENDATION 16/9 CONCERNING NITROGEN REMOVAL AT MUNICIPAL SEWAGE WATER TREATMENT PLANTS

1. Country
2. For the different size classes (10, 001 to 50, 000 pe, 50, 001 to 100, 000 pe, >100, 000 pe) give the following data:
 - number of plants within the catchment area of the Baltic Sea
 - number of plants which are located in sensitive areas
 - number of plants which are located in sensitive areas and are in compliance with this Recommendation
3. Results of assessments which have evaluated areas for being sensitive or non-sensitive
4. Please give a map of sensitive and non-sensitive areas.

CHAPTER 16

CARIBBEAN

Stanley Weeks and Jolyn Eichner

This paper briefly considers the arrangements - rather limited to date - for regional oceans management and security in the Caribbean Sea, the region that José Martí called 'the Vortex of the Americas'. The heterogeneous cluster of states that occupy the Caribbean Rim are characterised by less than benevolent geography, which is further burdened by history. A modest offshore natural resource endowment (primarily oil, bauxite, and fisheries) complements the intricate pattern of limited sea-water circulation, much interrupted by sea-floor sill and basin structures. Analogous to the geographic impediments to water circulation are the artificial political and historical structures which interfere with Caribbean regional seas cooperation. The Caribbean is freighted with both relict colonial political structures and superpower propinquity that divide and undermine Caribbean maritime (and other) regionalism, notwithstanding broader visions before and after the United Nations Convention on the Law of the Sea (UNCLOS) III.¹ Twenty-eight states share the Caribbean littoral, but four non-resident states administrate government for nineteen of these states (departments and territories), and therefore have strategic interests and considerable influence in the region.²

1 Edgar Gold (ed.), *A New Law of the Sea for the Caribbean: An Examination of Marine Law and Policy Issues in the Lesser Antilles*, Lecture Notes on Coastal and Estuarine Studies No.27 (Springer-Verlag, Berlin, 1988).

2 Non-resident states are: France (French Guyana, Guadeloupe, Martinique, St. Barthelemy, St. Martin); Netherlands (Aruba, Bonaire, Curacao, Saba, St. Eustasius, St. Maartin); United Kingdom (Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, Turks & Caicos); United States (Puerto Rico, US Virgin Islands).

Background³

Topographically, low-lying coastal shores of the eastern Central American isthmus band the Western Caribbean, while the Atlantic edge is bracketed by islands formed by fault block mountains in the north, low-lying limestone plateaus in the north-east, and volcanic mountains in the east. The Caribbean is subject to the vicissitudes of severe weather events, earthquakes, and, for the low-elevation islands, the complications of projected sea-level rise associated with global warming trends. Indeed, because they have encouraged a plethora of marine-related scientific missions, weather patterns and long-term climate change arguably could qualify as viable developmentalist strategy in the area, in step with the much-encouraged compilation of geographical information systems (GIS)-based natural resources databases to support the production of similarly encouraged national environmental action plans.⁴

By any measure, economic development in the Caribbean is uneven. For decades, the Eastern Caribbean subregion has been advertised as the playground in America's lake; Colombia is notorious for its panorama of drug cartels, drug czars, and drug-related crime. Belize and Costa Rica have helped to pioneer the implementation of sustainable eco-tourism; Venezuela is an OPEC (Organisation of Petroleum Exporting Countries) state. In the past, Haiti often was cited as the World Bank definition of a basket-case economy; more recently, the Mexican monetary system required stabilisation; today, Jamaica faces financial and economic collapse.⁵ The United States is the pre-eminent global capitalist economy; Cuba lacks financial infusions by its former ideological lender of last resort.

Resource endowment tends to define the possibilities in easily achievable economic gains for small island and developing states (SIDS) everywhere; the Caribbean is no exception. Agricultural

3 The best overview of these issues will be found in Orman E. Granger, 'Caribbean Island States: Perils and Prospects in a Changing Global Environment' in Steven Leatherman (ed.), *Journal of Coastal Research: Small Island States at Risk*, Special Issue No. 24, 1997, in press.

4 George A. Maul (ed.), *Small Islands: Marine Science and Sustainable Development, Coastal and Estuarine Studies No.51* (American Geophysical Union, Washington DC, 1996).

5 Thomas T. Vogel Jr, 'Jamaica is hit hard by a financial crisis; ill-conceived economic reforms undermine banks, insurers', *Wall Street Journal*, 29 April 1997, p.A19.

opportunities are restricted. Commercial fisheries are patchy. As the largest extractive industries in the Wider Caribbean (which includes the Gulf of Mexico), petroleum and natural gas follow a technology-led S-curve,⁶ while bauxite charts the typical boom-bust mining cycle (currently in the trough). Industrial manufacturing is an abbreviated economic sector, and back-office and financial-services industries as economic bases are found in an almost proprietary way linked to former British colonies, and are often ephemeral - the Bahamas and Cayman Islands being the obvious exceptions. Recreational tourism and eco-tourism are unstable industries, and provide a less than robust tax base, but seem to be the new developmental strategy of choice, particularly for Caribbean SIDS.

Throughout the region, low levels of economic activity coupled with high levels of democratised, if semi-colonial, institutions and states have led to governments' preoccupation with the potential for instability. While the legacy of colonialism, especially the British educational system in the Eastern Caribbean, has fostered a generally high level of literacy and widespread access to secondary and university education (which ought to translate into increases in economic development, but seems not to), economic development in the area is sufficiently fragile that sustainable development issues are readily linked to internationally led environmental agendas. It could be further argued that environmental tactics reciprocate by validating sustainable development strategies.

While it will be useful to observe regional ocean management and security efforts at an aggregate level, the Eastern Caribbean, defined by the necklace of volcanic islands on the Atlantic edge, is the most interesting subregion because it has achieved the most successful such arrangements to date. As profiled below, the Caribbean Community and Common Market (CARICOM) and the Regional Security System (RSS) offer perhaps the best examples of intra-regional cooperation; the Intergovernmental Oceanographic Commission (of UNESCO) Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), arguably the least effective.

⁶ Caleb Solomon and Peter Fritsch, 'Mission to Mars: how Shell hit gusher where no derrick had drilled before; company makes a huge bet on untested methods to tap deep Gulf well; big secret for a long time', *Wall Street Journal*, 4 April 1996, p.A1.

Regional Arrangements: Overview

While geography and history primarily define the domain of common Caribbean interests, the regional focus on recreation and eco-tourism helps to explain the initial impetus among Caribbean states for engagement in the various programmes developed under United Nations and World Bank auspices. However, the lack of an array of other common interests appears to constrain full intra-regional cooperation. Traditional and non-traditional ocean management and security issues rarely encourage multilateral offshore activities throughout the area, but favour bilateral agreements.⁷ Recent analyses of the Caribbean situation describe an effectively semi-enclosed sea festooned with regionalised international ocean management institutions and programmes that demonstrate, if not abject failure, at least a predominantly non-functional institutional apparatus.⁸

Any regional approach to Caribbean ocean management and security depends largely on the United States. Maritime surveillance and policing of all large-scale offshore activities, particularly those related to shipping and marine safety, as well as those labelled national security issues, such as drug smuggling, default overwhelmingly to US Coast Guard purview. Negative externalities produced through exploitation of offshore oil and natural gas deposits, such as pollution from drilling rigs, fall chiefly under the oversight of private (that is, corporate) management. However, due to the increasing aggregate numbers of ships in transit through the Panama Canal, oil tankers, and tourist-industry vessels, the likewise increasing problem of ship-generated waste in the Wider Caribbean has generated an impetus for a regional control programme. The Global Environment Facility response to this need has been spearheaded by the usual global institutions: the United Nations Development Programme, the United Nations Environment Programme (UNEP),

⁷ Ivelaw Lloyd Griffith, *The Quest for Security in the Caribbean: Problems and Promises in Subordinate States* (M. E. Sharpe, Armonk NY, 1993).

