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**TOWARDS A NETWORK OF MARINE
PROTECTED AREAS IN THE SOUTH CHINA
SEA: LEGAL AND POLITICAL
PERSPECTIVES**

by

Hai Dang Vu

Submitted in partial fulfillment of the requirements
for the degree of Doctor in the Science of Law

at

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Halifax, Nova Scotia
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To Nguyen Thi Hien and Vu Van Tan, My Dear Parents

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Abstract

The once pristine and rich marine environment of the South China Sea is degrading at an alarming rate due to the rapid socioeconomic development of the region. Despite this, and because mainly of complicated sovereignty and maritime boundary disputes, coastal States have not been able to develop effective regional cooperation to safeguard the shared marine environment. This dissertation, “Towards a Network of Marine Protected Areas in the South China Sea: Legal and Political Perspectives”, researches legal and political measures to support the development of a network of marine protected areas in the South China Sea. Such a network, if properly developed, would not only help to protect the marine environment and resources of the region but also contribute to lower the tension among its coastal States. These measures should be developed in accordance with international law, based on the specific geopolitical context of the South China Sea region and take into consideration experiences in developing regional networks of marine protected areas from other marine regions. Consequently, three optional categories of measures for the development of a network of marine protected areas in the South China Sea are suggested at the end. They include national-focused measures; measures to enhance the regional cooperation; and measures to build a regime for marine protected areas and network of marine protected areas in the South China Sea. These measures could be taken alternatively or on a step-by-step basis.

List of Abbreviations Used

APEC	Asia-Pacific Economic Forum
ASEAN	Association of South East Asian Nations
CBD	Convention on Biological Diversity, 1992
COBSEA	Coordinating Body on the Seas of East Asia
COP	Conference of Parties
CMS	Convention on Migratory Species of Wild Animals, 1979
DOC	Declaration on the Conduct of Parties in the South China Sea, 2002
EC	Commission of the European Communities
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GFCM	General Fisheries Commission for the Mediterranean
ICM	Integrated Coastal Management
ICRAN	International Coral Reef Action Network
ICRI	International Coral Reef Initiative
IMO	International Maritime Organization
IOSEA-Marine Turtles MOU	The Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia, 2001
IPOA	FAO International Plan of Action
IUCN	International Union for the Conservation of Nature
JOMSRE-SCS	Joint Oceanographic Marine Scientific Research Expedition in the South China Sea
LME	Large Marine Ecosystem
MAB	Man and the Biosphere Programme
MAP	Mediterranean Action Plan
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
MED POL	Coordinated Mediterranean Research and Monitoring Programme for the Mediterranean

MOU	Memorandum of Understanding
MPA	Marine Protected Area
NGO	Non-Governmental Organization
OSPAR CONVENTION	Convention for the Prevention of Marine Pollution of the North-East Atlantic, 1992
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PAP	Priority Actions Programme for the Mediterranean
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice, CBD
RAC/SPA	Regional Activities Centre for Specially Protected Areas
SAP	Strategic Action Programme for the South China Sea
SDS-EAS	The Sustainable Development Strategy for the East Asian Seas, 2003
SCS	South China Sea
SPA	Specially Protected Areas
SPAMI	Specially Protected Areas of Mediterranean Importance
UN Secretary- General	United Nations Secretary-General
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
WCPA	World Commission on Protected Areas
WWF	World Wildlife Fund

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Chapter I. Introduction

This first Chapter of the dissertation provides the purpose, content outline and contribution of the dissertation as well as the methodology of research used for its completion.

1.1 Purpose, Content Outline and Contributions of the Dissertation

1.1.1 Purpose of the Dissertation

The marine environment of the South China Sea (SCS)¹ is currently under serious threat of degradation. One of the most effective tools for the protection of important habitats and species, which can be used to “save” the SCS, is marine protected areas (MPAs). The Conference of the Parties (COP) of the Convention on Biological Diversity (CBD), of which all coastal States of the SCS are parties, also calls for the development of comprehensive, effectively managed and ecologically representative national and regional networks² of MPAs that cover at least 10 percent of the coastal and marine areas of the world by 2020.³

The coverage rate of MPAs in the SCS and the Gulf of Thailand Large Marine Ecosystems (LME⁴) were reported to be respectively 0.31 and 0.8 percent, far lower than the above-mentioned 10 percent objective.⁵ A protected areas gap analysis undertaken by the Association of Southeast Asian Nation (ASEAN)’s Regional Center for Biodiversity Conservation in 2010 found that among 152 coastal and marine key biodiversity areas

¹ For a definition of the South China Sea, see below 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea.

² For the difference between “network” and “networks” of MPAs in this dissertation see below 2.1.2 From Marine Protected Areas to a Network of Marine Protected Areas.

³ CBD, *Strategic Plan for Biodiversity 2011-2020*, Decision X/2, 10th Meeting of the COP to the CBD, Nagoya, Japan, October 18-29, 2010 [Decision X/2].

⁴ For the definition of the LME, see below 2.2.2.1 Identification of the Ecological Unit for Management.

⁵ Kenneth Sherman and Gotthilf Hempel (eds), *The UNEP Large Marine Ecosystem Report: A perspective on changing conditions in LMEs of the world of Regional Seas*, UNEP Regional Seas Report and Studies No.182 (Nairobi: UNEP, 2009) at 255 and 297.

that have been identified in the territories of ASEAN countries, only 35 are protected; 20 are partially protected and the rest are not protected at all.⁶ Another research earlier in 2002⁷ claimed that most MPAs in ASEAN countries had targeted only coral reefs. Other habitats such as seagrass, tidal mud flats and marshes had been generally neglected. Furthermore, it stated that among all MPAs declared by ASEAN members, 46 percent had little or no management, 28 percent were under moderate management and only a handful were well managed. A study in 1995, “The Global Representative System of Marine Protected Areas”, concluded that 90 percent of MPAs in the East Asian Seas (a broader marine region including the SCS) had failed or only partially achieved their management objectives.⁸ It means that SCS countries would need to make much greater efforts to establish and manage MPAs to get close to the CBD’s 2020 target.

In this context, this dissertation “Towards a Network of Marine Protected Areas in the South China Sea: Legal and Political Perspectives” identifies legal and political actions to support the development a network of MPAs in the SCS. Such actions must be in accordance with international law, take into consideration lessons from other regions’ relevant experiences and most importantly, be appropriate to characteristics of the SCS. In particular, they must not affect claims and positions of claimants to complicated and explosive maritime disputes that currently exist in this marine region.⁹

⁶ ASEAN Center for Biodiversity, *Protected Areas Gap Analysis in the ASEAN Region* (2010 December), online: ASEAN Center for Biodiversity <http://www.aseanbiodiversity.org/index.php?option=com_content&view=article&id=176&Itemid=180¤t=110>, accessed December 29, 2011 at 15.

⁷ UP-MSI *et al.*, *Marine Protected Areas in Southeast Asia* (Los Baños: ASEAN Regional Centre for Biodiversity Conservation, 2002).

⁸ Chris Bleakley and Sue Wells, *A Global Representative System of Marine Protected Areas, Volume 3: Central Indian Ocean, Arabian Sea, East Africa and East Asian Seas* (Washington, D.C.: Great Barrier Reef Marine Park Authority, The World Bank/The World Conservation Union, 1995) 113.

⁹ For more details about existing disputes in the SCS, see below 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea.

1.1.2 Outline of the Dissertation

In order to achieve the research purpose above, it appears necessary to answer a number of critical questions. They include what conditions are needed for the development of a regional network of MPAs, what international law says about the development of a regional network of MPAs, what current developments relating to MPAs and a network of MPAs in the SCS are and how networks of MPAs have been developed in other marine regions in the world. To answer these questions and thus to suggest legal and political measures to support the development of a network of MPAs in the SCS, the dissertation comprises six Chapters after the Introduction:

- Chapter II, entitled “Context: the South China Sea and Marine Protected Areas”, provides the background relating to concepts of protected areas, MPAs and a network of MPAs. It reviews the definition, purposes and classification of protected areas and MPAs and explains how the concept of networking MPAs came about. It also studies criteria, steps and successful conditions for the development of a regional network of MPAs and challenges for undertaking such an endeavour in the SCS. This Chapter also provides an overview of general conditions of the SCS (including ecological, geopolitical and socio-economic conditions) and highlights rationales for a network of MPAs in this region.

- Chapter III, titled “International Law and Marine Protected Areas and Networks of Marine Protected Areas”, reviews provisions under international law, in particular in international texts, relevant to the development of a regional network of MPAs, in particular provisions relating to protected areas, MPAs, networks of protected areas, ecosystem approach and regional cooperation for the protection of the marine environment. It evaluates whether these provisions can facilitate the development of a network of MPAs in the SCS. Texts studied comprise both international treaties and

“soft-law” instruments such as international declarations, statements and plans of action. This Chapter looks at international texts adopted in different fields, namely the law of the sea, fisheries management, the preservation of biodiversity, protection of a particular habitat or species and prevention of marine pollution. It also discusses whether any international customary rule has emerged relating to MPAs and networks of MPAs.

- Chapter IV, titled “Regional Cooperation relating to Marine Protected Areas in the South China Sea”, reviews current developments relating to the establishment of MPAs and networks of MPAs within regional mechanisms providing for territorial competences relevant to the SCS. Regional mechanisms studied are either specialized in the protection of the marine environment and resources or having a mandate relevant to that purpose. Measures explored include regional commitments, action plans, programs of action and other activities relating to MPAs and networks of MPAs.

- Chapter V, titled “Marine Protected Areas in the National Laws of China, Philippines and Vietnam”, reviews the legal regime of MPAs under the national law in China, Philippines and Vietnam. A brief overview of other area-based conservation measures which could be used for the protection of the marine environment and resources in these countries is also provided. The analysis of relevant national legislation in these three States, as case studies¹⁰ in the SCS region, helps to determine whether legal regimes of MPAs in States bordering the SCS are harmonized enough to facilitate the development of a regional network of MPAs.

- Chapter VI, titled “Developing a Regional Network of Marine Protected Areas in the South China Sea: Lessons from the Mediterranean Action Plan”, is another case study. It considers which lessons from the process of developing a network of MPAs

¹⁰ For a definition of case study as an analytical method see below 1.2.2 Methods of Research.

under the Mediterranean Action Plan process could be applied to the SCS. It first provides a background of the Mediterranean Sea and on cooperation in the region to protect the marine environment and living resources. Second, the establishment of MPAs and a network of MPAs under the Mediterranean Action Plan process is then reviewed to point out relevant lessons for the SCS.

- Chapter VII, the concluding Chapter, titled “Moving Forward: Options”, provides a roadmap for how the SCS could move forward in the development of a network of MPAs in this region. This roadmap suggests measures to be taken based on findings from previous Chapters. Those measures range from those focused on national actions such as establishing MPAs at the national level with consideration of regionally agreed conservation targets to those requiring high levels of regional integration such as adopting a regional framework agreement for MPAs in the SCS. Arguably, they could be implemented alternatively or on a step-by-step basis depending on the nature of the evolution of the political situation in the region.

1.1.3 Contributions of the Dissertation to the Current Literature

A review of the literature relating to the establishment of MPAs in the SCS has unveiled relatively sparse research and publication on this topic,¹¹ in particular from a network perspective. Most studies are limited to suggesting general ideas for the establishment of a network of MPAs in the SCS without studying in detail how these ideas can be implemented concretely. Thus, the dissertation offers an important contribution to the existing scholarship, which is to suggest a set of concrete legal and political measures to support the development of a network of MPAs in the SCS. These

¹¹ See below 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea.

measures can not only contribute to the protection and preservation of the marine environment but also to the promotion of peace and cooperation in the SCS.

This dissertation also makes a number of other more specific contributions to the current scholarship. It provides an evaluation of the status of regional cooperation relevant to the establishment of MPAs and networks of MPAs in the SCS. Concretely, this dissertation provides an evaluation of commitments adopted relevant to MPAs and networks of MPAs and concrete measures undertaken which could support the establishment of MPAs and networks of MPAs under regional mechanisms which have a mandate related to the protection of the marine environment and territorial scope relevant to the SCS.

It provides also a comparative analysis of national laws relating to MPAs in China, Philippines and Vietnam. Concretely, this dissertation reviews and compares the legal regime of MPAs as well as other area-based conservation measures under national legislation of China, Philippines and Vietnam.

Finally, it provides an analysis of lessons to be learned in the development of the regional cooperation for MPAs and a network of MPAs from the Mediterranean for the SCS: this dissertation suggests concrete lessons that the SCS can learn from the Mediterranean, with necessary adaptations to the local context, in the development of the regional cooperation for MPAs and a network of MPAs.

With the purpose of the dissertation and its main arguments explained, the next sub-section explores the research methodology used to guide the argumentation and analysis of the dissertation.

1.2 Research Methodology

This section explains the theoretical framework and methods of research used in this dissertation for the building of its arguments.

1.2.1 Theoretical Approach

Main concepts used for building arguments in this dissertation are the ecosystem approach and transboundary natural resources management. In addition, marine regionalism and the regime theory also play an influential role. These different concepts and theories are briefly explained as follows.

1.2.1.1 Ecosystem Approach

The most widely accepted definition of the ecosystem approach is provided under the CBD's framework. The 5th COP of the CBD held that the ecosystem approach is “a strategy for the integrated management of land, water and living resources that promote conservation and sustainable use in an equitable way”.¹² The ultimate objective of the ecosystem approach is to promote sustainable development. Its application involves the maintenance of ecosystem integrity, functioning and health in order to ensure natural resources for present and future generations. It aims to manage the interactions between often conflicting environmental, economic and social values and interests in order to maintain the integrity of the structure and functioning of the ecosystems, while allowing the sustainable use of living resources.¹³

¹² CBD, *Ecosystem approach*, Decision V/6, 5th Meeting of the COP to the CBD, Nairobi, Kenya, May 15-26, 2000. For a definition of “ecosystem” see below 3.1.2.1 Protected Areas and Networks of Protected Areas in the Text of the CBD.

¹³ *Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its seventh meeting*, UNGAOR, 61st session, Item No. 69 (a) on the primary list, UN Doc. A/61/156 (2006).

The ecosystem approach is “participatory, interdisciplinary and cooperative”.¹⁴ It recognizes that effective resources management requires consideration of information from all sources. It is rooted in the understanding that a decentralized management, to be close to the ecosystem being managed, is more likely to be accepted by the people involved. Furthermore, the ecosystem approach requires expertise from many different disciplines, including biology, chemistry, oceanography, geography, economics, sociology, politics and law and of stakeholders from local, national, regional and international levels.¹⁵

Although not considered yet as a substantive principle of international environmental law, the ecosystem approach is gaining momentum as it is recognised more and more in various international texts, including treaties and non-legally binding instruments such as international plans of action (in particular the CBD, Ramsar Convention¹⁶ and Agenda 21¹⁷). Relating to the marine ecosystem, the United Nations Convention on the Law of the Sea (UNCLOS) states in its preamble that “the problems of ocean space are closely interrelated and need to be considered as a whole”.¹⁸ Article 61 of UNCLOS also requires States, while taking measures to protect harvested species, take into account “the interdependence of stocks”.¹⁹ For fisheries, the United Nations Food and Agriculture Organization (FAO) states that “an ecosystem approach to

¹⁴ Dawn A. Russell and David L. VanderZwaag, “Ecosystem and Precautionary Approaches to International Fisheries Governance: Beacons of Hope, Seas of Confusion and Illusion” in Dawn A. Russell and David L. VanderZwaag (eds), *Recasting Transboundary Fisheries Management Arrangements in Light of Sustainability Principles: Canadian and International Perspectives* (Leiden: Martinus Nijhoff Publishers, 2010) 25.

¹⁵ *Ibid.* at 28.

¹⁶ *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, 2 February 1971, as amended by the Paris Protocol, 3 December 1982 and Regina Amendment, 28 May 1987, 996 U.N.T.S. 445.