⁸ Respectively, Peter M. Haas, 'Save the Seas: UNEP's Regional Seas Programme and the Coordination of Regional Pollution Control Efforts' in Elisabeth Mann Borgese, Norton Ginsburg, and Joseph R. Morgan (eds), *Ocean Yearbook 9* (University of Chicago Press, Chicago, 1991), pp.188-212; Edward Miles, 'The Potential Role of Regional Organisations Related to the Marine Environment in the Context of Global Climate Change' in Michael H. Glantz (ed.), *The Role of Regional Organizations in the Context of Climate Change*, NATO Advanced Science Institutes Series I: *Global Environmental Change*, Vol.14 (Springer-Verlag, in cooperation with NATO Scientific Affairs Division, Berlin, 1994), pp.120-8.

and the World Bank, with infrastructure location(s) the immediate sticking point.⁹ Other long-term issues awaiting attention include island soil erosion, deforestation, sedimentation, and deterioration of the resource base.

Policing of smaller scale activities is effectively prioritised by the financial capability and political will of the individual states. For example, region-wide fear of the potential for subversion, financed by contraband profits, of sitting SIDS governments has propelled the issue of drug smuggling to the top of priorities lists. As early as 1990, at least two Caribbean leaders identified drugs as the primary threat to security in the region.¹⁰ More recently, the US State Department official responsible for narcotics and law enforcement issues addressed the 'substantial risk that these islands could be taken over by criminal cartel groups'.¹¹

Through the US Coast Guard, the US effort to deal with the drug and other maritime problems of the Caribbean makes an interesting case study in externally fostered subregional cooperation. In the early 1990s, the United States negotiated the first in a series of bilateral counter-drug agreements with Caribbean states, with provisions for US ships to enter territorial waters, and for 'shiprider' law enforcement detachments (seven or eight persons) from the US Coast Guard to ride the patrol vessels of Caribbean states. The logic behind these efforts was straightforward: if drugs (and illegal immigrants) must cross the Caribbean to reach the US, then the best way to deal with such illegal traffic is to stop it at the Caribbean choke points (primarily the Old Bahama Channel, Straits of Florida, Yucatan Strait, and Windward Passage). By definition, such operations require entry into the territorial seas of the relevant Caribbean states.¹²

One US Coast Guard officer has characterised these agreements as the first efforts toward the establishment of a 'virtual

⁹ World Bank, *Developing Countries of the Wider Caribbean Region: Wider Caribbean Initiative for Ship-generated Waste*, Report No.12868 LAC (World Bank, Washington DC, 1994).

¹⁰ Prime Minister Lloyd Erskine Sandiford of Barbados and Michael Manly, former Prime Minister of Jamaica, both quoted in Griffith, *The Quest for Security in the Caribbean*, p.243.

¹¹ LT USCG James D. Carlson, 'As World Ambassador', *US Naval Institute Proceedings*, Vol.22, No.12, 1996, p.53.

¹² LTJG USCG Brian Koshulsky, 'Should I Die for Bahamian Fish?', *US Naval Institute Proceedings*, Vol.22, No.12, 1996, pp.68-9.

archipelagic law enforcement region', noting that, since 1995, US Coast Guard and regional maritime services have conducted periodic 'surge' operations that strive:

... to render the regional sovereign territorial sea boundaries transparent to the multinational law enforcement vessels that blitz the Eastern Caribbean during these operations [... so that] the biggest advancements probably have been the near-elimination of territorial sea boundaries to participating law enforcement assets and furthering of interoperability in the region between the various maritime services - be they marine police, coast guards, or navies.¹³

These efforts are considered to complement those of the Regional Security System.

Also since 1995, US Coast Guard liaison officers have been posted with the Haitian Coast Guard and in Barbados, while other services complement the US Coast Guard lead. For example, US Navy ships from the southern-based Western Hemisphere Group conduct periodic counter-drug patrols, with embarked US Coast Guard law enforcement detachments, as well as with the Caribbean station ships (one each) from the United Kingdom, Netherlands, and France (and, more recently, Canada).

Other maritime law enforcement issues pale in comparison with drug interdiction in the Caribbean. Caribbean piracy is virtually a non-issue: in 1991-96, only one incidence of piracy was reported for the region.¹⁴ Illegal migration, with the notable exception of periodic spates of 'boat people' refugees from Cuba and Haiti toward the US coast, appears mainly in two forms. One set of illegal migrants is composed of local fishers who have 'strayed' into neighbouring territorial seas, and who are returned - following 'detention for identification', seizure of vessel, and moderately harsh treatment geared to discourage recidivism - via diplomatic channels. Economic migrants comprise the other group, which provides local goods (such as fresh produce), and whose activities frequently result in

¹³ Carlson, 'As World Ambassador', p.53.

¹⁴ International Chamber of Commerce, International Maritime Bureau, Regional Piracy Centre, *Annual Report* (International Chamber of Commerce, Paris, 1997), p.3.

incarceration followed eventually by diplomatic intercession for repatriation.

Mutual distrust, especially between small and large states, punctuated occasionally by active discord, characterises conditions among states along the Caribbean rim, with the larger, or 'middle power', states - particularly Colombia and Venezuela - often following a unilateral approach to offshore security matters. Limited financial means constrain the capability of every SIDS to effectively police its coastal zone. Enforcement in the Eastern Caribbean, for instance, except for standing armies in Barbados and in Trinidad and Tobago, is the responsibility of low-tech constabulary navies (such as coast guards) under the command of state police forces and defence forces. In order to partially offset the budgetary problem affecting maritime policing and enforcement, exogenous states have provided vessels, weapons, and training in order to enhance Caribbean stability. For example, among the elements of development-oriented security assistance provided by Canada since 1982, coast guard training for at least 15 SIDS, mostly islands, has been emphasised through the Caribbean Maritime Training Assistance Program. One subregional collective security effort exists, the RSS in the Eastern Caribbean.

Regional cooperation focused on other-than-policing issues has demonstrated a chequered history of success. For example, cooperative fisheries arrangements at the regional level do not exist - either to manage the resource or to resolve conflicts - and most subregional trade agreements are bilateral (in order to avoid beggar-thy-neighbour outcomes, intentional or not). However, several noteworthy regional cooperative efforts do exist. For instance, over the long term, cooperation among Caribbean universities may help cure the serious lack of domestic capabilities for running regional programmes, of whatever genesis, both on- and offshore, exclusive of various training and education programmes that accompany internationally led plans.¹⁵ As might be expected, the Regional Seas Programme organised under the United Nations Environmental

¹⁵ Consortium of Caribbean Universities for Natural Resource Management (CCUNRM), *Three-year Progress Report on the CCUNRM* (CCUNRM, Virgin Islands, 1995). Relevant to the subsequent profiles, see also Intergovernmental Oceanographic Commission (of UNESCO), *Draft Action Plan and Strategy for TEMA-IOCARIBE* (SC-IOCARIBE-V Prov.) (Fifth Session of the IOC

Programme (UNEP) has provided most of the top-down, maritime cooperation initiatives receiving Caribbean attention. Nevertheless, most of UNEP's agenda is today marginally functional due primarily to the severe shortage of funds (particularly the US portion).¹⁶ Anecdotal evidence suggests that the most practicable regional initiatives are those which emerge from local efforts, rather than from international plans. The following sketches of CARICOM, RSS, and IOCARIBE extend and amplify this assertion.

Caribbean Community and Common Market (CARICOM)

At the subregional level, CARICOM has been an operable, but weak, organisation since its creation in 1973. External military-oriented inputs have strengthened the association following its indecisive role in the 1983 US intervention in Grenada. From its inception, it was hoped that CARICOM would facilitate regional integration through economic development initiatives that interweave the psychological and cultural objectives implicit in the establishment of a Caribbean identity.¹⁷ As Caribbean economic conditions continue in the character of 'dependent underdevelopment', and workshop-type assemblies proposed to address wider issues frequently have been internally forestalled, CARICOM cannot be described as a complete success. Nor is it a total failure: the 1991 Port of Spain Consensus emerged from CARICOM's 1989 initiative for an economic security conference that brought together some 200 delegates from the Dutch-, English-,

Subcommission for the Caribbean and Adjacent Regions, Intergovernmental Oceanographic Commission, Cartagena de Indias, Colombia, 1995).