¹⁷ *Agenda 21*, the United Nations Conference on Environment and Development, Rio De Janeiro, Brazil, June 3-14, 1992, UNOR, Annex II, UN Doc.A/Conf.151/26/Rev.1 (Vol I) at 9.

¹⁸ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 3, preamble.

¹⁹ *Ibid.*, art. 61.

fisheries strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties of biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries”.²⁰ The FAO Code of Conduct in Responsible Fisheries, considered “the most complete and operational reference for management”,²¹ requires States, while conducting fishing activities, among other things, to have “due regard” of the protection of the marine environment.²²

As studied further in this dissertation, MPAs can be a tool for the implementation of the ecosystem approach to fisheries as protected areas are important for the development of fish stocks.²³ Besides, networking MPAs is considered a way to implement the ecosystem approach for which the geographical extent of protection is based on movements of organisms and physically linked processes.²⁴ For this reason, the ecosystem approach is a core concept that guides the analysis and the suggested solutions offered in this dissertation.

1.2.1.2 Transboundary Resources Management

Another concept that this dissertation utilizes is closely related to the ecosystem approach (perhaps so close that some even argue that they are the same²⁵): transboundary

²⁰ FAO, *Fisheries Management. 2. The ecosystem approach to fisheries*, FAO Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 2 (Rome: FAO, 2003).

²¹ Garcia, S.M. *et al.*, *The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook*, FAO Fisheries Technical Paper. No. 443 (Rome: FAO, 2003) 19.

²² *Code of Conduct for Responsible Fisheries*, 28th FAO Conference, 31 October 1995 (Rome: FAO, 1995), para. 8.4.1. For more details about the FAO Code of Conduct for Responsible Fisheries, see below 3.2.6.1 The Code of Conduct for Responsible Fisheries. For more details about the ecosystem approach, see Russell and VanderZwaag, *supra* note 14.

²³ See above 2.1.1.2 Purposes of Marine Protected Areas.

²⁴ See above 2.1.2 From Marine Protected Areas to a Network of Marine Protected Areas.

²⁵ Alan Rogers, John Mugabe and Christine Mathenge, *Beyond Boundaries: Regional Overview of Transboundary Natural Resource Management in Eastern Africa* (Washington: Biodiversity Support Program, 2001).

natural resources management. Transboundary natural resources management can be defined as “any process of cooperation across boundaries²⁶ that facilitates or improves the management of natural resources (to the benefit of all parties in the area concerned)”.²⁷ The concept is based on the fact that political borders are frequently established by humans in an arbitrary manner and rarely correspond to the natural reality and therefore, natural resources would be best managed through collaboration among countries. Objectives of transboundary natural resources management are to improve the management of shared resources and optimize regional distribution of benefits from their use.²⁸ Transboundary natural resources management can exist at international and local levels²⁹ but in the context of this dissertation, the management of natural resources at international (regional) level is the focus.

The transboundary natural resources management concept has various rationales. It could allow the re-establishment of key ecological functions that have been disturbed by limitations imposed by political borders and could enable an increase in the size of the territory under ecological sustainable management. It could also contribute to the development of economic, social and cultural ties across the boundaries, build capacity

²⁶ It should be noted that while the terms “boundary”, “frontier” and “border” are used interchangeably, they might not mean exactly the same thing: a boundary refers to a separating line whereas a frontier is used to designate an undetermined separating zone. A border or borderland is a zone of indeterminate width that forms the outermost part of a country that is bounded on one side by the national boundary. For the distinction between boundaries, frontiers and borders, see Thang Nguyen-Dang, “Fisheries Cooperation in the South China Sea and the (Ir)Relevance of the Sovereignty Question” (2012) 2:1 Asian Journal of International Law 59 at 80; Victor Prescott and Gillian D. Triggs, *International Frontiers and Boundaries: Law, Politics and Geography* (Leiden: Martinus Nijhoff Publishers, 2008) pp.11-12; Douglas M. Johnston, *The Theory and History of Ocean Boundary-Making* (Kingston: McGill-Queen’s University Press, 1988) 3 and A.O. Cukwurah, *The Settlement of Boundary Disputes in International Law* (Manchester: Manchester University Press, 1967) pp.11-12.

²⁷ John Griffin, *Study on the Development of Transboundary Natural Resource Management Areas in Southern Africa: Main Report* (Washington, D.C: Biodiversity Support Program, 1999).

²⁸ Zuma Chengeta, Jamare Jamare and Nyasha Chishakwe, *Assessment of the Status of Transboundary Natural Resources Management Activities in Botswana* (Gaborone: IUCN Botswana, 2003) 10.

²⁹ Jaidev "Jay" Singh, *Study on the Development of Transboundary Natural Resource Management Areas in Southern Africa. Global Review: Lessons Learned* (Washington: Biodiversity Support Program, 1999) 10.

among stakeholders and develop regional networking collaboration. It is equally suggested that transboundary natural resources management initiatives would foster peace and security, build confidence and goodwill between border nations through the encouragement of inter-state collaboration and cooperation.³⁰ Finally, it could enhance the environment for improved decision-making and support management initiatives at broader levels (ecoregional and bioregional).³¹ From this perspective, transboundary natural resource management provides an indispensable support for the implementation of the ecosystem approach across boundaries.³²

1.2.1.3 Marine Regionalism

The process of regionalisation in ocean governance was defined by Lewis Alexander, the “father of marine geography”,³³ as “marine regionalism”.³⁴ According to Alexander, marine regionalism includes two concepts: the marine region itself and marine regional arrangements.

A region is perceived as a zone on the earth which is different from others by a certain number of characteristics or group of characteristics.³⁵ The regionalisation of the ocean is not a new idea. The division of the world ocean into five regions (Arctic, Antarctic, Atlantic, Pacific and Indian Oceans) has been a longstanding conception

³⁰ William Wolmer, “Transboundary Conservation: the Politics of Ecological Integrity in the Great Limpopo Transfrontier Park” in (2003) 29:1 *Journal of Southern African Studies* 261 at 265 and *ibid.* note 29 at 19.

³¹ Chengeta, Jamare and Chishakwe, *supra* note 28 at 11.

³² Griffin, *supra* note 27.

³³ Erik Franckx, “Regional Marine Environment Protection Regime in the Context of UNCLOS” (1998) 13 *International Journal of Marine and Coastal Law* 307 at 308.

³⁴ Lewis Alexander, “Regionalism at Sea: Concept and Reality” in Douglas Johnston (ed.), *Regionalisation of the Law of the Sea: proceedings* (Honolulu, University of Hawaii, 1978) 3.

³⁵ However, there is no limit for the kind of criteria that can be used for the determination of a region. They could be geographic, political, economic, cultural or a combination thereof. Thus, the qualification of region is more a human choice based on a particular issue or interest than a natural phenomenon, see Lewis Alexander, *Regional Cooperation in Marine Sciences*, Report prepared for the Inter-governmental Ocean Committee of the UNESCO, UN Ocean Economics and Technology Office and FAO, Doc. IOC/INF-407 (December 1978) at 13 [in French] [Alexander, *Regional Cooperation in Marine Sciences*].

despite some controversies.³⁶ Smaller regions are also very well-known, such as the Mediterranean, the North Sea, and Gulf of Mexico.³⁷ For general use, Alexander proposed three types of marine regions, which are widely agreed to by other authors:³⁸ physical region, management or functional region and operational or institutional region.

Marine regional arrangements are defined by Alexander as a multilateral treaty or actions and associated mechanisms relating to ocean questions.³⁹ Marine regional arrangements are very diverse in terms of scope of activities (such as protection of the marine environment, conservation of fish stocks and conduct of marine scientific research) and forms (from a simple arrangement for collective action to the establishment of regional organization with decision-making power).⁴⁰ In this dissertation, the SCS is considered as a marine region and the development of a regional network of MPAs, as a marine regional arrangement.

1.2.1.4 International Regime

Under the regime theory, an international regime is generally defined as a:

Set of implicit or explicit principles, norms, rules and decision-making procedures around which actor expectations converge in a given area of international relations. Principles are beliefs or fact, causation, and rectitude. Norms are standards of behaviour defined in terms of rights and obligations.

³⁶ Rhodes W. Fairbridge, *The Encyclopaedia of Oceanography* (New York: Reinhold Publishing Corporation, 1966) 829.

³⁷ Joseph Morgan, "The Marine Region" (1994) 24 *Ocean and Coastal Management* 51 at 54.

³⁸ For details see Alexander, *Regional Cooperation in Marine Sciences*, supra note 35 at 13; Lewis Alexander, "Regional Arrangements in the Oceans" (1977) 71 *American Journal of International Law* 84 at 92.

³⁹ Alexander, supra note 35 at 19. For him, regional arrangements must include three States or more, otherwise they are considered bilateral arrangements, see Lewis Alexander, *Marine regionalism in the Southeast Asian Seas* (Honolulu: East-West Environment and Policy Institute, 1982) 3. On this point, his view is different from that of Edward Miles who thinks that it is not necessary to distinguish between bilateral and regional arrangement, see Edward Miles, "On the Utility of Regional Arrangements in the New Ocean Regime" in Douglas M. Johnston (ed.), *Regionalisation of the Law of the Sea: Proceedings* (Honolulu, University of Hawaii, 1978) 231 at 259. In this dissertation, regional arrangement is used to refer only to a mechanism involving three or more parties.

⁴⁰ Alexander, supra note 35 at 20 and Lewis Alexander, "Regionalism at Sea: Concept and Reality" in Douglas Johnston (ed.), *ibid.* at 9.

Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice.⁴¹

According to supporters of the theory,⁴² regimes facilitate the making of mutually beneficial agreements among governments.⁴³ They do this by providing information or reducing the information costs associated with engaging in international relations.⁴⁴ Regimes also help to shape the reputation of members, thus raising the costs associated with noncompliance with regime's rules and decisions.⁴⁵

A number of approaches have contributed to explain the formation of an international regime. The most important ones include a State's calculations based on egoistic self-interests, the existence of a hegemonic power and the development of an epistemic community.⁴⁶ All three factors can be used integratively to identify conditions in which a regime arises. Different issue-areas would need a different combination of

⁴¹ Stephen D. Krasner (ed.), *International Regimes* (Ithaca: Cornell University Press, 1983) 2. This definition is broader than the legal understanding of a regime, which is a set of international legal rules governing the behaviour of States with regard to a specific issue. It encompasses principles and norms that are technically not international law, administrative and financial framework, the subjective element of mutual expectation and a sense of common purpose among the regime's participants, see Boleslaw Boczek, "The Concept of Regime and the Protection and Preservation of the Marine Environment" in Elisabeth Mann Borgese and Norton Ginsburg (eds), *Ocean Yearbook 6* (Chicago: the University of Chicago Press, 1986) 274. Marc Valencia defines a marine policy regime as "a system of governing arrangements, together with a collection of institutions (formal or informal) for the implementation of these arrangements, in a given social structure or marine region", see Mark Valencia, "Regional Maritime Regime Building: Prospects in Northeast and Southeast Asia" (2000) 31 *Ocean Development and International Law* 223 at 231.

⁴² Such as Raymond Hopkins, Donald Puchala, Oran Young, Robert Axelrod and Robert Keohane, see Krasner, *ibid.* at 8 and Andreas Hasenclever, Peter Mayer and Volker Rittberger, "Interest, Power, Knowledge: The Study of International Regimes" (1996) 40 *Mershon International Studies Review* 177 at 186.

⁴³ Valencia, *supra* note 41 at 226 and Krasner, *supra* note 41 at 6.

⁴⁴ Hasenclever, Mayer and Rittberger, *supra* note 42 at 186.

⁴⁵ *Ibid.* note 44.

⁴⁶ Krasner *supra* note 41 at 115; Oran R. Young, "The Politics of International Regime Formation: Managing Natural Resources and the Environment" (1989) 43 *International Organization* 350; Oran B. Young and Gail Osherenko (eds), *Polar Politics: Creating International Environmental Regimes* (Ithaca and London: Cornell University Press, 1983); Peter Haas, "Introduction: Epistemic Community and International Policy Coordination" (1992) 46 *International Organization* 1; Hasenclever, Mayer and Rittberger, *supra* note 42 and Lasse Ringius, *Radioactive Waste Disposal at Sea: Public Ideas, Transnational Policy Entrepreneurs and Environmental Regimes* (Cambridge, Mass.: MIT Press, 2001).

those elements to explain the formation of a regime.⁴⁷ Other explanations of regime formation suggested by academics are mostly based on empirical studies. They include internal pressures,⁴⁸ empathy,⁴⁹ norms, usages and customs,⁵⁰ transnational coalitions of policy entrepreneurs,⁵¹ intervention of an international organization⁵² and/or non-governmental organization (NGO).⁵³

Regarding maritime regimes, Mark Valencia considers a marine policy regime as “a system of governing arrangements, together with a collection of institutions (formal or informal) for the implementation of these arrangements in a given social structure or marine region”.⁵⁴ Alexander viewed a regional marine regime as the second basic institutional level of marine arrangement in terms of integration.⁵⁵ In this dissertation, the formation of a regional regime in the SCS for the protection of the marine environment

⁴⁷ Manfred Efinger, Peter Mayer and Gudrun Schwarzer, “Integrating and Contextualizing Hypotheses: Alternative Paths to Better Explanations of Regime Formation” in Volker Rittberger (ed.), *Regime Theory and International Relations* (Oxford: Clarendon Press, 1993) 252 at 273 and Ringius, *ibid.* at 109.

⁴⁸ Stephan Haggard and Beth Simmons, “Theories of International Regime” (1987) 41 *International Organization* 491 at 513 and Mark Zacher, “Toward a Theory of International Regimes” in Robert L. Rothstein (ed), *The Evolution of Theory in International Relations*, (Columbia: University of South Carolina Press, 1991) 133; Vinod Aggarwal, *Liberal Protectionism: The International Politics of Organized Textile Trade* (Berkeley: University of California Press, 1985) c.2 and Susan Strange, “Cave! Hic, Dragons: A Critique of Regime Analysis” in Stephen Krasner *supra* note 41 at 349.

⁴⁹ Robert Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton: Princeton University Press, 1984) at 110.

⁵⁰ Krasner, *supra* note 41 at 16.

⁵¹ Ringius, *supra* note 46 at 109.

⁵² Sulan Chen, “Instrumental and Induced Cooperation: Environmental Politics in the South China Sea” (University of Maryland, 2005) [unpublished] at 285; Mark Zacher, *supra* note 48 at 133 and Robert Bartlett, Priya Kurian and Madhu Malik, *International Organizations and Environmental Policy* (West Port, Connecticut: Greenwood Press, 1995) 3.

⁵³ Ringius, *supra* note 46 at 109.

⁵⁴ Mark Valencia, “Regional Maritime Regime Building: Prospects in Northeast and Southeast Asia” (2000) 31 *Ocean Development and International Law* 223 at 231

⁵⁵ The three others are: first, arrangements which do not impose “any greater “cost” on States than does the situation to which they are to respond” such as joint scientific surveys; second, regional regimes “consisting of sets of mutual expectations, generally agreed to rules, regulations, and plans, in accordance with which organizational energies and financial commitments are allocated” and third, regional organizations which are involved in planning, decision-making and implementation of the programs. See Alexander, *supra* note 38 at 93.

and living resources of the SCS could help facilitate cooperation among the interested and/or affected States for the development of a regional network of MPAs in the region.

1.2.2 Methods of Research

The research under this dissertation involves the exploration, examination and evaluation of information from all primary, secondary and tertiary resources⁵⁶ relevant to the different research questions identified earlier. A combination of following methods is used for the implementation of the dissertation's research: multidisciplinary and interdisciplinary researches, comparative law and case study.

- ***Multidisciplinary research***: Multidisciplinary research is defined as a study involving different academic disciplines to research on a theme or a problem but with multiple disciplinary goals.⁵⁷ Protected areas, MPAs and to a lesser extent, networks of MPAs are broad subjects that concern various disciplines of research such as ecology, economics, management, law and spatial planning.

This dissertation approaches the problem mainly from a perspective of law. For instance, it outlines what the legal issues that may be posed in the development of a network of MPAs in the SCS are and evaluates whether the existing legal framework, in particular at global and regional levels, are sufficient to deal with these issues. However, it is impossible to research on the development of a network of MPAs without having a certain degree of knowledge on functions, criteria, guidelines and useful steps for the

⁵⁶ For a definition of primary, secondary and tertiary resources, see University of Maryland Libraries, *Primary, Secondary and Tertiary Resources*, online: University of Maryland Libraries <<http://www.lib.umd.edu/guides/primary-sources.html>>, accessed the October 21, 2011.

⁵⁷ See Bärbel Tress, Gunther Tress and Gary Fry, "Defining Concepts and the Process of Knowledge Production in Integrative Research" in Bärbel Tress *et al.*, *From Landscape Research to Landscape Planning: Aspects of Integration, Education and Application* (Dordrecht: Springer, 2006) 13 at 15.

development of a network of MPA,⁵⁸ which belong to the fields of ecology and management. Besides, as the development of a network of MPAs has to be based on best available information and data, in particular about the biodiversity and threats to the marine environment and living resources,⁵⁹ the dissertation also reviews relevant information and data with regards to the SCS.

- ***Interdisciplinary research***: Unlike multidisciplinary research, interdisciplinary research involves several unrelated academic disciplines in a way that forces them to cross subject boundaries to create new knowledge and theory and solve a common research goal.⁶⁰ As the development of a network of MPAs at the regional level requires the cooperation between regional States, in addition to law, elements relating to inter-State relations in a regional context needs to be taken into consideration. Often, final solutions are more a political compromise between relevant States than a strict application of the law. This is even more likely for the SCS, a regional sea with a complicated geopolitical situation and the most contentious territorial disputes in the world.⁶¹ For this reason, a politico-legal interdisciplinary analysis needs to be undertaken with respect to the suggestion of solutions.⁶² The expectation is that, solutions suggested by this research would be both legally effective for the protection of the SCS marine environment and acceptable to all its coastal States.

⁵⁸ See below 2.2 Towards a Network of MPAs for the South China Sea: Perspectives and Challenges.

⁵⁹ See below 2.2.3.3 The Use of the Best Available Knowledge.

⁶⁰ See Tress, Tress and Fry, *supra* note 57 at 17. For the distinction between multidisciplinary and interdisciplinary studies, see also Aldo Chircop, “Teaching Integrated Coastal Management: Lessons from the Learning Arena” in (2000) 43 *Ocean and Coastal Management* 343 at 349 and Julie Thompson Klein, *Interdisciplinarity: History, Theory and Practice* (Detroit: Wayne State University Press, 1990) 56.

⁶¹ “The South China Sea” in NOAA and US National Museum of National History, *Hidden Depths: Atlas of the Oceans* (London: Collins, 2007) 206.

⁶² This approach allows a convergence of methodology with inputs from different disciplines with as objective a holistic view of the problem, see Aldo Chircop, “Teaching Integrated Coastal Management: Lessons from the Learning Arena” (2000) 43 *Ocean and Coastal Management* 343 at 351.

Thus, the search for the most appropriate legal and/or political measures to support the development of a network of MPAs in the SCS can also be considered an exercise in policy option analysis.⁶³ As such, the dissertation is expected to generate knowledge that will help policy-makers in the region to consider options in taking action to improve the protection of the SCS marine environment.

- **Case study:** Case study research involves the study of an issue explored through one or more cases within a bounded system.⁶⁴ In this dissertation, this method is used to study lessons for the development of a network of MPAs derived from another regional arrangement, for the SCS and the regime of MPAs under the national laws of coastal States in the SCS. The regional arrangement examined for possible lessons for the SCS relating to the development of MPAs and a network of MPAs is the Special Protected Areas Protocol of 1982, and the Biodiversity and Special Protected Areas Protocol of 1995,⁶⁵ under the Mediterranean Action Plan.

The reason for the choice of the Mediterranean Action Plan is twofold. First, under the Mediterranean Action Plan, a regional regime supporting the development of a Mediterranean-wide network of MPAs has been achieved. Second, the Mediterranean hosts a number of politically “hot” and complicated maritime and marine-related disputes. In the SCS, similar disputes are currently the biggest obstacles to maritime

⁶³ William N. Dunn, *Public Policy Analysis: An Introduction* (Englewood Cliffs, NJ: Prentice Hall, 1994) 61.

⁶⁴ John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 2nd ed. (Thousand Oaks, CA: Sage Publication, 2007) 73.

⁶⁵ *Protocol Concerning Mediterranean Specially Protected Areas*, 3 April 1982, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=00100100>>, accessed August 9, 2012 and *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean*, 10 June 1995, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 24, 2012.

cooperation in the SCS in general, and as to cooperation for the establishment of MPAs and a network of MPAs in particular.

With regards to the legal regime of MPAs in the coastal States of the SCS, three countries are chosen as case studies: China, Philippines and Vietnam. The reason for this choice is that these three States have the largest stakes in the protection of the SCS marine ecosystem. It would be difficult to develop a comprehensive network of MPAs in the SCS without the participation of any these three countries.

Different elements that justify the choices for case studies are discussed in more detail later in the dissertation.

- ***Comparative law***: Defined as “the systematic study of particular legal traditions and legal rules on a comparative basis”,⁶⁶ comparative law helps to provide ideas for legislation and law reform, fill gaps in legal systems, understand rules and contributes to the unification and harmonization of law.⁶⁷ The comparative law study process consists of two tasks: the comparison of law and the utilization of results.⁶⁸

In this dissertation, comparisons are made between different regional arrangements and between different national laws relating to MPAs. At the regional level, comparison is made between the cooperation for the protection of the marine environment and living resources in the Mediterranean and the same process in the SCS to examine which lessons the latter can learn from the former with regards to the development of a regional network of MPAs. At the national level, laws relating to

⁶⁶ Peter de Cruz, *Comparative Law in a Changing World* (London: Cavendish Publishing Limited, 1999) 3.

⁶⁷ *Ibid.* at 18. See also Konrad Zweigert and Hein Kotz, *An Introduction to Comparative Law* (Amsterdam: North-Holland, 1977), v.I and W. J. Kamba, “Comparative Law: A Theoretical Framework” (July 1974) 23:13 *International and Comparative Law Quarterly* 485.

⁶⁸ M. Schmitthoff, “The Science of Comparative Law” (1939) 7:1 *The Cambridge Law Journal* 94.

MPAs from China, Philippines and Vietnam are compared to see whether they have similarities that could facilitate the networking of MPAs at the regional level.

Conclusion

This first Chapter provides the basic background on the dissertation. Concretely, it explains the purpose of the dissertation, its main content and its contribution to the current scholarship. It also introduces the theoretical approach and research methods utilized by the author for building arguments in the dissertation. This information is necessary for readers to understand the framework under which the research concerning this dissertation is conducted. With this framework set out, Chapter 2 begins the analysis of substantive issues of the dissertation with a discussion on the context of the SCS and MPAs.

Chapter II. Context: The South China Sea and Marine Protected Areas

This Chapter provides background information on the two main subjects discussed in this dissertation: network of MPAs and the SCS. It addresses what an MPA means, what its purposes are, how it is classified and how the networking approach functions. It also highlights criteria, steps and successful conditions for the development and management of a network of MPAs, in particular at the regional level. As well, the Chapter explains what benefits of and challenges for the development of network of MPAs in the SCS are.

2.1 Background on Marine Protected Areas, a Network of Marine Protected Areas and the South China Sea

This section first reviews definitions of MPAs, purposes for their establishment, their classification and rationales for the development of a network of MPAs. It then discusses the ecological, geopolitical and socio-economic characteristics of the SCS to point out the benefits of developing a network of MPAs in this region. Many materials cited in this section are published under international NGOs, such as the International Union for the Conservation of the Nature (IUCN)¹ and the World Wildlife Fund (WWF).² While these institutions do not have the same status as other international governmental organizations, ideas that they promoted have increasing influence on international and national practices relating to environmental governance. Besides, as

¹ The IUCN is an international environmental network founded in 1948 with a unique structure as its membership comprises representatives from both governments and NGOs. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. In this dissertation, IUCN is considered as a NGO; see *About IUCN*, online: IUCN <<http://www.iucn.org/about/>>, accessed April 27, 2011.

² The WWF is an NGO established in 1961 to protect natural areas and wild populations of plants and animals, promote sustainable approaches to the use of renewable natural resources and the more efficient use of resources and energy and the maximum reduction of pollution; see *Who are we*, online: WWF <<http://www.worldwildlife.org/who/index.html>>, accessed April 27, 2011.

observed further in the dissertation, a large number of projects implemented by the IUCN and WWF, in particular those relevant to protected areas, are recognized and used in official international and national frameworks. Their reports and research are valuable sources of scientific information on the subject, providing necessary background and understanding about MPAs and networks of MPAs for readers.

2.1.1 The Concept of Marine Protected Areas

This sub-section discusses in turn the definition, purposes and the classification of MPAs.

2.1.1.1 Definition

The concept of MPAs cannot be understood without reference to the broader concept of protected areas in general. Indeed, as a category, an MPA is now considered by the IUCN as a specific kind of protected area and many elements that apply to a protected area in general are also applicable to an MPA. From a terminological point of view, various names with different original meanings such as parks, reserves, sanctuaries, closed areas or *refugia* have been used to refer to those areas with some spatially explicit restrictions. However, “protected area” has emerged as the most commonly used term implying protection of species and communities.³ How then are MPAs defined at the global, regional and national levels?

At the global level

There are different definitions relating to protected areas and MPAs but the two most frequently referred to internationally are those developed under the framework of the IUCN and the CBD.

³ Gary W. Allison, Jane Lubchenko and Mark H. Carr, “Marine Reserves Are Necessary But Not Sufficient for Marine Conservation” (1998) 8:1 *Ecological Conservations* S79 at S80.

Moving from having two distinct definitions for a protected area and MPA,⁴ the IUCN now defines a protected area generally as “a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”.⁵ According to IUCN, only areas where the main objective is conserving nature can be considered protected areas. It means that temporary or permanent fishing closures established primarily to help build up and maintain reserve stocks for fishing with no wider conservation aims are not considered MPAs. The exclusion of fishing closure areas from the definition of MPAs by IUCN seems to be at odds with the position of FAO, the UN body in charge of marine fisheries management. FAO considers an MPA “any marine geographical area that is afforded greater protection than the surrounding waters for biodiversity conservation or fisheries management purposes”.⁶ This exclusion is however tempered by the fact that IUCN considers seasonal closures of fish spawning aggregation areas or pelagic migratory routes, at specific and predictable times of the year for certain species when they are extremely vulnerable, may be important components of the management of an MPA.⁷

⁴ The Union defined a protected area as “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means” and an MPA as “Any area of intertidal or subtidal terrain, together with its overlying waters and associated flora, fauna, historical and cultural features, which has been reserved by legislation to protect part or the entire enclosed environment”; see IUCN, *Guidelines for Protected Areas Management Categories* (Cambridge: IUCN, 1994) and Graeme Kelleher and Adrian Phillips (eds), *Guidelines for Marine Protected Areas*, Best Practice Protected Area Guidelines Series No. 3 (Gland: IUCN, 1999) 98.

⁵ Nigel Dudley, *Guidelines for Applying Protected Area Management Categories* (Gland: IUCN, 2008) 8.

⁶ FAO, *Fisheries Management. 4. Marine Protected Areas and Fisheries*, FAO Technical Guidelines for Responsible Fisheries No.4, Suppl. 4 (Rome: FAO, 2011) 9 [Fisheries Management. 4. Marine Protected Areas and Fisheries].

⁷ Day J. Dudley *et al.*, *Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas*, Best Practice Protected Area Guidelines Series No.19 (Gland: Switzerland, 2012) 15.

Under the CBD, while the concept of protected area is defined in the text of the Convention, an MPA is defined in a report of its *Ad hoc* Technical Expert Group on Marine and Coastal Protected Areas. Article 2 of the Convention defines a protected area as “a geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives”.⁸ An MPA, is defined by the Technical Expert Group as:

Any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings.⁹

This definition recognises the importance of the coastal area in the protection of marine biodiversity. The term “adjacent” refers to terrestrial protected areas with a seaward boundary or lying just above the high tide level.¹⁰

The protection of the environment using an area-based approach also appears in a variety of other international frameworks such as under the International Convention for the Regulation of Whaling (International Whaling Convention) with the whale sanctuary to protect whales,¹¹ the International Maritime Organization with special areas and particularly sensitive sea areas (PSSA) for shipping regulation¹² and the Ramsar

⁸ CBD, 5 June 1992, 760 U.N.T.S. 79, art. 2 [CBD].

⁹“Marine and Coastal Biodiversity: Review, Further Elaboration and Refinement of the Programme of Work”, *Report of Ad hoc Technical Expert Group on Marine and Coastal Protected Areas*, 8th Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, Montreal, Canada, March 10-14, 2003.

¹⁰ UNEP-WCMC, *National and Regional Networks of Marine Protected Areas: A Review of Progress* (Cambridge: UNEP-WCMC, 2008) 28.

¹¹ *International Convention for the Regulation of Whaling*, 2 December 1946, 161 U.N.T.S. 74.

¹²*International Convention for the Prevention of Pollution from Ships*, 2 November 1973, 1340 U.N.T.S. 184 and *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, IMO Assembly Resolution A.982(24), IMO OR, 24th session, Agenda item 11, IMO Doc. A 24/Res.982 (2005).

Convention of 1972 with the protection of wetlands of international importance.¹³ Those relevant mechanisms, while not mentioning “protected areas” or “marine protected areas” by name, provide a zone based approach to the protection of a particular type of marine zone, landscape or habitat for a particular purpose.

Under Regional Frameworks

An examination of the 18 existing regional sea programs¹⁴ reveals that almost all programs, in one way or another, make reference to the use of MPAs. Most of them mention MPAs in their most important official instruments such as the framework conventions or implementing protocols. For some, such as the Commission for the Protection of the Marine Environment of the North East Atlantic (OSPAR Commission) and the Baltic Marine Environment Protection Commission (HELCOM), it appears in subsequently adopted operational documents like the OSPAR Recommendation¹⁵ and

¹³ *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, 2 February 1971, as amended by the Paris Protocol, 3 December 1982 and Regina Amendment, 28 May 1987, 996 U.N.T.S. 445 [Ramsar Convention].

¹⁴ Namely the Antarctic Treaty Secretariat, the Arctic Council, Baltic Marine Environment Protection Commission, Commission on the Protection of the Black Sea against Pollution, Caspian Environment Programme Coordinating Unit, Secretariat for the Nairobi Convention, Coordinating Body on the Seas of East Asia, Mediterranean Action Plan for the Barcelona Convention, Commission of the Convention for the Protection of the Marine Environment of the North-East Atlantic, North-East Pacific Programme, Northwest Pacific Regional Coordinating Unit, Secretariat of the Pacific Regional Environment Programme, Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden, Regional Organization for the Protection of the Marine Environment, South Asia Co-operative Environment Programme, Permanent Commission for the South Pacific, Regional Coordination Unit for the West and Central African Action Plan, Regional Coordinating Unit for the Caribbean Environment Programme. In this dissertation, the phrase “regional sea programs” designates all existing regional seas conventions and action plans while “Regional Seas Programme” designates the UNEP Regional Sea Programme and “Regional Seas Programmes” to designate those regional seas conventions and action plans developed under the auspice of the UNEP Regional Sea Programme.

¹⁵ *OSPAR Recommendation 2003/3 on a Network of Marine Protected Areas*, Ministerial Meeting of the OSPAR Commission, Bremen, Germany, June 23-27, 2003.

the HELCOM Guidelines¹⁶. Despite this frequent reference to MPAs, only a few documents provide a specific definition of the concept.