- 16 Relevant documents are three: United Nations Environment Programme (UNEP), *Action Plan for the Caribbean Environment Programme*, UNEP Regional Seas Reports and Studies No. 26, 1983; United Nations Environment Programme (UNEP), *Progress Report on Regional Co-operation in Environmental Matters in Latin America and the Caribbean*, [for] Meeting of high-level governmental experts on regional co-operation in environmental matters in Latin America and the Caribbean, 27-29 March 1989 (UNEP, 1988); and United Nations Environment Programme (UNEP), *Project Proposals of the Action Plan for the Caribbean Environment Programme for the 1996-1997 Biennium*, [for] Eleventh meeting of the monitoring committee on the Action Plan for the Caribbean Environment Programme and special meeting of the Bureau of Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, 7-9 December 1994 (UNEP, 1994).
- 17 Alister McIntyre, *The Caribbean after Grenada: Four Challenges Facing the Regional Movement* (Institute of International Relations, University of the West Indies, St. Augustine, Republic of Trinidad and Tobago, 1984), pp.11-15.

French-, and Spanish-speaking Caribbean - a significant achievement in itself - to focus on mutually reinforcing (human, social, economic, and environmental) strategies for the region's economic growth and survival into the twenty-first century.¹⁸

By virtue of its existence, however, more widespread initiatives tend to be attached to CARICOM, such as recent calls for entire Caribbean rim participation in an Association of Caribbean States (ACS), 'anchored on and promoted by CARICOM'; unfortunately, the ACS is seen by many Caribbean states as nothing more than another attempt at inclusion of Latin American states in things Caribbean.¹⁹ Latin American states, on the other hand, attribute much higher importance to their economic gains achievable through membership of the North American Free Trade Area (NAFTA), the Andean Group, and the Common Market of the Southern Cone (MERCOSUR). International projects also are linked with CARICOM, such as the CARICOM-initiated Caribbean project for Planning for Adaptation for Climate Change (a four-year Global Environment Facility-funded project, implemented by the World Bank, and executed by the Organisation of American States).²⁰

However, it is the Organisation of Eastern Caribbean States (OECS), something of a subset of CARICOM, that links active regional and subregional security measures. Established by treaty in June 1981, OECS is the subregional grouping successor to the 1966 West Indies Associated States Council of States. Membership is limited to Antigua-Barbuda, Dominica, Grenada, Montserrat, St. Kitts-Nevis, St. Lucia, and St. Vincent and The Grenadines. Although, as a result of preoccupation by those states with internal disorder and mercenary activity, considerable cooperation exists in military and police training (such as the Regional Police Training Center in Barbados and the OECS/Caribbean Cadet [Officers] Camp), the OECS is also noted for its economic-environmental initiatives, such as its recent workshop on

¹⁸ Griffith, *The Quest for Security in the Caribbean*, pp.38-9.

¹⁹ West Indian Commission, *Time for Action: The Report of the West Indian Commission* (The West Indian Commission, Black Rock, Barbados, 1992), pp.426-35.

²⁰ World Bank, *Caribbean: Planning for Adaptation to Climate Change*, Brochure No.2 (World Bank, Washington DC, 15 October 1995). See also World Bank, *Initiative for Regional Action on Caribbean Environmental Issues*, Report No.13045-LAC (World Bank, Washington DC, 16 May 1994).

170 *Regional Maritime Management and Security*

issues of Caribbean trade and environment, and its ongoing efforts toward solid waste management.²¹

Relative to the emergence of Caribbean collective security in its more comprehensive form, here addressed as ocean management and security, it is helpful to understand the evolution of the traditional approach. Before CARICOM came the 1973 Mutual Assistance Scheme, promoted by the Standing Committee of Ministers of Foreign Affairs (an 'institution' of the planned community), which predated the 1979 resolution for Zone of Peace, which predated the subregional RSS. Article 8 of the OECS treaty addresses security matters; Section 4 specifies the legal and political framework for the establishment of the RSS.²² The creation of the RSS is generally regarded as the OECS response to CARICOM's failure to address the Grenada crisis in any meaningful way except to invite US intervention - invited intervention, with which, it must be acknowledged, the Eastern Caribbean repeatedly has demonstrated itself quite comfortable.

Regional Security System (RSS)²³

As a reference point, the peculiarities of the Regional Security System are significant and instructive for coastal-state newly industrialised economies. The RSS was established in 1982 under a Memorandum of Understanding (MOU) signed originally by Antigua-Barbuda, Barbados, Dominica, St. Lucia, and St. Vincent and The Grenadines, with Grenada and St. Kitts-Nevis later becoming parties to it. It must be remembered that Eastern Caribbean offshore security units operate under police and army control, so that the point of the MOU was to coordinate national efforts in order to ensure sufficient force against potential internal and external instability in the subregion.

Areas of RSS cooperation include the preparation of contingency plans, mutual assistance on request in national

21 Organisation of Eastern Caribbean States, Regional Forum on Trade and Environmental Issues, 7-10 November 1995; for example, OECS, *OECS Solid Waste Management Project Bulletin*, Bulletin 1 of 2, July 1993.

22 Griffith, *The Quest for Security in the Caribbean*, Chapter 6, 'Collective Security Measures', *The Quest for Security in the Caribbean*, pp.148-74.

23 *Memorandum of Understanding Relating to Security and Military Cooperation*, reprinted in Griffith, *The Quest for Security in the Caribbean*, pp.287-93.

emergencies, prevention of smuggling, search and rescue, immigration control, fishery protection, customs and excise control, maritime policing duties, protection of offshore installations, pollution control, and response to natural and other disasters, and threats to national security. Ministers responsible for defence issues comprise the central policy-making body, which may appoint committees and must meet at least once per year. A regional security coordinator (RSC), who is the chief officer of the Central Liaison Office, is appointed by the Council of Ministers, as is the RSC's staff, after consultation with the force commanders. The regional security coordinator is also responsible for advising the Council of Ministers in matters relating to regional security and is authorised to engage in non-binding negotiations with extra-regional agencies on behalf of the participant states. The RSC is also responsible for the triennial budget (and any supplements) submitted for the Central Fund - of which Barbados supports 49 per cent, with the remainder apportioned among the other members.

Numerous MOU points specify RSS mechanics, such as command and discipline, jurisdiction, claims, training, procurement, and operational expenses. Planning and operations between 'requesting country' and 'sending country' are overseen by force commanders as a Joint Coordinating and Planning Committee, with combined operations coordinated at Barbados Defence Force Headquarters (St. Ann's Fort). For joint training exercises, force commanders, not governments, control access by participating coast guard units to state territorial waters. It was envisioned that participant state governments would review and update their laws relating both to their territorial waters and exclusive economic zones, and to armed forces visiting the participating countries. In confirmation of its potential usefulness in Eastern Caribbean stability, the RSS was institutionalised as a treaty organisation in March 1996.

Intergovernmental Oceanographic Commission (of UNESCO) Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE)²⁴

Equally instructive for post-colonial states is IOCARIBE, the self-described experimental laboratory in the Caribbean for regionalising the management of semi-enclosed seas under a top-down model that requires annual financial tithes for operations from the coastal states. IOCARIBE began as the first experimental regional Association of IOC Member States in 1975. Following evaluation in 1982, the regional subcommission was then created with a view to linking regional activities with global promotion, development and coordination of marine scientific research programmes, ocean services and related activities - the manifestation of a 'think global, act regional' mission.

For simplicity of inspection, the range of recent IOCARIBE programmes and participants is provided in Table 16.1. Criticism of the ambitious ocean management programmes designed under the aegis of international bodies and inserted into a region or subregion can be surveyed via the recent IOCARIBE self-evaluation. However, the fundamental problems with IOCARIBE programme implementation can be summarised as follows:

- insufficient program funds,
- unrealistic or poorly managed feasibility studies,
- insufficient funds for travel by representatives to meetings,
- institutional self-aggrandisement
- lack of local institutional capacity,
- inappropriately designated national focal points,
- lack of sufficient numbers of scientific personnel,
- lack of commitment by member states,
- insufficient participation feedback,

²⁴ Intergovernmental Oceanographic Commission (of UNESCO), Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), *Report on IOCARIBE Evaluation* (Intergovernmental Oceanographic Commission, Cartagena de Indias, Colombia, October 1995).