Oftentimes, these regional texts are limited to stating that the objective of the establishment of MPAs (sometimes referred to as “specially protected areas”¹⁷) is to safeguard components of the marine environment of a particular importance. A typical example of this approach to “define” MPAs is Article 8 of the Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region, 1985.¹⁸

Article 8

ESTABLISHMENT OF PROTECTED AREAS

1. The Contracting Parties shall, where necessary, establish protected areas in areas under their jurisdiction with a view to safeguarding resources of the Eastern African Region and shall take all appropriate measures to protect those areas.
2. Such areas shall be established in order to safeguard:
 - (a) The ecological and biological processes essential to the functioning of the Eastern African Region;
 - (b) Representative samples of all types of ecosystems of the Eastern African region;
 - (c) Populations of the greatest possible number of species of fauna and flora depending on these ecosystems;
 - (d) Areas having a particular importance by reason of their scientific, aesthetic, cultural or educational purposes.
3. In establishing protected areas, the Contracting Parties shall take into account, inter alia, their importance as:
 - (a) Natural habitats, and in particular as critical habitats, for species or fauna and flora, especially those which are rare, threatened or endemic;

¹⁶ *Guidelines for Designating Marine and Coastal Baltic Sea Protected Areas (BSPA) and Proposed Protection Categories*, Guidelines for Recommendations 15/5, adopted by the 15th Meeting of the Helsinki Commission, March 8-11, 1994, Helsinki, Finland.

¹⁷ Used in, for example, *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean*, 10 June 1995, online: UNEP Mediterranean Action Plan for the Barcelona Convention <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed March 6, 2010; *The Protocol on Environmental Protection to the Antarctic Treaty*, 4 October 1991, online: Antarctic Treaty Secretariat <http://www.ats.aq/index_e.htm>, accessed April 1, 2010 and *Convention for Co-operation in the Protection and Development of the Marine and Coastal environment of the West and Central African Region*, 23 March 1981, online: UNEP <http://www.unep.org/AbidjanConvention/The_Convention/Protocols/Convention_Text.asp>, accessed December 29, 2010.

¹⁸ *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region*, 21 June 1985, online: UNEP <http://www.unep.org/NairobiConvention/The_Convention/Protocols/Protocol_Protected_Areas.asp>, accessed March 31, 2013.

- (b) Migration routes or as wintering, staging, feeding or moulting sites for migration species;
- (c) Areas necessary for the maintenance of stocks of economically important marine species;
- (d) Reserves or genetic resources;
- (e) Rare or fragile ecosystems;
- (f) Areas of interest for scientific research and monitoring.

Another example is the Protocol concerning Special Protected Areas and Biological Diversity in the Mediterranean of 1995,¹⁹ which does not define a special protected area but states what it protects. Pursuant to article 4 of this Protocol, a special protected area can be established to safeguard: representative types of coastal and marine ecosystems; endangered and critical habitats and sites of particular importance.²⁰

Two regional institutions have formulated definitions of MPAs: the OSPAR Commission and the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA). The definition of MPAs under the PERSGA framework is heavily influenced by the definition of protected area under the CBD. Article 2 of the Protocol Concerning the Conservation of the Biodiversity and the Establishment of a Network of Protected Areas in the Red Sea and Gulf of Aden of 2005 defines protected areas as “geographically defined coastal and marine areas that are designated or regulated and managed to achieve specific conservation objectives”.²¹ As for OSPAR, its Recommendation 2003/3 on a Network of MPAs states:

¹⁹ *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean*, 10 June 1995, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 24, 2012

²⁰ *Ibid.*, art.4. More details about this Protocol are discussed later, see below 6.3 The Developments relating to Marine Protected Areas and Networks of Marine Protected Areas under the Mediterranean Action Plan Process.

²¹ *The Protocol Concerning the Conservation of the Biodiversity and the Establishment of a Network of Protected Areas in the Red Sea and Gulf of Aden*, 12 December 2005, online: Regional Intergovernmental Organization for the Conservation of the Environment of the Red and the Gulf of Aden <<http://www.persga.org/inner.php?id=62>>, accessed December 29, 2010, art. 2 (10).

[M]arine protected areas mean an area within the maritime area for which protective, conservation, restorative or precautionary measures, consistent with international law have been instituted for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes of the marine environment.²²

Besides regional seas programs, another regional instrumentality relevant to MPAs is the European Union (EU) in view of the development of its Natura 2000 network. This is an EU-wide network of protection areas (including in the marine environment) established under the Habitats Directive adopted by the Council of the European Union in 1992.²³ Though it does not have a specific definition for MPA, the Habitats Directive uses the notion of “special area of conservation”, which it defines as:

A site of Community importance designated by the Member States through a statutory, administrative and/or contractual act where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of the natural habitats and/or the populations of the species for which the site is designated.²⁴

A “site of Community importance” is the one that contributes to the maintenance or conservation of the habitats and species listed in the Annexes of the Directive.²⁵ As many of the listed habitats and species belong to the marine environment,²⁶ the special area conservation category of the Directive necessarily includes MPAs.

²² OSPAR, *supra* note 15, para.1.1.

²³ EC, *Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* [1992] OJ, 206/7.

²⁴ *Ibid.* note 23 at 5.

²⁵ *Ibid.* note 23 at 4.

²⁶ *Ibid.* note 23, Annexes I and II.

Under National Legislation and Policies

At the national level, the definition of an MPA is extremely diverse. Some States such as the United States, Canada and New Zealand²⁷ consider MPA as a separate category (from the general protected area). Other States such as South Africa and Peru have a single definition of protected area that applies to both terrestrial and marine protected areas.²⁸ Some others, like Australia, use the IUCN definition of 2008 or France, do not have a legal definition of a “protected area”.²⁹

The above overview of the different definitions of MPA allows for some observations. First, an MPA can be seen as a separate entity or as the marine component within the general concept of protected area.³⁰ Second, despite the diversity of definitions of MPAs and in the use of the terminology, there is a common understanding of MPAs in relevant international and regional instruments and in many national texts. The common understanding is that an MPA is a portion of the marine environment that

²⁷ For instance, in the United States, MPA is defined as an area of the marine environment reserved by laws or regulations at any level to provide “lasting protection for part or all of the natural and cultural resources therein”, see *Marine Protected Areas*, Executive Order No.13158, 3 Federal Register 34909 (2000) s2. For the definition of MPAs in Canada and New Zealand, see Canada *Ocean Act*, S.C. 1996, c.31, s35 and Department of Conservation and Ministry of Fisheries of New Zealand, *Marine Protected Areas Policy and Implementation Plan* (Wellington: Department of Conservation and Ministry of Fisheries, 2005) 10.

²⁸ For instance, the National Environmental Management: Protected Areas Act of South Africa of 2003 provides a list of areas that will be considered as “protected areas” by definition: “special nature reserves, national parks, nature reserves (including wilderness areas) and protected environments; world heritage sites; marine protected areas; specially protected forest areas, forest nature reserves and forest; wilderness areas declared in terms of the National Forests Act, 1998 (Act No. 84 of 1998); and mountain catchment areas declared in terms of the Mountain Catchment Areas Act, 1970 (Act No. 63 of 1970); see Act No.57 of 2003, National Environmental Management: Protected Areas Act Vol. 14 No.26025 Government Gazette 18 February 2004, s1 and 9. For the definition of “natural protected area” in Peru, see Act No.26834 -Act on Natural Protected Areas, 30 June 1997, El Peruano (the Peruvian Official Daily) N° 6215 4 July 1997 at 150721, Art.1 [in Spanish]

²⁹ See Department of Sustainability, Environment, Water, Population and Communities, *Marine Protected Areas*, online: Department of Sustainability, Environment, Water, Population and Communities <<http://www.environment.gov.au/coasts/mpa/about/index.html>>, accessed October 22, 2012 and Armelle Guignier and Michel Prieur, “The Legal Framework of Protected Areas: France”, *IUCN Environmental Law Centre, Guidelines for Protected Areas Legislation Review Workshop, Bonn, 13 – 16 July 2009* at 7 [in French]; see also Book III Environmental Code [in French].

³⁰ In this dissertation, “protected area” is used for both marine and terrestrial protected areas; while “marine protected area” refers to those protected areas with a marine component.

has a certain value and which is recognized or designated as such in an official source. However, it should be noted that the value that MPAs should protect varies. For instance, in New Zealand, the purpose of MPAs focuses on the protection of the biological diversity.³¹ In Canada, an MPA can also protect commercial fishery resources³² and in the United States, cultural values are also taken into consideration in the designation of an MPA.³³

Finally, it seems that an MPA may be understood as a broad concept comprising in itself all types of area-based conservation measures for the protection of the coastal and marine environment and resources (including wetlands of international importance, PSSAs and fisheries closures), or as a separate area-based conservation measure. The broad understanding of MPAs is supported in the literature produced by the IUCN.³⁴ But a more restrictive understanding is adopted under the Ramsar Convention,³⁵ CBD,³⁶ and a number of national laws.³⁷ It seems that there is no agreement among academics on this issue either. For instance, some authors think that the particularly sensitive sea area, an area-based conservation measure that provides protection against vessel-source pollution, cannot be considered an MPA while others argue that it is a specialized MPA.³⁸ It is the opinion of the author of this dissertation that an MPA should be understood in a broad sense to comprise all types of area-based conservation measures for the protection of the coastal and marine environment and resources. That will avoid adding another category

³¹ Department of Conservation and Ministry of Fisheries of New Zealand, *Marine Protected Areas Policy and Implementation Plan* (Wellington: Department of Conservation and Ministry of Fisheries, 2005) at 10.

³² Canada *Ocean Act*, *supra* note 27, para 35(1)(a).

³³ Executive Order No.13158, *supra* note 27, section 1.

³⁴ For details, see above 2.1.1.1 Definition.

³⁵ For details, see below 3.1.3.1 The Text of the Convention.

³⁶ For details, see below 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

³⁷ For example, see below Chapter V. Marine Protected Areas in the National Laws of China, Philippines and Vietnam.

³⁸ See for example below 3.2.7 Particularly Sensitive Sea Areas.

of protected areas (which could mean another level of administrative complication) without having any real intrinsic protective measure.

2.1.1.2 Purposes of Marine Protected Areas

Traditionally, MPAs are considered to have two major functions. The first is a common function between protected areas and MPAs, which is to help protect and preserve the ecosystem.³⁹ MPAs provide protection for the marine ecosystem by protecting habitats and sites that are important for marine biodiversity⁴⁰ and/or critical for the conservation of one or many marine species⁴¹, safeguarding life-support processes of the sea and preserving sites from human impacts to enable them recover from stresses.⁴²

The second function is more specific to the marine context: to help maintain viable fisheries. MPAs, along with traditional fisheries management tools,⁴³ help rebuild

³⁹ Pursuant to Article 2 of CBD, the ecosystem is defined as “a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit”; see CBD, *supra* note 8. Pursuant to Decision V/6 of the 5th COP of the CBD in 2000, human and their cultural diversity are integral part of many ecosystems, see CBD, *Ecosystem approach*, Decision V/6, 5th Meeting of the COP to the CBD, Nairobi, Kenya, May 15-26, 2000 [Decision V/6].

⁴⁰ Such as mangrove areas, kelp forest, seagrass beds, coral reefs and seamounts. See for example Ant Maddock, *UK Biodiversity Action Plan Priority Habitat Descriptions* (updated July 2010), online: Joint Nature Conservation Committee <<http://jncc.defra.gov.uk/page-5711>>, accessed August 12, 2011; Chris Bleakly, *Review of Critical Marine Habitats and Species in the Pacific Islands Region, IWP-Pacific Technical Report (International Waters Project) no. 5 (Samoa: SPREP, 2004) 17*; Charlotte De Fontaubert, *The Status of Natural Resources on the High-Seas* (Gland: WWF, IUCN, 2001) 9; Robert S. Steneck, “Kelp Forest Ecosystems: Biodiversity, Stability, Resilience and Future” (2002) 29:4 *Environmental Conservation* 436 at 438; UNEP-WCMC, *In the Front Line: Shoreline Protection and other Ecosystem Services from Mangroves and Coral Reefs* (Cambridge: UNEP-WCMC, 2006) and K. Kathiresan and B.L. Bingham, “Biology of Mangroves and Mangrove Ecosystems” (2001) 40 *Advances in Marine Biology* 81.

⁴¹ Such as breeding, nursery and feeding areas of fish. For a definition of critical habitat in national law, see the United States’ *Endangered Species Act of 1973* Pub L No.93-205 87 Stat 884 at Sec 3 5(A).

⁴² IUCN, *Establishing Resilient Marine Protected Area Networks-Making it Happen* (Washington, DC: IUCN-WCPA, 2008) 3; Rodolfo Rioja-Nieto and Charles Sheppard, “Effects of Management Strategies on the Landscape Ecology of a Marine Protected Area” (2008) 51: 5 *Ocean and Coastal Management* 397 and Kelleher and Phillips, *supra* note 4 at xvi.

⁴³ Such as restriction on gear, vessels, fishing time and number of fishers (efforts controls) or regulations of the catch or the amount landed (catch controls).

damaged fish stocks and maintain their stability.⁴⁴ Experiments have shown that species within MPAs have much higher densities, biomass, larger individual mean sizes and greater taxonomic diversity than those outside.⁴⁵ The fisheries in areas outside the MPAs could also benefit from those species moving from the MPAs via spill-over effect; however this conceptual assumption is not yet well understood by researchers.⁴⁶

In addition to these two direct functions, MPAs can have many other important roles, most of which are similar to their terrestrial “counterparts” such as providing non-consumptive economic activities like tourism and recreation;⁴⁷ providing opportunities for scientific research and education;⁴⁸ protecting cultural, historical, spiritual and aesthetic values.⁴⁹ Finally, a less well-known role of MPAs is to help resolve conflicts and maintain peace between States. In fact, some transboundary MPAs⁵⁰ or marine parks for peace⁵¹ can be used explicitly to solve border disputes, secure or maintain peace

⁴⁴ Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 14 and IUCN, *supra* note 42.

⁴⁵ Fisheries Management. 4. Marine Protected Areas and Fisheries, *ibid.* at 41; Partnership for Interdisciplinary Studies of Coastal Oceans, *The Science of Marine Reserves: Europe*, 2nd ed. (2011), online: Partnership for Interdisciplinary Studies of Coastal Oceans <<http://www.piscoweb.org/publications/outreach-materials/science-of-marine-reserves>>, accessed May 18, 2011 at 4; FAO/Japanese Government Cooperative Programme, *Report and Documentation of the Expert Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Considerations, Rome, June 12-14, 2006* (Rome: FAO, 2007) 109; and National Research Council, Committee on the Evaluation, Design, and Monitoring Marine Reserves and Protected Areas in the United States, *Marine Protected Areas: Tools for Sustaining Ocean Ecosystems* (Washington, D.C.: National Academy Press, 2001) 71.

⁴⁶ *Ibid.*

⁴⁷ Sue Stolton and Nigel Dudley, *Arguments for Protected Areas: Multiple Benefits for Conservation and Use* (Sterling, VA: Earthscan, 2010) 195 and Secretariat of the CBD, *Protected Areas in Today's World: Their Value and Benefits for the Welfare of the Planet*, Technical Series No.36 (Montreal: Secretariat of the Convention on Biological Diversity, 2008) 1.

⁴⁸ Caitlyn Toropova *et al.* (eds), *Global Ocean Protection: Present Status and Future Possibilities* (Gland: IUCN, 2010) 2 and 17; and National Research Council, Committee on the Evaluation, Design, and Monitoring Marine Reserves and Protected Areas in the United States, *supra* note 45 at 72.

⁴⁹ Toropova *et al.*, *ibid.* at 20.

⁵⁰ See below 2.2.4.1 Transboundary Protected Areas between States.

⁵¹ The term more often used is “peace parks” which can also mean memorials in city parks and battlefields. So to avoid any possible confusion, the term “parks for peace” is used in this dissertation to refer to a type of transboundary protected areas; see Stolton and Dudley, *supra* note 47 at 229.

during and after an armed conflict and promote stable and cooperative relationships between neighbouring countries.⁵²

2.1.1.3 Classification of Marine Protected Areas

As indicated earlier, protected areas can take various forms and the extent of specific protection measures involved as well as the terminology used around the world is also diverse. For instance, a “sanctuary” in the Philippines is an area forbidden for any extractive use but a “national marine sanctuary” in the United States usually allows activities such as fishing, but not oil exploitation.⁵³ Or “national marine parks” in Kenya are closed for any kind of extraction activity while in Tanzania they are zones for a wide range of uses.⁵⁴ To avoid this confusion, protected area classifications have been developed internationally and the most widely accepted system of classification so far is the one established under the IUCN. Initiated as early as 1962, the current IUCN classification was adopted in 1994.⁵⁵ The assignment is made according to management objectives and thus, do not reflect directly the approach used for management, the activities allowed or prohibited or the effectiveness of management.⁵⁶ Under this system, there are six categories of protected areas: strict nature reserves (category Ia), wilderness area (Ib), natural park (II), natural monument or features (III), protected areas with

⁵² Stolton and Dudley, *supra* note 47 at 228. It is also stated that MPAs contribute to the sequestration of carbon (important for the slowdown of climate change) and mitigate natural disasters such as typhoons, tsunamis and coastal erosion; see for example Toropova *et al.*, *supra* note 48 at 20; Stolton and Dudley, *supra* note 47 at 205; and Mark Mehlgarten, *Marine Protected Areas: A Compact Introduction* (Eschborn: Deutsche Gesellschaft für, 2002) 3. Actually, what really helps capture and store carbon is different components of the marine ecosystem, in particular all the aquatic plants. Similarly, coastal habitats such as coral reefs, seagrass beds, mangroves and wetlands buffer human settlements from natural hazards. The MPA, or more exactly the status of protected areas helps to preserve and restore these important habitats and species.

⁵³ FAO/Japanese Government Cooperative Programme, *supra* note 45 at 185.

⁵⁴ UNEP-WCMC, *supra* note 10 at 18.

⁵⁵ Alexander Gillespie, *Protected Areas and International Environmental Law* (Boston: Martinus Nijhoff Publishers, 2007) 29.

⁵⁶ UNEP-WCMC, *supra* note 10 at 18.

sustainable use of natural resources (IV), protected landscapes/seascapes (V) and habitat/species management areas (VI).⁵⁷ Although all these categories are considered to be of equal importance, they seem to imply a graduation in human intervention.⁵⁸ As of July 2013, more than 200,000 protected areas in the world have been assigned to one of the above-mentioned categories.⁵⁹

The general IUCN classification of protected areas is explicitly intended for all protected areas including MPAs. In 2012, the Union also issued Guidelines on how to apply these categories to MPAs.⁶⁰ These Guidelines shed light on the application of the classification to multiple-zone MPAs in terms of the compatibility between the activities of exploitation of the sea within different categories. Almost half of more than 9000 MPAs currently listed in the World Databased on Protected Areas have been assigned with an IUCN category.⁶¹

The current IUCN protected areas categories system still has little influence on the practice relating to protected areas in the world. At the global level, most of instruments relating to protected areas predated the adoption of the 1994 categories system. These instruments include the Ramsar Convention of 1971,⁶² World Heritage Convention of 1972,⁶³ and CBD of 1992. Since 1994, some programs have started work to integrate the IUCN system into their framework instruments. These programs include the CBD, the United Nations Educational, Scientific and Cultural Organization

⁵⁷ For the description of these categories see Dudley, *supra* note 5 at 13 and Gillespie, *supra* note 55 at 36.

⁵⁸ IUCN, *supra* note 4.

⁵⁹ For more details see online: Protected Planet <<http://protectedplanet.net/search>>, accessed July 1, 2013.

⁶⁰ Day J. Dudley *et al.*, *supra* note 7.

⁶¹ Protected Planet, *supra* note 59.

⁶² *Ramsar Convention*, *supra* note 13.

⁶³ *Convention Concerning the Protection of the World Cultural and Natural Heritage*, 6 November 1972, 1037 U. N. T. S. 152.

(UNESCO)'s Man and Biosphere Programme and the International Forum on Forests.⁶⁴ At the regional level, a survey carried out by the IUCN's Environmental Law Centre in 2004 found only two regional instruments using the IUCN categories,⁶⁵ namely the Conservation of Arctic Flora and Fauna Circumpolar Protected Areas Network Strategy and Action Plan of 1996 and the African Convention on the Conservation of Nature and Natural Resources of 2003.⁶⁶

As for national legislation, a research in 2003 showed that although the IUCN categories system of 1994 started to appear in one way or another in legislation and policies relating to protected areas, in particular in those that entered into force after its adoption; the number of countries that directly use or are strongly influenced by this system are still limited.⁶⁷ For instance, of a total of 126 pieces of national legislation adopted after 1994, there are only two in which IUCN protected area management categories are incorporated into instruments exactly and IUCN is specifically mentioned; 11 in which categories very similar to those of IUCN are used and/or IUCN is not specifically mentioned (strong influence with very similar categories); and 45 which contain concepts that are similar to the IUCN categories (few similar categories with no clear or direct influence). Finally, in 68 pieces of national legislations, no similarities

⁶⁴ Benita Dillon, "The Use of the Categories in National and International Legislation and Policy" (2004) 14:3 Protected Areas Program: Protected Areas Categories 15 at 16.

⁶⁵ The survey was implemented under the framework of the Speaking a Common Language Project: see Kevin Bishop *et al.*, *Speaking a Common Language: The Uses and Performance of the IUCN System of Management Categories for Protected Areas* (Gland: IUCN, 2004) C2.2 at 55.

⁶⁶ See Working Group on Conservation of Arctic Fauna and Flora, *Conservation of Arctic Flora and Fauna Circumpolar Protected Areas Network-Strategy and Action Plan*, Habitat Conservation Report No.6 (Trondheim: Directorate for Nature Management, 1996), online: Arctic Council <<http://arcticportal.org/uploads/3v/kl/3vklGMBX4PY7yUyECXLhAQ/HCR6-CPAN-Protected-Areas-Network-CPAN---Strategy-and-Action-Plan.pdf>>, accessed August 9, 2010 and *African Convention on the Conservation of Nature and Natural Resources* (revised version), 11 July 2003, online: African Union <<http://www.africa-union.org/root/au/documents/treaties/treaties.htm>>, accessed August 9, 2010, Art. V, para 6.

⁶⁷ Sue Wells and Jon Day, "Application of the IUCN Protected Area Management Categories in the Marine Environment" (2004) 14:3 Protected Areas Program: Protected Areas Categories 28.

seem to exist between the protected areas established and the IUCN categories (no apparent influence). Besides, the survey found that the IUCN categories had been mentioned more in national policy frameworks than legislations.

In addition to the IUCN's general scheme of classification for protected areas, other ways of classifying MPAs are suggested by academics. For instance, Tundi Agardy proposed two ways to categorize MPAs: one based on marine management areas and the other, on its primary objectives.⁶⁸

2.1.2 From Marine Protected Areas to a Network of Marine Protected Areas

“Networking” protected areas provides benefits for protection both in terrestrial and marine environments but seems to generate a special interest in the marine context because of the characteristics of the marine ecosystem. While the concept of protected areas may be considered as old as natural resource management itself and has been developing along with human history;⁶⁹ protected areas have, for the most part, been established on an individual and *ad hoc* basis.⁷⁰ The model of ecological network started to appear in the 1970s, particularly in Estonia with the suggestion by conservationists to have different landscape planning proposals at regional levels.⁷¹

A network of protected areas can have many benefits. It helps ensure the protection of all types of biodiversity, maintains the natural range of species, protects

⁶⁸ For more details see Tundi Spring Agardy, *Marine Protected Areas and Ocean Conservation* (Austin, TX: R.G. Landes, 1997) c5 at 99.

⁶⁹ It is believed by some authors (including Edward Houdes *et al.*, Michael I. Jeffrey, Kalemani Jo Mulongoy and Stuart Chape) that the idea of setting aside areas for natural or semi-natural land stretches back thousands of years with the early hunting reserves; fishing, crabbing closed areas or sacred places. For example, see: Kalemani Jo Mulongoy and Stuart Chape (eds), *Protected Areas and Biodiversity: An Overview of Key Issues* (Cambridge: UNEP-WCMC, 2004) 7.

⁷⁰ UNEP-WCMC, *supra* note 10 at 13.

⁷¹ Graham Bennett and Piet Wit, *The Development and Application of Ecological Networks: A Review of Proposals, Plans and Programmes* (Gland, IUCN: 2001) 16; and Kalev Sepp and Are Kaasik (eds), *Development of National Ecological Networks in the Baltic Countries in the Framework of Pan-European Ecological Network* (Warszawa: IUCN Office of Central Europe, 2002) 11.

unique, endemic, rare and endangered species spread over a fragmented habitat and protects ecological processes essential for large-scale ecosystem functioning. From a management point of view, a network helps ensure social and economic connections between protected areas, bringing sectoral agencies and different stakeholders together, facilitating information sharing and allowing more efficient resource use. A network of protected areas may also be more resilient to a wide range of threats.⁷² It also provides greater flexibility to situate and configure protected areas in ways that maximise positive and avoid negative socioeconomic effects. At the regional level, a network can help protect an ecosystem along with species that cannot be adequately protected in one country and promote cooperation between neighbouring countries to address common issues.⁷³

The practice of networking MPAs is even more critical because of the characteristics of the marine ecosystem. Compared to the terrestrial environment, the sea is relatively open with more organisms dispersing and migrating at various life stages. Changes in marine ecosystems also occur in a shorter scale of time as they are subject to the surrounding medium and respond to forces such as tides or circulation patterns. Marine ecosystems and species are more closely connected in a number of ways such as by the actions of waves, winds, freshwater inflows or tidal currents. Boundaries in the marine environment are very nebulous both in terms of the outer bounds of ecosystems and definable limits of ecological communities and population structure.⁷⁴ Furthermore,

⁷² Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 20.

⁷³ UNEP-WCMC, *supra* note 10 at 24 and Government of Canada, *National Framework for Canada's Network of Marine Protected Areas* (Ottawa: Fisheries and Ocean Canada, 2011) 11 [National Framework for Canada's Network of Marine Protected Areas].

⁷⁴ Agardy, *supra* note 68, c5 at 15.

marine mobile species such as fish, marine mammals and turtles can move in three dimensions and over much greater distances than common terrestrial species.⁷⁵

“Networking” MPAs, in the sense of “scaling up” single MPAs to a zoned network with multiple-use MPAs, is also considered a way of implementing the ecosystem approach.⁷⁶ A large-scale network of MPAs will extend protection from a single species approach to the preservation of the whole ecosystem as a unit with considerations for all its processes and linkages.

The need for a global representative network of MPAs was recognised by the IUCN in 1988 at its 17th General Assembly in San José, Costa Rica.⁷⁷ The Union defines a network of MPAs as “a collection of individual marine protected areas operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfil ecological aims more effectively and comprehensively than individual sites could alone”.⁷⁸ Not just any collection of MPAs can constitute a network; they must be located in critical habitats, containing components of a particular habitat type or portions of different kinds of important habitats and interconnected by the movement of species.⁷⁹

At the national level, a network of MPAs is often defined in non-legislative sources such as in national policies, plans of action, strategies or guidelines. For instance, Canada adopts the same definition of a network of MPAs as the IUCN in its

⁷⁵ National Research Council, Committee on the Evaluation, Design, and Monitoring Marine Reserves and Protected Areas in the United States *supra* note 45 at 17.

⁷⁶ IUCN, *supra* note 42 at 15.

⁷⁷ *Protection of the Coastal and Marine Environment*, Resolution 17.38, 17th Session of the General Assembly of IUCN, San Jose, Costa Rica, February 1-10, 1988.

⁷⁸ IUCN, *supra* note 42 at 12. With the merging of MPAs to the general category of protected areas, it is uncertain whether the organization will seek a new definition for a network of MPAs.

⁷⁹ IUCN, *supra* note 42 at 15.

National Framework for Canada's Network of Marine Protected Areas issued in 2011.⁸⁰ Another example is the National Representative System of Marine Protected Areas, defined in the Guidelines for establishing the National Representative System of Marine Protected Areas of Australia. There, a network of MPAs is defined as “a national system of MPAs which aims to contain a comprehensive, adequate and representative sample of Australia’s marine ecosystems”.⁸¹ Finally, the Framework for the National System of Marine Protected Areas of the United States of America of 2008 gives a very practical understanding of “national system of MPAs”. It considers it as “the group of MPA sites, networks, and systems established and managed by federal, State, tribal, and/or local governments that collectively enhance conservation of the nation’s natural and cultural marine heritage, and represent its diverse ecosystems and resources”.⁸²

The terms “network” and “system” have been used interchangeably to designate a group of protected areas across a region or a country. It was suggested that the word “network” is used primarily with geographical and physical connotation to designate a group of protected areas with connectivity between them. And a “system” refers to grouping of protected areas that has, in addition to geographical and physical characteristics, a functional element implying governance and management arrangements with coordinated planning.⁸³ However, in the context of MPAs, the term “network” is often used to imply government and management relationships as well.⁸⁴ In the framework of the COP of the CBD’s decision, “network” is used for a grouping of

⁸⁰ See National Framework for Canada’s Network of Marine Protected Areas, *supra* note 73 at 8.

⁸¹ ANZECC Task Force on Marine Protected Areas, *Guidelines for establishing the National Representative System of Marine Protected Areas* (Canberra: Environment Australia, 1998) 4.

⁸² National Marine Protected Area Center-US Department of Commerce, *Framework for the National System of Marine Protected Areas of the United States* (November 2008) 4, online: National Marine Protected Area Center <<http://www.mpa.gov/nationalsystem/framework/>>, accessed January 11, 2010.

⁸³ UNEP-WCMC, *supra* note 10 at 20.

⁸⁴ *Ibid.* note 83.

protected areas at the global level and a “system” for those at the national and regional levels.⁸⁵ Finally, “network” can also be used to designate organised groups of people, projects and institutions involved in the establishment and management of protected areas.⁸⁶

The information relating to a network of protected areas provided in this subsection suggests that phrases such as “to establish” or “to designate” a protected area or “establishment” or “designation” of a protected area should be used to refer to the act of officially designating an area as protected area. Meanwhile, phrases such as “to develop” a network of protected areas or “development” of a network of protected areas should be used to refer to the process of building a network of MPAs. This use of terminology is reflected in this dissertation. However, for economy, the dissertation also uses “establish” and “establishment” interchangeably sometimes to designate both the designation of an MPA and the development of a network of MPAs (in particular when MPAs and a network of MPAs are mentioned in the same sentence). As well, network in singular could be used to designate both a specific network of protected areas (either a territorial and/or a sectoral network⁸⁷) or a network of protected areas in general and “networks” is used in the context of commitments and actions to develop networks of protected areas in general or to develop a category of networks of protected areas.⁸⁸

⁸⁵ CBD, *Marine and Coastal Biological Diversity*, Decision VII/5, COP 7th Meeting, Kuala Lumpur, Malaysia, February 9-20, 2004 [Decision VII/5].

⁸⁶ UNEP-WCMC, *supra* note 10 at 20 and IUCN, *supra* note 42 at 12.

⁸⁷ In the context of this dissertation, a territorial network of protected areas refers to a network of protected areas developed at a specific geographical level and a sectoral network of protected areas refers a network containing a specific type of area-based conservation measure such as a network of *refugia*, for example, see below 4.5.1.4 Developments of First Steps toward a Regional System of Fisheries *Refugia*.

⁸⁸ Such as networks of protected areas in wetlands, see below 3.1.3.2 Resolutions and Recommendations of the Conference of the Parties.

2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea

For the purpose of this dissertation, the SCS is viewed as the body of water in the Pacific Ocean located between the Strait of Malacca in the Southeast and the Strait of Taiwan in the Northeast.⁸⁹ Considered as one of largest semi-enclosed seas in the world, the SCS has an estimated area of about 3.500.000 km² and is surrounded by China, the territory of Taiwan (hereafter called Taiwan), Philippines, Brunei, Indonesia, Singapore, Malaysia, Thailand, Cambodia and Vietnam.⁹⁰ From a socioeconomic point of view, the coastal area of the SCS is home to about at least 270 million people, equivalent to five percent of the world's population at the time.⁹¹ It is also the fastest developing area in the middle of a region with the world's most dynamic economies over the last decades, which are China and ASEAN countries. The main exploitations of the SCS include fisheries, mariculture, oil and gas, shipping and tourism.⁹² For a graphic illustration of the SCS, see Figure 1 below.