- insignificant collaboration with end-users, industry and policy makers,
- non-inclusion of NGOs,
- domination of programmes by wealthier states,
- poor articulation of training and transfer mechanisms,
- lack of accountability for output and results, and
- lack of a regional information management system.

Although some programmes have been considered successful, among the unfortunate effects of the many less-than-successful IOCARIBE plans is the rise of questions concerning perhaps unintentional creation or perpetuation of dependency in underdeveloped states, similar to those involved in the 'appropriate technology' learning-strategies argument. Using the single example of sea-level change implicit in global warming scenarios, three considerations seem critical. First, in the planned transfer of technology, what wider-application knowledge, skills and abilities (beyond highly standardised replication) are taught - and to how many technicians, rather than scientists - during the shift to local oversight of sea-level change instrument monitoring, which is itself a relatively exclusive activity? Second, who owns, and who controls, the accumulation of knowledge embedded in the registration of sea-level change data? Third, to what degree is the science involved in the sea-level change monitoring programme already available through, and made redundant by, local institutions and networks (that is, the Consortium of Caribbean Universities for Natural Resource Management or CCUNRM).²⁵ In other words, had it been wholly successful, would IOCARIBE have created much more than a scientific colony in the Caribbean?

Conclusion

Caribbean history is littered with localised geopolitical divides and historical conflicts that have resulted in the current atmosphere of fractionated cooperation. Furthermore, few states can afford to financially support efforts not perceived in their immediate interests.

²⁵ See footnote 15.

174 Regional Maritime Management and Security

Table 16.1: Participation of States in IOC - IOCARIBE Events by Programmes and States (continued across page)

		FR	NE	UK	US	MEX	GUA	BEL	HON	NIC	CR	PAN	COL	VEN	GUY	FG
OSLR																
1977	Report of the IOCARIBE interdisciplinary workshop on scientific programmes in support of fisheries projects.	*		*	*	*	*	*	*	*	*	*	*	*	*	*
1982	Summary report of the IOCARIBE steering committee for developing regional contingencies for fish kills.				*						*					
1987	Group of experts on recruitment in tropical demersal communities (TRODERP) First session.				*	*							*	*		
1989	IOC workshop to define IOCARIBE-TROCERP proposals.	*			*								*	*		
OSNLR																
1978	Report of the IOCARIBE workshop on environmental geology of the Caribbean coastal area.				*	*							*			
1986	IOCARIBE mini-symposium for regional development of IOC-UN (OETB) programme on ocean science in relation to non-living resources (OSNLR).	*			*	*										
1989	Interdisciplinary seminar on research problems in the IOCARIBE region.				*								*	*	*	
1990	IOCARIBE ad hoc group of experts meeting on OSNLR.	*			*								*	*		
1994	OSNLR ad hoc experts meeting on technical and cartographic methodology for Caribbean critical areas.	*			*								*	*		
CZM																
1979	Workshop on coastal area management in the Caribbean region.				*	*	*		*	*	*	*	*	*	*	*
1993	IOC workshop on small island oceanography in relation to sustainable economic development and coastal area management of SIDS.	*	*		*								*			
1994	IOC workshop on GIS applications in the coastal zone management of SIDS.		*		*											Tonga (*)
OPC																
1986	IOCARIBE workshop on physical oceanography and climate.				*	*					*		*	*		
1990	IOC group of experts on Global Sea-level Observing System (GLOS), second session. GLOSS development within IOCARIBE. (Stations in use.)	*			*	*			*				*	*	*	
1992	IOCARIBE group of experts on Ocean Processes and Climate.				*	*					*		*	*		
1995	Chapman conference on the circulation of the Intra-American sea.				*	*										
IODE																
1990	First IOC training course on the applications of satellite remote sensing to marine studies				*						*		*	*		
1991	IOC training course on microcomputers and management of marine data in oceanographic data centres of Spanish speaking countries in the Caribbean region.				*						*		*	*		
IBCCA																
1986	First Reunion del comite IBCCA.	*			*	*					*		*	*		
1988	Second Reunion del comite IBCCA.				*	*					*		*	*		
1988	IBCCA workshop on data sources and map compilation.				*	*					*		*	*		
1989	First meeting of the IBCCA editorial board officers.				*	*					*		*	*		
1990	Third Reunion del comite IBCCA.				*	*					*		*	*		
1992	Fourth Reunion del comite IBCCA.				*	*					*		*	*		
1993	Second meeting of the IBCCA editorial board officers.				*	*					*		*	*		
1994	Fifth Reunion del comite IBCCA.				*	*					*		*	*		
MPRM																
1976	Report of the IOC/FAO/UNEP international workshop on marine pollution in the Caribbean and adjacent regions.				*	*	*	*			*	*	*	*	*	*
1989	IOC-UNEP Regional workshop to review priorities for marine pollution monitoring, research, control and abatement in the Wider Caribbean.	*			*	*	*	*	*	*	*	*	*	*	*	*
1991	IOC-UNEP (CEPPOL) workshop on monitoring and control of Caribbean pollution by oil and marine debris.				*	*					*	*	*	*		
1992	IOC/UNEP/NOAA/EPA/SEA GRANT/IMO Second marine debris workshop.				*	*					*	*	*	*		
1992	IOC/UNEP/ARPEC/IMO/CEPPOL oil and marine debris evaluation meeting.				*	*					*	*	*	*		

176 *Regional Maritime Management and Security*

Table 16.1 (cont.): Key

The States:		The Programmes:	
FR	France	OSLR	Ocean Science in relation to Living Resources
NE	Netherlands	OSNLR	Ocean Science in relation to Non Living Resources
UK	United Kingdom	CZM	Coastal Zone Management
US	United States	OPC	Ocean Processes and Climate
MEX	Mexico	IODE	International Oceanographic Data Exchange
GUA	Guatemala	MPRM	Marine Pollution Research, Monitoring and Abatement
BEL	Belize	IBCCA	International Bathymetric Chart of the Caribbean Sea and Gulf of Mexico
HON	Honduras		
NIC	Nicaragua		
CR	Costa Rica		
PAN	Panama		
COL	Colombia		
VEN	Venezuela		
GUY	Guyana		
FG	French Guiana		
BAH	Bahamas		
CUB	Cuba		
CI	Cayman Islands		
JAM	Jamaica		
HAI	Haiti		
DMR	Dominican Republic		
T&C	Turks & Caicos		
PR	Puerto Rico		
USV	US Virgin Islands		
BWI	British West Indies; British Virgin Islands		
ANG	Anguilla		
A&B	Antigua & Barbuda		
SKN	Saint Kitts & Nevis		
MNT	Montserrat		
GDL	Guadeloupe		
DOM	Dominica		
MRT	Martinique		
STL	Saint Lucia		
BAR	Barbados		
SVG	Saint Vincent & The Grenadines		
GRE	Grenada		
T&T	Trinidad & Tobago		
NEA	Netherlands Antilles		
IOC	Intergovernmental Oceanographic Commission		
IHO	unidentified organization		

Source: Intergovernmental Oceanographic Commission (of UNESCO), Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), Report on IOCARIBE evaluation (Cartegena de Indias, Colombia, October 1995), Annex IV, pp.1-3.

Although there are local efforts to harmonise local activities with the several United Nations programmes, and there is a successful subregional effort toward security in the areas of marine safety and law and order at sea, no regional 'comprehensive security' framework exists in the Caribbean region. Nor is one likely to succeed under current political and economic configurations. Attempts toward regional protection of the marine environment are limited to ad hoc responses primarily to threats against tourism-generated income, as development and management of major marine resources still reside chiefly in foreign and corporate hands. Meanwhile, perceptions of security in the Caribbean remain state-centred rather than regional, and predominantly regime- and land-oriented. This situation is unlikely to change soon.

The basic problem impeding regional (and, to a lesser extent, subregional) programmes generally is lack of real financial commitment, which is a function both of historical and geopolitical background and interests and of stunted economic development. Moreover, lacking better international—regional articulation, it is unlikely that imposed institutional mechanisms for the range of ocean management issues would succeed, even if funding were realised. Finally, chronically poor organisation means that, following the flurry of programme initiation, the passage of time tends strongly to erode the legitimacy of stalled programmes and to drain away energy for local implementation. For all these reasons, it is likely that the various ocean management programmes under international umbrellas will remain largely dormant. Subregional organisations focused on stability, while not exceptional, do appear to offer a more promising pattern for future regional oceans management and security initiatives along the Caribbean littoral.

CONCLUSION

SUMMARY REPORT OF THE THIRD MEETING, CSCAP MARITIME COOPERATION WORKING GROUP

Sam Bateman and Hasjim Djalal

This meeting, held in Bangkok between 30 May and 1 June 1997, was the third meeting of the CSCAP Maritime Cooperation Working Group. It was the largest meeting of the group so far with 30 participants from 16 member CSCAPs and about 18 Thai observers. CSCAP China attended for the first time with four participants. Two experts from Taiwan were also included as 'other participants'. Europe, Mongolia and North Korea were the only CSCAPs not represented. The assistance provided by CSCAP Thailand and the Southeast Asian Programme in Ocean Law, Policy and Management (SEAPOL) in organising the meeting is gratefully acknowledged.

The high number of participants at the meeting may be interpreted as confirmation that the theme chosen for the meeting, 'Regional Oceans Management and Security', is an important one for the Working Group. Measures to achieve the more effective management of regional seas and oceans are a strong common interest of CSCAP member countries. In the security context, they offer potential as 'building blocks' for wider regional cooperation and dialogue, improved regional relations and confidence building.

While *oceans governance* is the term often used to describe the management of oceans and seas, the Working Group preferred to talk about *oceans management* in the security context. This avoids implications that the seas can be *governed*, or that one or more nations can exercise *sea command* over regional seas in the classical strategic sense that *sea command* provides the freedom to use the sea for one's own purposes and to deny its use to an adversary. Such a meaning is clearly inimical to the idea of cooperative management of regional seas and oceans.

Oceans management and regional security are closely related. The main sources of possible conflict at sea in the Asia Pacific are maritime sovereignty disputes, conflicting and excessive claims to offshore jurisdiction, and the lack of agreed jurisdiction over the marine resources of the region. Many Asia Pacific nations relate security to the protection of sovereignty over offshore areas and marine resources. But these are problematic issues at present, with relatively few agreed maritime boundaries in the region and numerous overlapping claims to maritime jurisdiction, as well as disputes over the sovereignty of several islands and island groups. To some extent, maritime disorder, rather than order, prevails in regional seas, with unregulated pollution of the marine environment, over-fishing, marine environmental degradation, and widespread illegal activities at sea (unlicensed fishing, piracy, unauthorised movement of people, and drug smuggling).

The pursuit of national maritime interests, including maritime security interests, may be incompatible with other broader security concerns at a regional level, particularly resource conservation and environment protection. This situation arises when national interests are put before 'the common good'. It is evident in the way in which the exploitation of marine resources poses problems for both comprehensive and conventional security. Resource scarcities, particularly of energy, the possible disruption of seaborne trade, and the risk of confrontation between resource protection forces of neighbouring countries are problems of conventional security for individual countries, while environmental degradation, destruction of habitats, over-fishing, the threatened extinction of species, and pollution of regional seas are all issues of comprehensive security at a regional level. Dilemmas such as this are examples of issues which can be addressed by the Maritime Cooperation Working Group.

A participant at the Bangkok meeting referred to 'old' concepts of managing oceans and seas. By these, he meant concepts based primarily on national rights and obligations rather than cooperation between neighbouring countries. The old systems have proven to be ineffective and can lead to disputes and the 'tragedy of the commons', whereby countries act in their own self-interest and create a situation

in which all lose.¹ Work on new regimes for marine management is therefore required to bring order to the regional marine environment and to prevent maritime disputes simmering away as potential sources of conflict.

These new management regimes might be linked with the following measures of preventive diplomacy and confidence-building, identified by the ASEAN Regional Forum:²

- the development of a set of guidelines for the peaceful settlement of disputes (the Guidelines for Regional Maritime Cooperation developed by the Working Group are a contribution in this regard);
- cooperation and dialogue to build maritime information databases, recognising that no single country can build comprehensive databases from its own resources and all participating countries will benefit from the sharing of information;
- cooperative approaches to sea lines of communication, beginning with exchanges of information and training in such areas as search and rescue, piracy and drug control;
- the establishment of zones of cooperation in areas such as the South China Sea;
- a multilateral agreement on the avoidance of naval incidents that applies to both local and external navies;
- sea-level/climate-monitoring systems (again these require a high level of cooperation between participating countries, but such systems are essential for weather forecasting, to help predict maritime natural hazards and to monitor the longer term impact of climate change);

1 Andrew Mack, 'Security Regimes for the Oceans: The Tragedy of the Commons, the Security Dilemma, and Common Security' in Jon M. Van Dyke, Durwood Zaelke, and Grant Hewison (eds), *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony* (Island Press, Washington DC, 1993), p.409.

2 ARF Concept Paper tabled at the 1995 ARF meeting in Brunei and reproduced in Desmond Ball, 'Maritime Cooperation, CSCAP and the ARF' in Sam Bateman and Stephen Bates (eds), *The Seas Unite: Maritime Cooperation in the Asia Pacific Region* (Strategic and Defence Studies Centre, Australian National University, Canberra, 1996).

- the introduction of regional conventions on the marine environment (especially to prevent the dumping of toxic wastes and to inhibit land-based sources of marine pollution); and
- cooperative regimes for maritime surveillance and joint marine scientific research.

This list of prospective measures from the ARF potentially provides a charter of work for the CSCAP Maritime Cooperation Working Group. To some extent, most of these measures have been encapsulated in the Guidelines for Regional Maritime Cooperation developed by the Working Group. The agenda of the Bangkok meeting of the group was well attuned to supporting the ARF with the development of the measures.

The overall aim of the meeting in Bangkok was to explore new ideas of preventive diplomacy and confidence building in the general area of regional maritime cooperation, particularly in the enclosed and semi-enclosed seas of Southeast and Northeast Asia.³ Maritime activity is increasing in these seas and cooperation is becoming more important. The objectives of the meeting were to:

- review progress with the Guidelines for Regional Maritime Cooperation (draft CSCAP Memorandum No.4);
- contribute to the development of new ideas about the cooperative management of regional seas and oceans areas;
- identify present and planned activities in some area of regional maritime cooperation (such as shipping, resource management, pollution prevention, marine safety, and law and order at sea) which have benefits for regional security (that is, 'value added'); and
- share national and sub-regional perspectives of cooperative oceans and marine management.

³ An *enclosed or semi-enclosed sea* is defined by Article 122 of the 1982 UN Convention on the Law of The Sea as 'a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States'. Examples include the Gulf of Thailand, the South China Sea and the Yellow Sea.

The review of the Guidelines for Regional Maritime Cooperation revealed three main problem areas. These were, firstly, that of definitions and the question of whether or not these should be included, noting that many definitions set out in the guidelines come directly from the 1982 UN Convention on the Law of the Sea. However, the consensus of the meeting was that these should be included. The second issue of concern was the handling of sovereignty issues in the draft guidelines. To overcome this problem, the clause on sovereignty was removed to the end of the guidelines under a side heading, 'Non Prejudicial'. The third major problem area related to naval cooperation. However, observing that all countries represented at the meeting, with the exception of India, are members of the Western Pacific Naval Symposium, and the possible significance of naval cooperation as a confidence-building measure, references to naval cooperation have been retained in the guidelines but with a relatively low profile.

After the meeting, the draft CSCAP Memorandum No.4 and the guidelines were revised by a small re-drafting group. As far as possible, the subsequent amendments to the guidelines took account of the concerns expressed at the meeting. The revised draft memorandum and guidelines were then recirculated to all member CSCAPs. Comments subsequently received were taken into account in the latest draft of the guidelines, which are now awaiting approval of the co-chairs of CSCAP before publication. The latest draft of CSCAP Memorandum No.4 with the guidelines is an annex to this chapter.

The guidelines provide a possible charter for regional maritime cooperation. They strongly accord with the new approaches to oceans management set out in the UN Convention on the Law of the Sea, other international conventions and state practice. If adopted in the region, they will be a framework for ongoing work by the Maritime Cooperation Working Group. Particular guidelines establish the need for additional work which could be undertaken by the Working Group (for example, in fostering multi-disciplinary educational and dialogue programmes under the broad framework of comprehensive security), and with others, there may be a role for the group in monitoring the implementation of the guidelines (for example, in drawing attention to problems with the implementation of and compliance with relevant international instruments).