⁸⁹ For the delimitation of the SCS, see International Hydrographic Organization, *Limits of the Oceans and Seas*, Special Publication No.23, 3rd ed. (Monte-Carlo: International Hydrographic Organization, 1953) 30 and Wilkinson *et al.*, *South China Sea*, GIWA Regional Assessment 54, (Kalmar: University of Kalmar, 2005) 14. It should be noted that the Gulf of Thailand is considered part of the SCS in some recent definitions but not in the one provided by International Hydrographic Organization at the time, see for example, Liana Talaue-McManus, *Transboundary Diagnostic Analysis for the South China Sea*, EAS/RCU Technical Report Series No.14 (Bangkok: UNEP, 2000) 1. In this dissertation, the Gulf of Thailand is considered part of the SCS.

⁹⁰ Referred to hereafter commonly as “SCS States”, see Talaue-McManus, *ibid.* note 89 at 1.

⁹¹ Talaue-McManus, *ibid.* at 1. This statistic was published in 2000. A more recent number is not available but as the population of States bordering the SCS have grown since, this number should be higher now.

⁹² Talaue-McManus, *ibid.* at 1; Sulan Chen, “Instrumental and Induced Cooperation: Environmental Politics in the South China Sea” (PhD thesis, University of Maryland, 2005) 109 [Unpublished] and Kenneth Sherman and Gotthilf Hempel (eds), *The UNEP Large Marine Ecosystem Report: A perspective on changing conditions in LMEs of the world of Regional Seas*, UNEP Regional Seas Report and Studies No.182 (Nairobi: UNEP, 2009) at 255 and 297.

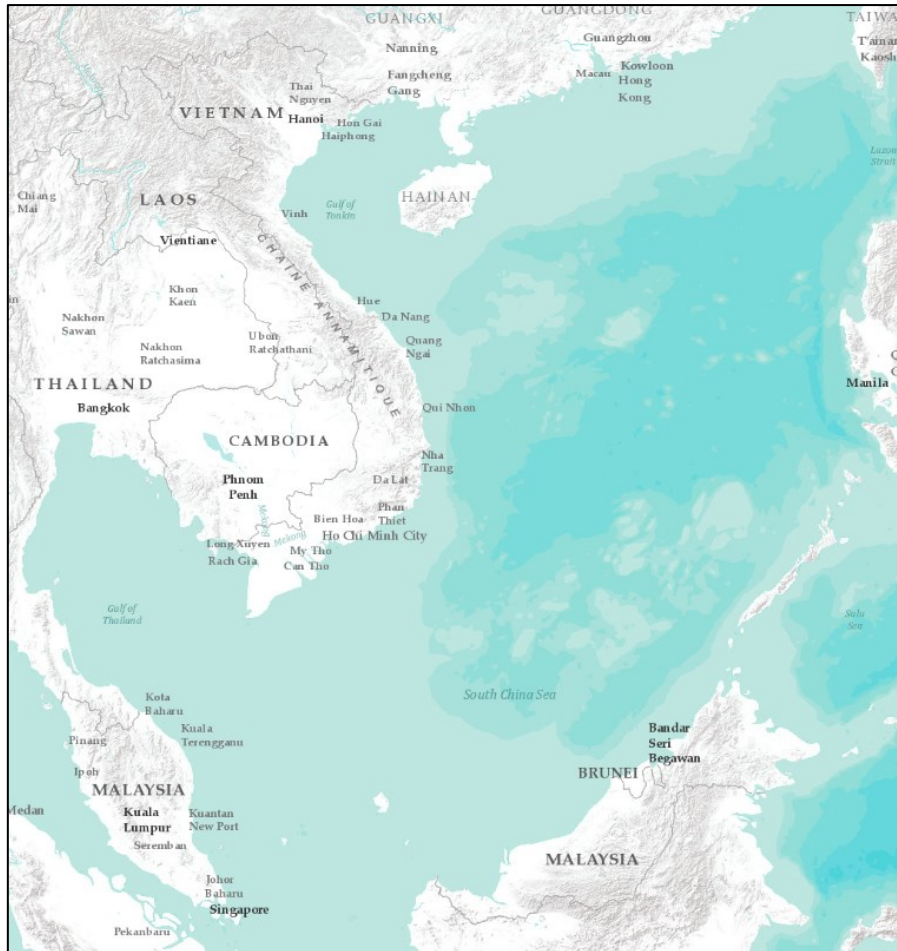


Figure 1 The South China Sea

ArcGIS Base Map (May 2012)

The development of a regional network of MPAs can have many important benefits in the SCS. A network of MPAs may be useful for the preservation of many internationally important habitats in this semi-enclosed sea, which are under serious threats of loss, degradation and pollution. It can also help protect and restore the SCS's fish stocks, which, although extremely important for the fisheries industry and the livelihood of the populations of the coastal States, have been both over-exploited and badly managed so far. Besides, having a network of MPAs with components like marine peace parks may be a way to promote peace and cooperation in the SCS which,

otherwise, is well-known for having one of the world's most complicated maritime boundary disputes. To provide support to these arguments, this sub-section discusses in detail the importance of the SCS marine ecosystem, its threats, and potential role to promote peace and cooperation of MPAs in the region amid complex territorial and jurisdictional disputes.

2.1.3.1 The Importance of the South China Sea Marine Ecosystem

The SCS lies within the Indo-West Pacific region, recognized as a global center of biodiversity.⁹³ Relating to the coverage of valuable natural habitat, recent estimates state that the SCS has 12 percent of the world's and about 30 percent of Asia's mangrove forests. It is also recognised that the SCS supports 20 percent of Southeast Asia's coral reefs which account for 34 percent of the world total. Southeast Asian countries (excluding China) have, at least, 334 wetland⁹⁴ sites with a total area of about 192 million hectares. In China's SCS coast, a total of about 15 thousand hectares of estuaries, lagoons, intertidal mudflats, peat and non-peat swamps have been identified.⁹⁵

The wider region is also very rich in species. The Indo-West Pacific has the most diverse range of mangrove and coral species in the world: 41 out of 51 genera of true mangrove species and 50 out of 70 genera of coral known globally. The East Asian Seas⁹⁶ is one of the world's richest regions in seagrass species, containing 20 species out

⁹³ Talaue-McManus, *supra* note 89 at 1 and Wilkinson *et al.*, *supra* note 89 at 18.

⁹⁴ For a definition of wetland, see below 3.1.3 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971.

⁹⁵ UNEP, *Mangroves in the South China Sea*, UNEP/GEF/SCS Technical Publication No.1 (Bangkok: UNEP, 2004) 2; Talaue-McManus, *supra* note 89 at 1; UNEP, *Coral Reefs in the South China Sea*, UNEP/GEF/SCS Technical Publications No.2 (Bangkok: UNEP, 2004) 2 and UNEP, *Wetlands Bordering the South China Sea*, UNEP/GEF/SCS Technical Publication No.4 (Kingston: UNEP, 2004) 4.

⁹⁶ For the location of the East Asian Seas see below 2.2.2.1 Identification of the Ecological Unit for Management.

of 50 known globally. Eighteen (18) of these species are found in, and adjacent to the coastal waters of the SCS.⁹⁷

The SCS is an important fishing ground for countries in the region. Most of the region belongs to the FAO's Western Central Pacific fishing zone,⁹⁸ which ranked third among the world's 18 fishing zones in terms of total annual marine production.⁹⁹ Its stocks are estimated to include 1,027 species of fishes, 91 species of shrimp and 73 cephalopods. The main species fished are scad, mackerel, tuna and shrimp. Most of fishery resources in the SCS are either shared stocks or highly migratory species.¹⁰⁰

Fisheries have an important socio-economic role in SCS countries. Each year, the region lands around six million tonnes of catches, accounting for 10 percent of the total catch of the world and 23 percent of Asia.¹⁰¹ The total number of workers in the fisheries sector in SCS countries in the 1990s was estimated to be about 22 million people.¹⁰² The consumption of marine fish in the food supply in East and Southeast of Asia is about 2.96 kg per capita per year, much higher than the world's average of 1.09 kg per capita per year.¹⁰³

⁹⁷ UNEP, *Mangroves in the South China Sea*, *supra* note 95 at 2; UNEP, *Coral Reefs in the South China Sea*, *supra* note 95 at 2; Talaue-McManus, *supra* note 89 at 9 and UNEP, *Seagrasses in the South China Sea*, UNEP/GEF/SCS Technical Publications No. 3 (Bangkok: UNEP, 2004) 2.

⁹⁸ Purwito Martosubroto, "Western Central Pacific: FAO Statistical Area 71" in FAO, *Review of the State of the World Fisheries Resources*, FAO Fisheries Technical Paper 457 (Rome: FAO, 2005), online: FAO <<http://www.fao.org/docrep/009/y5852e/y5852e00.htm>>, accessed June 17, 2010.

⁹⁹ Jorge Csirke, "Global Marine Production and State of Marine Fishery Resources" in FAO, *ibid.* Relevant statistics were updated until 2002, more recent numbers are not available.

¹⁰⁰ Pakjuta Khemakorn, *Sustainable Management of Pelagic Fisheries in the South China Sea Region* (New York: the United Nations, 2006) 19 and Kuan-Hsiung Wang, "Bridge over Troubled Waters: Fisheries Cooperation as a Resolution to the South China Sea Conflicts" (December 2001) 14: 4 *The Pacific Review* 531 at 536.

¹⁰¹ Khemankorn, *ibid.* note 100; Sherman & Hempel (eds), *supra* note 92 at 299; and Tom Naess, "Dangers to the Environment" in Timo Kivimaki (eds), *War or Peace in the South China Sea?* (Copenhagen: Nias Press, 2002) 54.

¹⁰² This number includes people working in aquaculture and inland fisheries, see FAO, *Number of Fishers 1970-1997*, FAO Fisheries Circular No.929, Revision 2 (Rome: FAO 1999).

¹⁰³ *Statistics Relating to Fish in Food Supply*, online: FAOSTAT <<http://faostat.fao.org/site/610/default.aspx#ancor>>, accessed January 21, 2013.

Also, many important marine animals, considered by the IUCN as threatened or endangered are found in the SCS such as marine turtles, whales and dugongs.¹⁰⁴

2.1.3.2 Threats to the South China Sea Marine Environment

Over the last few decades, the environment of the SCS has been under some serious threats arising from the fast economic development and high population growth of the region. These threats are habitat loss and degradation, unsustainable exploitation of marine living resources and pollution of the aquatic environment.¹⁰⁵

Although the SCS is endowed with many globally important habitats as described earlier, they have been suffering degradation and loss at a very alarming rate. Seventy (70) percent of the region's mangroves have been lost due mainly to the conversion of coastal land to pond aquaculture (especially for shrimp), cutting of wood, urban and port development and coastal settlement. Eighty (80) percent of the SCS's coral reefs have been degraded or under serious threats in places¹⁰⁶ from sediment, overfishing and destructive fishing practices (such as the use of poison and dynamite), pollution and climate change. Consequently, its reefs have become the most threatened and damaged reefs in the world. Twenty (20) to 50 percent of the seagrass beds have been damaged in many places in the region (Indonesia, Malaysia, Philippines and Thailand) through destructive fishing, sedimentation, waste water, effluents, nutrients, coastal construction and overfishing.¹⁰⁷ The wetlands of the SCS have also suffered widespread loss due to the conversion of land for agriculture, human settlement, urbanization, industrialization

¹⁰⁴ Wilkinson *et al.*, *supra* note 93 at 19 and Committee of Information and Education-Communist Party of Vietnam, *Vietnam's Sea and Islands* (Hanoi, 1993) 28.

¹⁰⁵ Talaue-McManus, *supra* note 89 and Chen, *supra* note 92 at 119.

¹⁰⁶ Such as the coastal waters near China.

¹⁰⁷ Sherman and Hempel (*eds*), *supra* note 92 at 304; Wilkinson *et al.*, *supra* note 89, Chen, *supra* note 92 at 122; Talaue-McManus, *supra* note 89 at 22 and UNEP, *Strategic Action Programme for the South China Sea*, UNEP/GEF/SCS Technical publication No.16 (Bangkok: UNEP, 2008) 3, 9 and 21 [UNEP, SAP].

and tourism and degradation of the ecosystem from pollution, overfishing, deforestation and natural disasters.¹⁰⁸

Marine living resources in the SCS are over-exploited, accompanied by excessive by-catch, discards and waste due to the use of destructive fishing practices.¹⁰⁹ Studies have shown that most of the conventional small pelagic fisheries reached full level of exploitation after 1987 at the SCS basin-wide level. Catch per unit effort in most fisheries has declined steadily and “fishing down the web” is widespread in all SCS countries.¹¹⁰ Fringing reefs are heavily exploited by subsistence fisheries and about 70 percent of the coral reefs in the broader region (including the Sulu-Sulawesi Sea and the Indonesian Sea) produce less than 5 tonnes per km² compared to the 15-20 tonnes per km² of the remaining 30 percent.¹¹¹ Migratory pelagic species such as tuna, sharks, or billfishes are also overexploited.¹¹² Moreover, there is widespread capture, either intentional or accidental of rare, threatened or endangered species such as marine turtles and dugongs.¹¹³ Finally, the widespread use of destructive fishing practices such as poisoning and blast fishing exacerbates the degradation of marine habitat and high level of fish wasting.¹¹⁴

Marine pollution is very severe in certain places in the SCS such as the Ha Long Bay (Vietnam), Manila Bay (Philippines) and Sumatra Island (Indonesia).¹¹⁵ Major sources of pollution are land-based and from shipping. Land-based sources are the most

¹⁰⁸ UNEP, SAP, *ibid.* note 107 at 29.

¹⁰⁹ Sherman and Hempel (*eds*), *supra* note 92 at 303; Wilkinson *et al.*, *supra* note 93 at 40; and Chen, *supra* note 92 at 124.

¹¹⁰ Sherman & Hempel (*eds*), *supra* note 92 at 302 and Talaue-McManus, *supra* note 89 at 40.

¹¹¹ *Ibid.* note 110.

¹¹² Wilkinson *et al.*, *supra* note 93 at 42.

¹¹³ Sherman & Hempel (*eds*), *supra* note 92 at 303.

¹¹⁴ Wilkinson *et al.*, *supra* note 93 at 42.

¹¹⁵ Sherman & Hempel, *supra* note 92 at 303 and Wilkinson *et al.*, *supra* note 93 at 31.

important, consisting of contributions from domestic and industrial waste,¹¹⁶ agriculture, aquaculture as well as sediments and solid waste¹¹⁷. Pollution from ships in the SCS is caused by occasional oil spills from ships and from oil exploration and production and from episodic discharges from shipping.¹¹⁸ Currently, the level of pollution is estimated as moderate but this is very likely to increase with the future development of trade because the SCS is one of the busiest international searoutes through which a quarter of the world's merchandise and half of the world's oil are transported every year.¹¹⁹

2.1.3.3 Marine Protected Areas as a Mechanism to Promote Cooperation and Peace in the South China Sea

There are many disputed areas in the SCS, such as the northern Borneo/Sabah island between the Philippines and Malaysia, the Scarborough Reef between the Philippines, China and Taiwan, the mouth of the Tonkin Gulf between China and Vietnam and different parts of the Gulf of Thailand between Vietnam, Cambodia and Thailand.¹²⁰ However, the most well-known and complicated disputes are those that concern the Paracel Islands (between China, Taiwan and Vietnam), Spratly Islands (between China, Philippines, Brunei, Malaysia, Vietnam and Taiwan) and China's nine-

¹¹⁶ It is estimated that SCS countries generate one million metric tonnes of sewage per year. A large proportion of this domestic waste is discharged directly into the sea without proper treatment. Besides, industries release a minimum of 430,000 tonnes of biochemical oxygen demand (an industrial waste capable of suppressing microbiological growth or activity) into the aquatic system interacting with the SCS, see Chen, *supra* note 92 at 124; UNEP, *Land-based Pollution in the South China Sea*, UNEP/GEF/SCS Technical Publications No. 10 (Bangkok: UNEP, 2007) 3 and Sherman & Hempel (*eds*), *supra* note 92 at 303.