The main part of the meeting involved the sharing of national and sub-regional perspectives of oceans and marine management. To establish a basis of knowledge for the achievement of the aim of the meeting, to explore new ideas for regional maritime cooperation, individual countries adjacent to regional seas presented short papers on national arrangements for oceans/marine management. These individual presentations addressed how each country manages its maritime interests (such as shipping, marine environmental protection, and fisheries) with a particular focus on national arrangements for undertaking surveillance and enforcement at sea. The objective was to see how different countries manage their maritime interests, which may overlap those of their neighbours, and to stimulate new ideas for regional maritime cooperation.

Several themes emerged from these national presentations. Most countries perceive a need for a change to their national marine management arrangements to meet better the new challenges of oceans management (such as increased shipping traffic, marine environmental protection, over-fishing, and increased offshore hydrocarbon exploration and exploitation). Generally, regional countries are attempting to put in place more coordinated (or integrated) arrangements and policies for managing oceans and marine affairs in lieu of the sectoral approach of the past. Nevertheless, a high level of diversity of arrangements and fragmentation of responsibility is still apparent across the region, with several different national agencies in most countries having some responsibility for maritime regulation and enforcement. This diversity and fragmentation tends to inhibit cooperation at a regional level.

The opportunity was also taken to discuss existing arrangements for regional maritime cooperation and the experiences of other regions in the world with similar experiences of cooperation and geographical situations. Papers were presented covering the Caribbean and the South Pacific, with an up-date on the South China Sea workshops (from Professor Ian Townsend-Gault of Canada) and the situation in Southeast Asia (by Dr Frances Lai of SEAPOL). Subsequent discussion disclosed some concerns over the extent to which experiences in one region could be translated to another. This was particularly the case in the South Pacific, where arrangements tended to be inward-looking with few external linkages. Experience from the South China Sea Workshop process confirmed the utility of

setting aside the issue of boundary disputes and focusing instead on cooperative management issues.

Overall, the papers on national and regional experiences confirmed the scope for useful work in the field of cooperative oceans management to be undertaken by the CSCAP Maritime Cooperation Working Group. Given the lack of agreed maritime boundaries in East Asian seas and the number of conflicting/overlapping maritime claims in the region, the management of regional seas and the development of new management regimes offer considerable potential for preventive diplomacy and confidence building. This also involves building links between the concepts and forums of cooperative and comprehensive security. These and similar themes are planned for the agenda of future meetings of the Working Group.

The next (and fourth) meeting of the Maritime Cooperation Working Group will be held in Tokyo in November 1997. This meeting will address issues related to the relationship between seaborne trade, shipping and regional security. The importance of shipping and seaborne trade in the Asia Pacific is explained by economic and geo-strategic factors. First, the 'archipelagic' nature of the region and the lack of any significant land transport infrastructure in East Asia, other than in China, mean that intra-regional trade is mostly carried by sea, except for very high-value cargoes carried by air. Second, some regional countries are major shipowning nations. Third, regional nations generally lack self-sufficiency and are variously dependent on imports by sea of energy, foodstuffs, raw materials, and particular manufactured goods. Hence they are vulnerable to the disruption of seaborne trade.

Navigational rights and freedoms are major issues in the Asia Pacific, due to the importance of seaborne trade in the region and its strategic geography. Significant geographical features include a proliferation of archipelagic states across the Southwest Pacific, and the high incidence of major international straits and focal areas, particularly in East Asian waters. Ships travelling between the Malacca and Singapore straits and Northeast Asia pass almost entirely through the territorial sea or exclusive economic zone (EEZ) of one country or another. These are just some of the issues which establish the link between seaborne trade and regional security.

With the importance of maritime issues in the Asia Pacific region and the links between these issues and regional security, the CSCAP Maritime Cooperation Working Group continues to have opportunities to support the broad CSCAP process with useful track-two work, particularly in support of the ARF. The fifth meeting of the group, to be held in 1998, will return to the topic of management of regional seas and regime building. Great potential exists with this topic for the development of worthwhile confidence-building measures and preventive diplomacy to reduce the risk of conflict in the oceans and seas of the Asia Pacific region.

The effective management of regional seas and the reduction of maritime disputes present a challenge to the region which will only be met by a higher level of preparedness to cooperate than exists at present. The work of the Maritime Cooperation Working Group, especially the Guidelines for Regional Maritime Cooperation, is intended to be a worthwhile contribution to the foundations of better cooperation and a higher level of maritime order in the region.

ANNEX

CSCAP MEMORANDUM NO.4: GUIDELINES FOR REGIONAL MARITIME COOPERATION

Introduction

This document puts forward the proposed Guidelines for Regional Maritime Cooperation which have been developed by the Maritime Cooperation Working Group of the Council for Security Cooperation in the Asia Pacific (CSCAP). The Guidelines are a set of fundamental, non-binding principles to guide regional maritime cooperation and to ensure a common understanding and approach to maritime issues in the region.

These Guidelines were developed on the basis of proposals advanced at several regional forums, at both the Track One and Track Two levels, for a Regional Agreement on the Avoidance of Incidents at Sea (INCSEA) agreement. As a consequence of papers delivered and deliberations at the first two CSCAP Maritime Cooperation Working Group meetings, held in Kuala Lumpur in June 1995 and April 1996, the concept evolved through the possibility of a Regional Risk Reduction or Maritime Safety Agreement to the idea of more wide-ranging guidelines covering the full scope of regional maritime cooperation. Subsequently a proposed draft of the Guidelines was considered by an ad hoc meeting of the Working Group, held in Jakarta in December 1996, and accepted for submission to the CSCAP Steering Committee. After subsequent comment by CSCAP members, discussion at the Third Meeting of the Working Group held in Bangkok in May 1997 and a further opportunity for comment by CSCAP members, the Guidelines are now issued for consideration for adoption in the region.

The Guidelines adopt a comprehensive approach to regional security. If adopted by regional countries, they will constitute a major contribution to regional security. They cover the maritime confidence and security building and preventive diplomacy measures identified by the ASEAN Regional Forum (ARF) and reflect the strong support in the region for the 1982 UN Convention on the Law of the Sea (UNCLOS). The Guidelines are consistent with UNCLOS and have been influenced by State practice with regard to developments in

oceans management and international law since UNCLOS was opened for signature. They combine this State practice with the obligations pertaining to maritime cooperation laid down in UNCLOS.

Importance of these Guidelines

The importance of these Guidelines flows from the nature and complexity of the regional geographical environment, the significance of maritime issues in the region, and the propensity for illegal activities and disputes to occur at sea. Maritime cooperation will contribute to regional stability by easing tensions and reducing the risks of conflict. The Guidelines also reflect the entry into force of the UNCLOS. They demonstrate the strong regional support for UNCLOS which has been ratified by most ARF member states.

Purpose of Guidelines

The Guidelines serve several purposes:

- First, they constitute an important regional confidence-building measure, laying down general principles for regional maritime cooperation in line with the ARF's long term objective of becoming a mechanism for conflict resolution. They should serve to dampen down tensions, particularly in areas of enclosed or semi-enclosed sea with disputed or overlapping maritime jurisdiction.
- Secondly, they serve as a step in the process of building an oceans governance regime for the Asia Pacific region based on UNCLOS and the inter-related nature of oceans issues, and devoted to the notion of integrated management of such issues.
- Thirdly, the Guidelines should help promote a *stable maritime regime* in the region with the free and uninterrupted flow of seaborne trade, and nations able to pursue their maritime interests and manage their marine resources in an ecologically sustainable manner in accordance with agreed principles of international law.
- Fourthly, the Guidelines apply the concept of comprehensive security in the Asia Pacific region. They should provide a link

between the various concepts and processes of comprehensive security and the various forums which are concerned with elements of comprehensive security.

- Lastly, the proposed Guidelines encapsulate the progress achieved in the Maritime Cooperation Working Group meetings and pave the way for further work within each of the maritime security issue areas covered by the broad principles for cooperation laid down in the Guidelines.

Legal Status of the Guidelines

The proposed Guidelines are non-binding in nature. They set down broad principles of cooperative behaviour in the maritime sector, and do not create legally binding obligations between states. In keeping with their non-binding but persuasive nature, the guidelines are framed in exhortatory rather than obligatory language.

The Guidelines will be regarded as 'soft' law by international lawyers. Soft law instruments are a relatively recent phenomenon in respect of the growing body of international agreements between states. They are generally regarded as non-binding instruments which do not create legal obligations, but instead reflect agreement between states concerning the need to cooperate in identified issue areas. Some of these instruments have been uniquely successful in articulating basic ground rules for international behaviour. This is especially true in the field of the international environment. For example, the 1972 Stockholm Declaration on the Human Environment is widely accepted as laying down the general principle of a state's responsibility for environmental damage to areas beyond its national jurisdiction. This principle is reflected in many other well-known 'soft law' instruments, such as the 1992 Rio Declaration on Environment and Development, as well as in binding instruments, including UNCLOS itself.

The proposed Guidelines aspire to a similar status in respect of the maritime relations between states in the region. They represent a consensus among these states as to the maritime issues which in their view require cooperation in order to achieve the overall objective of a stable regime for all aspects of maritime activities conducted within the region.

Recommendation

It is recommended that these Guidelines be put forward as a CSCAP initiative for consideration by the ARF.

The publication of this Memorandum should not be seen as endorsement of the Guidelines by all members of CSCAP. Some CSCAP members have reservations about several of the Guidelines especially:

18-19	Naval Cooperation
20	Maritime Surveillance
30	Non-Prejudicial

GUIDELINES FOR REGIONAL MARITIME COOPERATION

The participating states of the ASEAN Regional Forum:

Conscious that the issues of oceans management are closely interrelated and need to be considered as a whole;

Affirming the duty among all States to utilise the oceans for peaceful purposes;

Acknowledging the importance of resolving sovereignty and jurisdictional disputes peacefully and without resort to force;

Supporting the intention of the ASEAN Regional Forum (ARF) to foster a regional environment conducive to maintaining the peace and prosperity of the Asia Pacific region;

Taking into account the entry into force of the 1982 United Nations Convention on the Law of the Sea (UNCLOS);

Acknowledging the guiding principles for the Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of their Living Resources set out in Chapter 17 of Agenda 21, agreed at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992;

Taking into account emerging practice with regard to maritime cooperation in all parts of the world;

Acknowledging the importance of seaborne trade in the Asia Pacific region;

Mindful of the interests which countries share in the marine environment, and in a spirit of cooperation, friendship and goodwill; and

Convinced that these guidelines will promote regional maritime cooperation and contribute to the peace, good order and continuing prosperity of the Asia Pacific region;

Hereby adopt the following non-binding Guidelines for Regional Maritime Cooperation:

DEFINITIONS

1. For the purposes of these Guidelines:

'archipelagic waters' means those waters enclosed by the archipelagic baselines of an archipelagic State drawn in accordance with Article 47 of the UNCLOS;

'continental shelf' means the submarine area of seabed and subsoil as defined by Part VI of the UNCLOS;

'enclosed or semi-enclosed sea' means a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States, as defined by Part IX of the UNCLOS;

'exclusive economic zone' means an area superjacent to the sea-bed, the sea-bed and subsoil, as defined by Part V of the UNCLOS;

'high seas' means those waters to which the provisions of Part VII of the UNCLOS applies;

'marine environment' includes the oceans and all seas and adjacent coastal areas;

'pollution of the marine environment' means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities, as defined by Part I of the UNCLOS;

'sea lines of communication' is the term used to describe shipping routes used for seaborne trade;

'surveillance' means the observation of aerospace, surface and sub-surface areas, places, persons or objects by visual, aural, electronic, and photographic means; and

'territorial sea' means the belt of sea which is claimed by the coastal State as territorial sea in accordance with Section 2, Part II of the UNCLOS.

RIGHTS AND DUTIES

2. Parties recognise:
 - the sovereignty and responsibilities of other Parties in respect of their internal waters, territorial seas, and archipelagic waters;
 - the sovereign rights and duties of other Parties with regard to exclusive economic zones and continental shelves; and
 - the rights and responsibilities of other States as provided by the UNCLOS, other conventions, treaty obligations and general international law.

MARITIME COOPERATION

3. States are encouraged to become parties to the UNCLOS and other relevant instruments, noting that this will contribute to the strengthening of peace, security, cooperation, sustainable development and friendly relations.
4. Parties accept that a comprehensive concept of regional maritime security requires a multidisciplinary approach, necessitating cooperation and coordination among all interested bodies and activities.
5. Parties recognise the importance of cooperation for the management of the marine environment, particularly for enclosed and semi-enclosed seas.
6. Parties acknowledge and appreciate the progress being made with activities to prevent conflict and promote cooperation in

194 *Regional Maritime Management and Security*

the South Pacific and the South China Sea. These experiences provide valuable lessons in practical maritime cooperation.

SEA LINES OF COMMUNICATION

7. Parties recognise the importance of freedom of navigation, in accordance with the provisions of UNCLOS, to the maintenance of seaborne trade in the Asia Pacific region.
8. Taking into account the promotion of the safety of navigation and the protection of the marine environment, parties are encouraged to develop cooperative approaches to the maintenance and protection of sea lines of communication. Such cooperative approaches might begin with exchanges of information and training in such areas as humanitarian assistance, search and rescue, marine safety, and law and order at sea. The exchange of information should include information on likely threats to, or security incidents relating to, sea lines of communication.
9. Further implementation of this cooperative approach could include naval cooperation and the sharing of information resulting from maritime surveillance.

HUMANITARIAN ASSISTANCE

10. Parties recognise the benefits of working together on the prevention, mitigation and management of maritime natural disasters, including preparedness and early warning systems, the exchange of information, compilation of data bases, planning, disaster reduction and relief activities, as well as training and education programs.

SEARCH AND RESCUE

11. Parties are encouraged to promote greater sharing of maritime Search and Rescue (SAR) experience and expertise, as well as facilitate coordination and cooperation in SAR training and procedures.

12. Parties are encouraged to consult with regard to the ratification, implementation and participation in relevant conventions and instruments concerning maritime SAR.

MARITIME SAFETY

13. Parties are encouraged to promote navigational safety by measures such as adequate charting, notices to mariners, navigational aids, and notification of recommended shipping routes, as appropriate.
14. Parties express support for regional and international efforts to deal with the problem of sub-standard ships, including the establishment of regional systems of port state control.
15. Parties are encouraged to consult with regard to the ratification, implementation and participation in relevant conventions and instruments concerning maritime safety.

LAW AND ORDER AT SEA

16. Parties recognise the importance of cooperation in the maintenance and enforcement of law and order at sea, including the prevention of piracy, drug smuggling, and other crimes at sea, acknowledging the rights of states to enforce their domestic laws at sea to the extent permitted by international law.
17. Parties are encouraged to institute regular meetings to enhance cooperation and coordination in their maritime enforcement activities.

NAVAL COOPERATION

18. Parties acknowledge the confidence-building benefits of naval cooperation, including increased personnel contacts and voluntary measures to promote naval transparency.
19. Parties may wish to consider a framework of bilateral or multilateral instruments on the avoidance of naval incidents that would be open to interested navies.

MARITIME SURVEILLANCE

20. Parties recognise that maritime surveillance may be conducted for peaceful purposes as part of the exercise of freedom of navigation and overflight in areas claimed as exclusive economic zone or continental shelf, and on the high seas. This should be conducted without prejudice to the jurisdictional rights and responsibilities of the coastal state within its exclusive economic zone or over its continental shelf, as provided for under UNCLOS.*
21. Parties are encouraged to work towards arrangements for the sharing of surveillance information with other Parties to these Guidelines.

PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT

22. Parties recognise their individual and collective obligation to protect and preserve the marine environment.
23. Parties are encouraged to consult with regard to:
 - cooperation on a bilateral, sub-regional and regional basis in taking all measures necessary to prevent, reduce, monitor and control pollution of the marine environment from all sources;
 - the ratification, implementation and participation in relevant conventions and instruments concerning protection, preservation and monitoring of the marine environment;
 - the implementation of Chapter 17 of Agenda 21, adopted at the 1992 United Nations Conference on Environment and Development (UNCED), particularly those program

* CSCAP Malaysia is not able to agree with this formulation of Paragraph 20 and proposes that it should read:

'Parties recognise that maritime surveillance may be conducted for peaceful purposes as part of the exercise of freedom of navigation and overflight in areas claimed as exclusive economic zone or continental shelf, and on the high seas. This should be conducted with the agreement, and without prejudice to the sovereign rights, of the coastal state within its exclusive economic zone or continental shelf.'

areas concerning integrated management and sustainable development, marine environmental protection and the strengthening of international, including regional cooperation and coordination; and

- the development and implementation of national, sub-regional and regional monitoring programs and contingency plans in response to pollution incidents in the marine environment.

MARINE RESOURCES

24. Parties are encouraged to consult at the bilateral, sub-regional and regional levels in the formulation and harmonisation of policies for the conservation, management and sustainable utilisation of marine living resources that straddle maritime zones, or which are highly migratory, or occur in the high seas.
25. Parties are encouraged to consult at the bilateral, sub-regional and regional levels in the formulation and harmonisation of policies for the exploration and exploitation of marine non-living resources which occur across two or more zones of national jurisdiction, especially in cases where a shared resource can be exploited, wholly or in part, from one or more of the zones of national jurisdiction.

MARINE SCIENTIFIC RESEARCH

26. Parties are encouraged to cooperate, directly or through competent international, regional or sub-regional organisations, for the purpose of promoting studies, undertaking programs of scientific research and encouraging the exchange of information and data acquired about the marine environment, particularly about pollution of the marine environment and changing sea levels.
27. Parties are encouraged to consult on efforts to harmonise their respective procedures, in accordance with Part XIII of UNCLOS, for granting consent to proposed marine scientific research projects in their exclusive economic zones and on their continental shelves.

TECHNICAL COOPERATION AND CAPACITY-BUILDING

28. Parties recognise the benefits of technical cooperation and capacity-building, and are encouraged to implement relevant programs in the maritime sector designed to build infrastructures, institutions and capabilities for policy formulation and implementation. This includes information sharing and development of databases.

TRAINING AND EDUCATION

29. Parties will cooperate on the development and promotion of training and educational programs for the management of the marine environment, particularly for the maintenance of safety and law and order at sea, the preservation and protection of the marine environment, and the prevention, reduction and control of marine pollution. Such cooperation might include:
- the offer of places on national training courses to other parties, subject to payment of relevant costs;
 - sharing curriculum and course information;
 - the exchange of naval and law enforcement personnel, scientists and other experts;
 - the exchange of views on maritime issues;
 - holding conferences, seminars, workshops and symposiums on maritime subjects of common interest; and
 - fostering cooperation among maritime training institutions and research centres.

NON-PREJUDICIAL

30. Nothing contained in these Guidelines, or activities taking place thereabove, should be interpreted as prejudicing the position of any Party in its claims to territorial sovereignty, sovereign rights or jurisdiction over territory or maritime zones.

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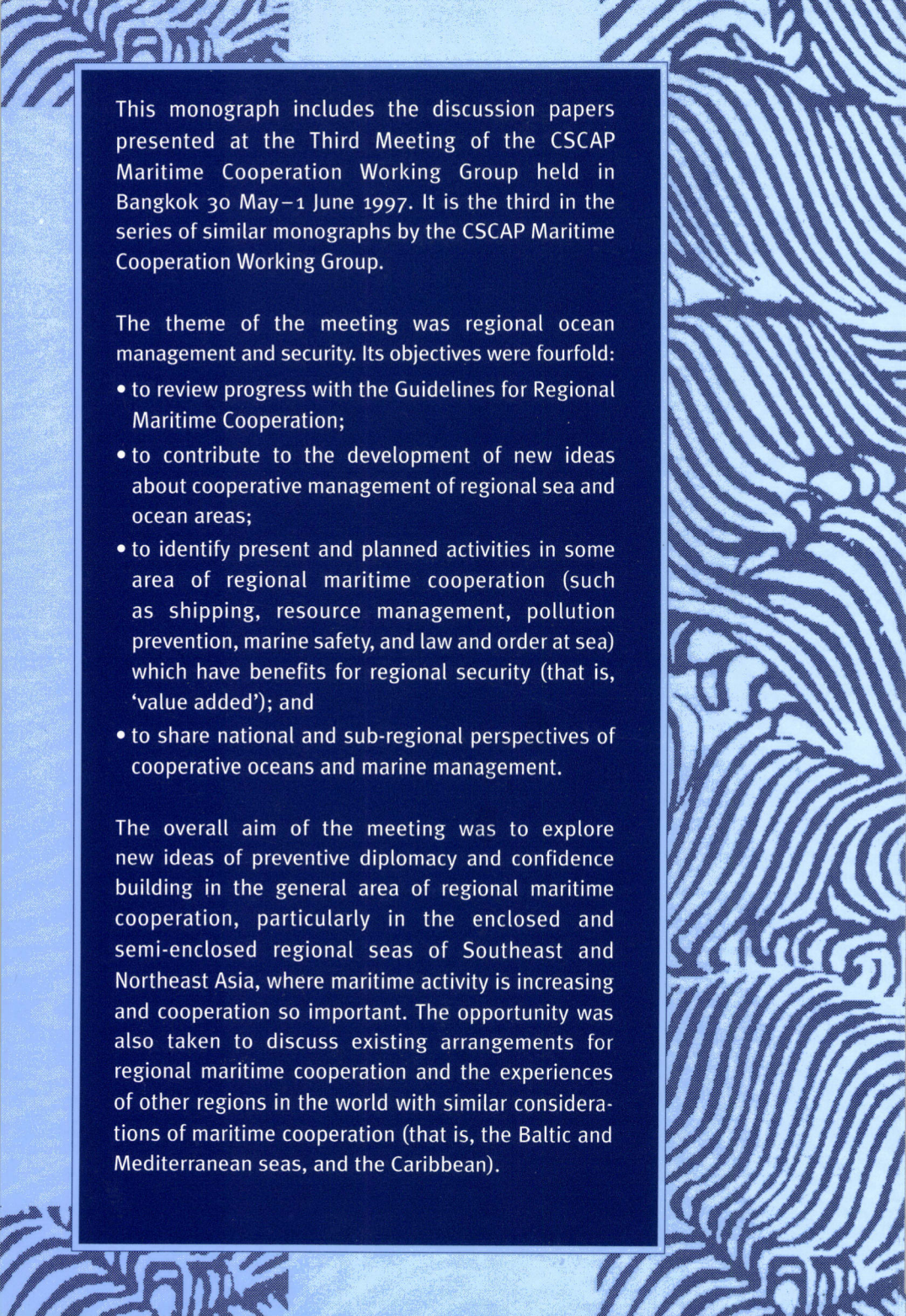
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208 *Regional Maritime Management and Security*

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This monograph includes the discussion papers presented at the Third Meeting of the CSCAP Maritime Cooperation Working Group held in Bangkok 30 May–1 June 1997. It is the third in the series of similar monographs by the CSCAP Maritime Cooperation Working Group.

The theme of the meeting was regional ocean management and security. Its objectives were fourfold:

- to review progress with the Guidelines for Regional Maritime Cooperation;
- to contribute to the development of new ideas about cooperative management of regional sea and ocean areas;
- to identify present and planned activities in some area of regional maritime cooperation (such as shipping, resource management, pollution prevention, marine safety, and law and order at sea) which have benefits for regional security (that is, 'value added'); and
- to share national and sub-regional perspectives of cooperative oceans and marine management.

The overall aim of the meeting was to explore new ideas of preventive diplomacy and confidence building in the general area of regional maritime cooperation, particularly in the enclosed and semi-enclosed regional seas of Southeast and Northeast Asia, where maritime activity is increasing and cooperation so important. The opportunity was also taken to discuss existing arrangements for regional maritime cooperation and the experiences of other regions in the world with similar considerations of maritime cooperation (that is, the Baltic and Mediterranean seas, and the Caribbean).