¹¹⁷ A high level of suspended solids are found in coastal waters through most of the region due to activities such as extensive deforestation, logging, mining, land reclamation, dredging, urban development and erosion, see Sherman & Hempel (*eds*), *ibid.* note 92 at 303.

¹¹⁸ *Ibid.* note 117 and Wilkinson *et al.*, *supra* note 93 at 33.

¹¹⁹ Zhang Xuegang, "Southeast Asia and Energy: Gateway to Stability" (2007) 3:2 China Security 18 at 19; Wilkinson *et al.*, *supra* note 89 at 20 and Chen, *supra* note 92 at 125.

¹²⁰ For more details about all disputes in the SCS and Asia, see Victor Prescott and Clive Schofield, *The Maritime Political Boundaries of the World*, 2nd ed. (Leiden: Martinus Nijhoff Publishers, 2005) 429 and Gillian Triggs, *Maritime Boundary Disputes in the South China Sea: International Legal Issues*, Legal Studies Research Paper No. 09/37 (May 2009), University of Sydney Law School.

dotted-line (or nine-dash-line, U-shape, cow-tongue) claim. These disputes, commonly referred to by the international media as “the South China Sea dispute”, are probably some of the most difficult maritime disputes in the world due to the nature of overlapping claims and interests underlying the sovereignty issues.

China, Taiwan and Vietnam claim sovereignty over the Paracel Islands which are entirely occupied by China after taking them by force from South Vietnam in 1974. The Spratly Islands are claimed in their entirety by China, Taiwan and Vietnam respectively, almost in their entirety by Philippines; and partly by Malaysia. Brunei also claims that two of the Spratly’s rocks lie on its extended continental shelf. Except Brunei, all six claimants of the Spratlys have occupied and raised different structures (mostly military) on various features on the islands.¹²¹ In addition to the claim concerning the two groups of islands, China also published maps declaring 80 percent of the SCS as its historic waters.¹²² This claim was presented officially for the first time before the United Nations in 2009 in a protest note against the joint submission of the outer limits of the continental shelf between Vietnam and Malaysia.¹²³ The overlapping territorial and jurisdictional claims in the SCS are presented in the Figure 2 below.

¹²¹ For a more detailed analysis of the dispute relating to the Paracels and Spratlys see: M. Valencia, J. Vandyke and N. Ludwig, *Sharing the Resources of the South China Sea* (The Hague: Kluwer Law International, 1997).

¹²² The position of China on the relation between this claim and the one concerning the two islands remains unclear.

¹²³ Note No. CML/18/2009 of the Permanent Mission of the People’s Republic of China to the Secretary General of the United Nation on May 7, 2009.

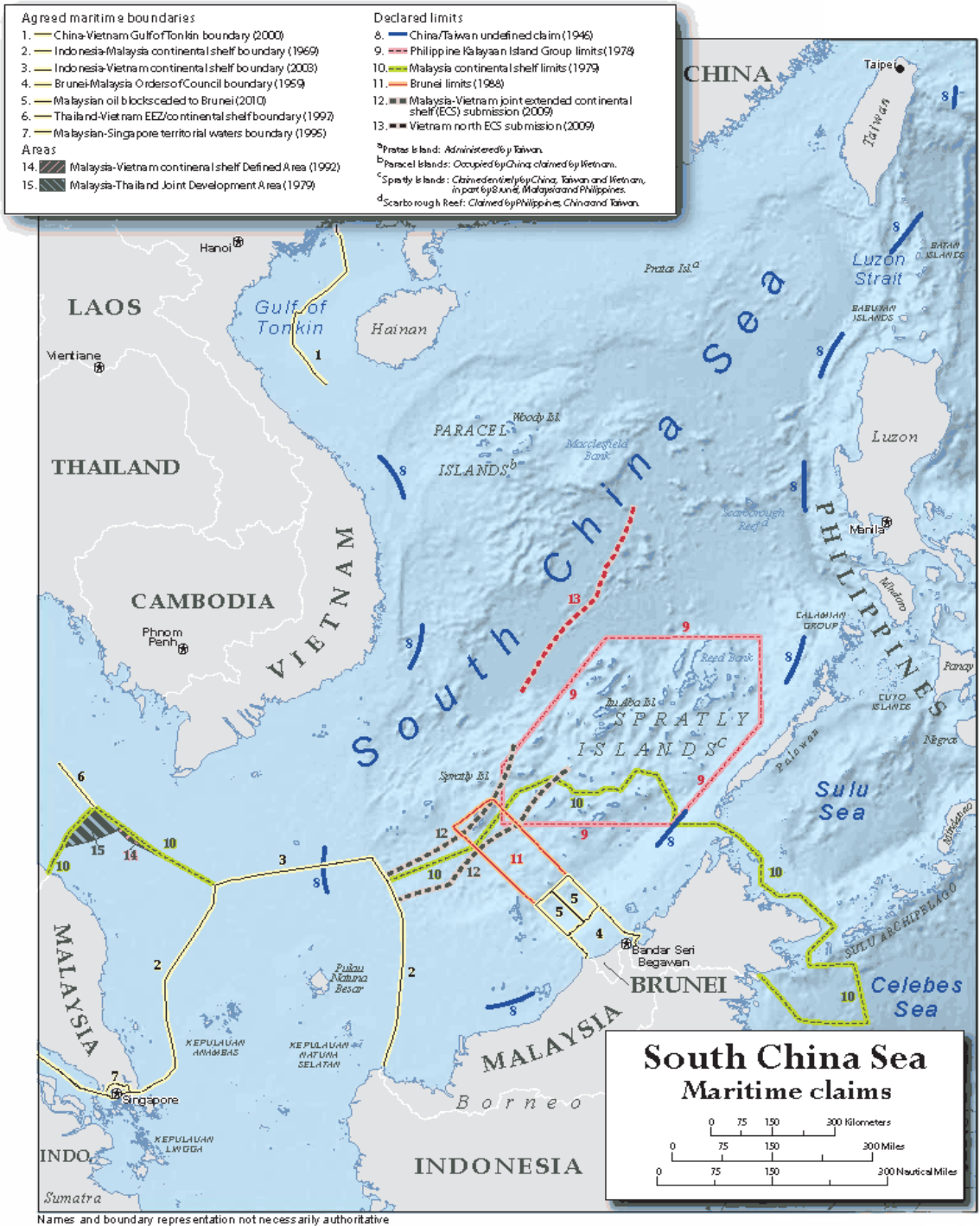


Figure 2 Overlapping Claims in the South China Sea

(Source: U.S. Energy Information Administration¹²⁴)

¹²⁴ Online: U.S. Energy Information Administration
 <http://www.eia.gov/countries/analysisbriefs/South_China_Sea/images/scs_map.png>, accessed February 13, 2013).

The complex nature of these disputes is exacerbated by important security and economic interests at stake in the region. Strategically connecting the Pacific Ocean and the Indian Ocean, the SCS hosts the busiest waterways in the world for military and commercial vessels, in particular oil tankers. A major portion of oil imports for Japan, Korea and Philippines passes through the SCS.¹²⁵ Economically, the area is also a rich ground for fishing resources and has a fair prospect for oil and gas exploitation. However, on the potential quantity of mineral resources of the SCS, the statistics are highly diverse.¹²⁶

These disputes pose a big threat to stability, peace and cooperation in the region. Although the risk of open war seems remote, such a reality cannot be totally excluded either, as States in the region have continuously asserted their claims both through diplomatic discourse and on the ground.¹²⁷ They have also been spending large amounts of financial resources to build up and improve their maritime and aerial military

¹²⁵ Stein Tønnesson, “The Economic Dimension: Natural Resource and Sea” in Kivimaki (ed.), *supra* note 101 at 58.

¹²⁶ According to Chinese estimates, the SCS region may contain as high as 213 billion barrels of oil (in which, the potential reserves in the Paracels and Spratlys alone are 105 billion) and 56,600 million km³ of natural gas. Meanwhile, the U.S. Energy Information Administration estimated that the total of discovered reserves and undiscovered hydrocarbon resources in the offshore basins of the SCS are around 11 billion barrels of oil and 5,380 million km³ gas, see *South China Sea* (February 7, 2013), online: U.S. Energy Information Administration <<http://www.eia.gov/countries/regions-topics.cfm?fips=SCS>>, accessed February 13, 2013 [South China Sea-U.S. Energy Information Administration] and *South China Sea* (2008), online: U.S. Energy Information Administration <<http://www.eia.doe.gov/countries/regions-topics.cfm?fips=SCS>>, accessed April 1, 2010 at 4.

¹²⁷ For more details, see Carlyle A. Thayer, *Recent Developments in the South China Sea: Grounds for Cautious Optimism?* (December 12, 2010) RSIS Working Paper No.220, online: Rajaratnam School of International Studies <http://www.rsis.edu.sg/publications/Working_papers.html>, accessed February 8, 2011; Rommel C. Banlaoi, “Renewed Tensions and Continuing Maritime Security Dilemma in the South China Sea: A Philippine Perspective” and Ian Storey, “Recent Developments in the South China Sea”, papers presented at *The South China Sea: Cooperation for Regional Security and Development 2nd Workshop, Hanoi, 26-27, November 2009*.

capacities.¹²⁸ Besides, clashes and incidents between law enforcement forces and the navies between coastal States and in particular, between those forces and fishermen, happen very often.¹²⁹ The most affected victims from these clashes are the fishers, who see their boats, fishing gears destroyed, their catches seized. They also have to pay large fines, be imprisoned and sometimes, even lose their life.¹³⁰

Though initiatives towards a legal resolution have been taken,¹³¹ these disputes will not likely be resolved in the near future because of their complexity and the refusal of China to use international mechanisms of dispute settlement with regards to the

¹²⁸ For more details see Carlyle A. Thayer, “Recent Development in the South China Sea: Implications for Peace, Stability and Cooperation in the Region”; Kang Fong, “Security Assessment and Prospect of the South China Sea Area”, presented at *The 2nd International Workshop “The South China Sea: Cooperation for Regional Security and Development, November 10-12, 2010, Ho Chi Minh City, Vietnam* and Richard A. Bitzinger, “A New Arms Race? Explaining Recent Southeast Asian Military Acquisitions” (2010) 32:1 *Contemporary Southeast Asia* 50.

¹²⁹ The most recent incidents in 2013 include the standoff between China and Philippines in the Second Thomas Shoal, the shooting of a Taiwanese fishing boat by Philippine military ship causing the death of a fisherman and the shooting of Vietnamese fishing boat in flares by Chinese military ship causing making the former’s cabin ablaze, see “Second Thomas Shoal ‘could be the next flashpoint’ (May 30, 2013) online: Taipei Times <<http://www.taipeitimes.com/News/front/archives/2013/05/30/2003563520>>, accessed July 1, 2013; “Aquino apologizes for Taiwan fisherman’s death” (May 15, 2013) *AFP* and “China says it fired flares but calls blaze on Vietnamese boat fabrication” (March 23, 2013) online: The Japan Times <<http://bugs.japantimes.co.jp/news/2013/03/28/asia-pacific/china-says-it-fired-flares-but-calls-blaze-on-vietnamese-boat-fabrication/#.UdD5uflwrSg>>, accessed July 1, 2013.

¹³⁰ See “Vietnam Fisherman Says Beaten during China Arrest” (April 23, 2012) online: *Strait Times* <http://www.straitstimes.com/BreakingNews/SEAsia/Story/STIStory_791808.html>, accessed April 29, 2012 and Tessa Jamandre, “China fired at Filipino fishermen on Jackson atoll” (June 3, 2011) online: *ABS-CBN News* <<http://www.abs-cbnnews.com/-depth/06/02/11/china-fired-filipino-fishermen-jackson-atoll>>, accessed April 29, 2012. See also Thang Nguyen-Dang, “Fisheries Cooperation in the South China Sea and the (Ir)Relevance of the Sovereignty Question” (2012) 2:1 *Asian Journal of International Law* 59 and Lan-Anh Thi Nguyen, *The South China Sea Dispute: A Reappraisal in the Light of International Law* (PhD Thesis: University of Bristol, 2005) [unpublished] 39.

¹³¹ In January 2013, the Philippines initiated the UNCLOS arbitral proceeding against China to challenge its nine-dotted-line claim but China refused to participate to the proceedings; see *Statement by Secretary of Foreign Affairs Albert del Rosario on the UNCLOS Arbitral Proceedings against China to Achieve a Peaceful and Durable Solution to the Dispute in the WPS* (January 22, 2013) online: Department of Foreign Affairs of the Republic of Philippines <<http://www.dfa.gov.ph/index.php/newsroom/dfa-releases/7300-statement-by-secretary-of-foreign-affairs-albert-del-rosario-on-the-unclos-arbitral-proceedings-against-china-to-achieve-a-peaceful-and-durable-solution-to-the-dispute-in-the-wps>>, accessed January 23, 2013 and Pia Lee-Brago, “China rejects UN arbitration on West Phl Sea” (February 20, 2013) online: *The Philippine Star* <<http://www.philstar.com/headlines/2013/02/20/910910/china-rejects-un-arbitration-west-phl-sea>>, accessed May 8, 2013.

SCS.¹³² In this context, MPAs and a network of MPAs offer a political opportunity to maintain a peaceful, cooperative and stable environment.

As earlier explained, an important role of a protected area, in particular a peace park, is to help promote peace and cooperation.¹³³ The development of a regional network of MPAs in the SCS with marine peace parks as components could then contribute to decrease the tension and enhance cooperation between disputing claimants. Furthermore, from a political point of view, cooperation to protect the marine environment in a disputed area might be accepted by relevant claimants more easily than other cooperative activities because environmental protection is a non-exploitative undertaking. Unlike cooperation in oil and gas exploitation and fisheries, cooperation to protect the marine environment (including the development of a regional network of MPAs) does not require any type of commercial extraction and sharing of marine resources. Therefore, countries could participate in relevant initiatives in disputed areas without having to worry about seeing their potential resources exploited “unfairly” by others.¹³⁴

Now that the background on MPAs and a network of MPAs and the benefits of developing a network of MPAs in the SCS have been explained, the next section of the

¹³² After the ratification of the UNCLOS, China made a declaration in accordance with article 298 of UNCLOS in 2006, excluding the jurisdiction of all mechanisms of dispute settlement under UNCLOS (International Tribunal for the Law of the Sea, International Court of Justice and international arbitration) with regards to disputes concerning, inter alia, sea boundary delimitation, and historic bays or titles, see *Declaration of the People's Republic of China on August 25, 2006 with regards to article 298 of UNCLOS*, online: United Nations Department of Ocean Affairs and the Law of the Sea <[http://www.un.org/Depts/los/convention_agreements/convention_declarations.htm#China after ratification](http://www.un.org/Depts/los/convention_agreements/convention_declarations.htm#China_after_ratification)>, see April 3, 2013. Recently, China also refused to participate to the arbitral proceeding initiated by Philippines, see Pia Lee-Brago, “China rejects UN arbitration on West Phl Sea” (February 20, 2013) online: *The Philippine Star* <<http://www.philstar.com/headlines/2013/02/20/910910/china-rejects-un-arbitration-west-phl-sea>>, accessed April 3, 2013.

¹³³ See above 2.1.1.2 Purposes of Marine Protected Areas.

¹³⁴ Hai Dang Vu, “An Approach to the Implementation of Regional Cooperative Activities in the South China Sea: An Analysis”, presented at *The 2nd International Workshop “The South China Sea: Cooperation for Regional Security and Development, November 10-12, 2010, Ho Chi Minh City, Vietnam.*

dissertation discusses the steps and conditions to develop a network of MPAs and challenges for the undertaking of such an endeavour in the context of the SCS.

2.2 Towards a Network of MPAs for the South China Sea: Perspectives and Challenges

The main purpose of this section of the dissertation is to indicate what prospect there is for the development of a network of MPAs in the SCS. Concretely, it discusses criteria, steps and conditions of success for the development of a network of MPAs, in particular a network of MPAs at the regional level. In addition, it also reviews suggestions from academics relating to the establishment of transboundary MPAs and a network of MPAs in the SCS and challenges for undertaking such an initiative in the SCS.

2.2.1 Criteria for a Network of Marine Protected Areas

This section draws data from both literature providing general guidelines relating to the development and management of networks of MPAs¹³⁵ and those that have a country-specific application.¹³⁶ Though designated by various terminologies, the applicable criteria are most commonly designated as representativeness, resilience and connectivity. A summary of different criteria found in the relevant literature follows.

¹³⁵ See UNEP-WCMC, *supra* note 10; IUCN, *supra* note 42; Adrian G. Davey, *National System Planning for Protected Areas* (Gland: IUCN, 1998); Nigel Dudley and Jeffrey Parish, *Closing the Gap: Creating Ecologically Representative Protected Area Systems. A Guide to Conducting the Gap Assessments of Protected Area Systems for the Convention on Biological Diversity*, Technical Series 24 (Montreal: Secretariat of the Convention on Biological Diversity, 2006); Roberts M. Callum *et al.*, “Ecological Criteria for Evaluating Candidate Sites for Marine Reserves” (2003) 13:1 (Supplement) *Ecological Applications* S199; AHTEG/MCPA, *Technical Advice on the Establishment and Management of a National System of Marine and Coastal Protected Areas*, CBD Technical Series no.13, (Montreal: Secretariat of the Convention on Biological Diversity, 2004) and Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6.

¹³⁶ National Marine Protected Area Center-US Department of Commerce, *supra* note 82; J. Smith *et al.*, *Criteria and Tools for Designing Ecologically Sound Marine Protected Areas Networks in Canada’s Marine Region* (Halifax, N.S: WWF Canada 2009); and R. R. Stewart, T. Noyce and H. P. Possingham, “Opportunity Cost of Ad Hoc Marine Reserve Design Decisions: an Example from South Australia” *Marine Ecology Progress Series* 253 (2003) 25.

2.2.1.1 Size, Shape and Spatial Distribution of Individual MPAs in a Network

Individual components of a network of MPAs have to be of an appropriate size, shape and spatial distribution.¹³⁷ For the protection of species, individual MPAs should be large enough to capture the home-range sizes of many species, as well as allow for self-seeding by short-distance dispersers. The choice of size will determine the subset of species that will potentially benefit from the MPA. Generally, a larger protected area will benefit a wider diversity of species and be less vulnerable to disturbances such as low tides and algal blooms.¹³⁸ The size must depend also on the objective of the MPA to maximize the catch in the surrounding waters or to protect species because if the MPA is too large, spill-over and export of fishes may not offset the loss of fishing grounds. Besides, the effectiveness of management must also be considered as large MPAs demand more effort to establish and enforce.¹³⁹

Relating to the shape of the MPA, it is important to consider the ratio of edge habitat versus core interior habitat as the edges are often extensively fished and therefore do not offer the same refuge to fish species as core interior protected areas do. It is also important to include a variety of depths and transitional zones while planning for a representation of all habitat types within a network. The shape of an MPA should aim to capture the onshore-offshore or habitat-habitat ontogenic shifts of species. Besides, the MPA should be designed to encompass, not bisect the protected ecological features.

¹³⁷ See UNEP-WCMC, *supra* note 10 at 26.

¹³⁸ Callum *et al.*, *supra* note 135. However, there is still debate about the optimum size of an MPA's ecological boundaries as some authors state that benefits of no-take areas are not dependant on size but more on the mobility of species and that several small marine reserves can export *larvae* and adults to fishing grounds better than a single large one because of a larger edge-to-area ratio, see Fiona R. Gell and Roberts M. Callum, "Benefits Beyond Boundaries: the Fishery Effects of Marine Reserves" (2003) 18: 9 *Trends in Ecology and Evolution* 448; Callum *et al.*, *supra* note 135 at S204; and Benjamin S. Halpern, "The Impact of Marine Reserves: Do Reserves Work and Does Reserve Size Matter?" (2003) 13:1 (Supplement) *Ecological Applications* S117.

¹³⁹ IUCN, *supra* note 42 at 58.

Finally, the shape is an important factor in the effective delineation and enforcement of MPA in the network.¹⁴⁰

Spatial distribution between MPAs must be guided by the movement of species, their *larvae*, eggs and spores into, out of and between MPAs. This, in turn, depends on their dispersal distance. MPAs must be appropriately spaced to capture the broadest range of dispersal possible. Furthermore, the spacing of MPAs should also consider habitat patterns. Within the network, spacing between neighbouring MPAs should offer suitable habitat for target species or range of target species.¹⁴¹

2.2.1.2 The Permanence of the Network

A network of MPAs as a whole has to be considered permanent, even if units within it change. Protecting biodiversity, and restoring and maintaining species requires long-term commitment. Long-term MPAs, especially no-take not only can have positive results on the biomass, abundance, size and diversity of species within the protected area but can also benefit areas outside its boundary because of spill-over of juveniles and export of *larvae* and eggs. The time to accrue social, economic and environmental benefits can vary from a few seasons to decades, depending on various elements (such as life story of target species, conditions of the ecosystem or speed of development of the network).¹⁴²

2.2.1.3 The Representativeness of the Network

In general, species diversity increases with habitat diversity. Therefore, the greater the variety of habitats protected, the greater the biodiversity conservation is likely

¹⁴⁰ IUCN, *supra* note 42 at 59 and J. Smith *et al*, *supra* note 135 at 13.

¹⁴¹ IUCN, *supra* note 42 at 59.

¹⁴² IUCN, *supra* note 42 at 50 and *Marine Protected Areas: A Fundamental Tool for Long-term Ocean Biodiversity Protection and Sustainable Management* (June 2013) Statement of IUCN-WCPA.

conserved.¹⁴³ For this reason, a network of MPAs should be fully ecologically representative in the sense that one or more MPAs must be established for each of full range of biological diversity (from genes to ecosystem) and the associated oceanographic environment in the given area.¹⁴⁴ The network should also aim to capture the differences in biodiversity across different depths as well as geographic areas. The representativeness of a network is assessed using a biogeographical approach,¹⁴⁵ which studies all possible scales of analysis of the distribution of life across space, and how, through time, it has changed with a focus on distribution and dynamics of diversity.¹⁴⁶

Following features should be included within the network: all ecosystems/habitats types; all species and characteristic species communities; critical habitats for threatened, restricted range or endemic species and areas important for vulnerable life stages (for example spawning or breeding aggregations). Rare habitats and ecosystems, including those that provide essential ecosystem services and those that are vulnerable or “sensitive” should have more priority for inclusion in the network than common or persistent ones.¹⁴⁷ According to the Framework for the National System of Marine Protected Areas of the United States, a network of MPAs should be culturally

¹⁴³ IUCN, *supra* note 42 at 59.

¹⁴⁴ UNEP-WCMC, *supra* note 10 at 27.

¹⁴⁵ *Ibid.* note 144 at 21; IUCN, *supra* note 42 at 40; Davey, *supra* note 135 at 13; Airamé Satie *et al.*, “Applying Ecological Criteria to Marine Reserve Design: A Case Study from the California Channel Islands” (2003) 13(1) *Supplement Ecological Applications* S170 at S172; AHTEG/MCPA, *supra* note 135 at 24; Robert M. Callum *et al.*, “Application of Ecological Criteria in Selecting Marine Reserves and Developing Reserve Networks” (2003) 13(1) *Supplement Ecological Applications* S215 at S218; and Jane Lubchenco *et al.*, *The Science of Marine Reserves* (2002) online: Partnership for Interdisciplinary Studies of Coastal Oceans <<http://www.piscoweb.org>>, accessed June 11, 2010 at 17.

¹⁴⁶ Robert J. Whittaker *et al.*, “Conservation Biogeography: Assessment and Prospect” (2005) 11 *Diversity and Distributions* 3 at 4.

¹⁴⁷ *Ibid.* note 144.

and/or historically representative too. It should represent a range of cultural and/or historic resources and values of a particular management unit.¹⁴⁸

The total area set aside for the protection of each habitat should approximate to its relative prevalence in the region. It is estimated that, a network of fully protected areas should cover 20 percent or more of all biogeographic regions and habitats in order to meet all fishery and conservation goals.¹⁴⁹ The World Parks Congress called for strictly protected MPAs covering 20 to 30 percent of each habitat for healthy and productive oceans by 2012.¹⁵⁰ The COP to the CBD called for the protection of at least 10 percent of the marine ecological regions in the world by 2012 in its programme of work adopted at the 7th Meeting in 2004, a deadline extended at its 10th Meeting in 2010, to the year 2020.¹⁵¹

2.2.1.4 The Resilience of the Network

The ecological resilience of a system refers to its ability to survive natural disasters and major impacts, and to absorb shocks. Resilience is important to ensure the long-term function of a network of MPAs regardless of natural and human changes.¹⁵² To increase resilience, a network should include multiple samples of habitat types, separated spatially to spread the risks of large scale events destroying the only protected site of a certain habitat (the practice of replicating). Replications of habitats within a network of MPAs play an equally important role in providing a stepping stone for the

¹⁴⁸ See National Marine Protected Area Center-US Department of Commerce, *supra* note 82 at 16.

¹⁴⁹ IUCN, *supra* note 42 at 42.

¹⁵⁰ *Recommendations*, Vth IUCN World Parks Congress, Durban, South Africa, September 8-17, 2003.

¹⁵¹ CBD, *Strategic Plan: Future Evaluation of Progress*, Decision VII.30, Annex II, 7th Meeting of the COP to the CBD, Kuala Lumpur, Malaysia, February 9-20, 2004 and CBD, *Strategic Plan for Biodiversity 2011-2020*, Decision X/2, 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Nagoya, Japan, October 18-29, 2010.

¹⁵² UNEP-WCMC, *supra* note 10 at 28.

dispersal of marine species sites for studies on effectiveness of the MPAs.¹⁵³ The resilience of a network of MPAs can also be improved by ensuring that a number of MPAs within the network are free from extractive uses. This would preserve the genetic variability of the species and ecosystems involved in the network of MPAs, and facilitate paying attention to especially vulnerable species and habitats.¹⁵⁴

2.2.1.5 The Connectivity of the Network

Connectivity refers to linkages that exist as a result of particular characteristics of marine organisms (larval dispersal, pelagic juveniles and adults and reproduction through spawning) and of the marine environment (mixing of waters through wind, tides, currents and upwelling). These linkages exist spatially, both in localised situations and basin-wide and temporally in terms of genetic flow and generational time-scales. To ensure the protection of ecological functioning and system productivity, a network of MPAs should maximise and enhance connectivity between individual MPAs, groups of MPAs within an area and networks of MPAs in the same or different regions.¹⁵⁵ Several forms of connectivity are important to MPAs: the exchange of offspring, movement of juveniles and adults and the transfer of materials.¹⁵⁶

2.2.1.6 Cost-Effectiveness, Efficiency and Equity of the Network

The development of a network of MPAs must ensure a balance between cost and benefits, appropriate equity in their distribution and include the minimum number of protected areas to achieve system objectives.¹⁵⁷ The establishment, maintenance and

¹⁵³ IUCN, *supra* note 42 at 42 and AHTEG/MCPA, *supra* note 135 at 24.

¹⁵⁴ UNEP-WCMC, *supra* note 10 at 28.

¹⁵⁵ UNEP-WCMC, *supra* note 10 at 29.

¹⁵⁶ Callum *et al.*, *supra* note 135 at S205.

¹⁵⁷ Davey, *supra* note 135 at 17.

management of an MPA can be quite costly, even more with a network of MPAs.¹⁵⁸ Besides, economic benefits and costs associated with MPAs may accrue unequally to different stakeholder groups. Those who bear a large part of the cost or whose actions have the potential to impact most negatively on marine resources would receive less or insufficient gains from the protection.¹⁵⁹

For these reasons, people need to be assured that MPAs are effective, represent some sustainable economic value and are managed in an equitable way in terms of impacts on different stakeholders (in particular communities).¹⁶⁰

As the criteria for an effective network of MPAs have been discussed, the next section reviews how to develop a network of MPAs.

2.2.2 Steps for the Development of a Network of Marine Protected Areas

Guidance on how to develop a network of MPAs has been proposed by international bodies such as the Secretariat of the CBD, the IUCN and various authors.¹⁶¹ Guidelines on the development of a network of MPAs can also benefit from the knowledge gained through establishing an individual protected area and from the learning offered by the application of concepts such as the ecosystem approach and system planning. According to a summary of this guidance, this process of establishing a

¹⁵⁸ Pursuant to different studies, the cost of the establishment of an individual MPA can range from more than 20.5 thousand US dollars for a 0.2 km²-area to 34.8 million for a 362,100 km²-area. As for the management expenditures, the average annual cost for running MPAs can be 775 US dollars per km² per year and the total running cost for a global network of MPAs covering 20-30 percent of the seas is estimated at 5-19 billion US dollar; see Ashley McCrea-Strub *et al.* "Understanding the Cost of Establishing Marine Protected Areas" (2010) 35: 1 Marine Policy 1 and Andrew Balmford *et al.*, "The Worldwide Costs of Marine Protected Areas" in (2004) 101:26 Proceedings of the National Academy of Sciences of the United States of America 9694.

¹⁵⁹ Lucy Emerton and Yemi Tessema, *Economic Constraints to the Management of Marine Protected Areas: the Case of Kisite Marine National* (Gland: IUCN, 2001) sec 4.1 and Lucy Emerton, *Economic Tools for the Management of Marine Protected Areas in Eastern Africa* (Gland: IUCN, 1999) 21.

¹⁶⁰ Davey, *supra* note 135 at 17.

¹⁶¹ For example, IUCN, *supra* note 42; AHTEG/MCPA, *supra* note 135; and C. R. Margules and R. L. Pressey, "Systematic Conservation Planning" (2000) 405 *Nature* 243.

network of MPAs can be divided into six subsequent steps: identification of an ecological unit for management, evaluation of the current situation of the area, determination of goals and objectives, designation of new marine protected areas and implementation of the network and monitoring. These steps are now elicited in turn.

2.2.2.1 Identification of the Ecological Unit for Management

The first step is to determine to which geographical scale to build a network of MPAs or to define the boundaries of the network. A network of MPAs can be developed at different scales, from a local network of a few MPAs to a national network within a State and a regional network involving several States.¹⁶² In practice, the choice of a geographical scale would depend on the geophysical, biogeographical, ecological, political, jurisdictional and socioeconomic characteristics of the area. For instance, different systems of the division of the world's oceans into the smaller sea units that currently exist can be taken into consideration as follows:

- The WCPA has divided the oceans into 18 regions based on bio-geographical criteria and in consideration of political boundaries.¹⁶³ According to this division, the SCS belongs to the East Asian Seas region.

- The United States National Oceanic and Atmospheric Administration, with the support and endorsement from various international organizations,¹⁶⁴ divided the world's

¹⁶² UNEP-WCMC, *supra* note 10 at 21.

¹⁶³ These regions are Antarctic, Arctic, Mediterranean, North West Atlantic, North East Atlantic, Baltic, Wider Caribbean, West Africa, South Atlantic, Central Indian Ocean, Arabian Sea, East Africa, East Asian Seas, South Pacific, North East Pacific, North West Pacific, South East Pacific and Australia-New Zealand; see Graeme Kelleher, Chris Bleakley and Sue Wells (eds), *A Global Representative System of Marine Protected Areas, Vol. 1: Antarctic, Arctic, Mediterranean, Northwest Atlantic, Northeast Atlantic, Baltic* (Washington: The World Bank, 1995) 2.

ocean and coastal areas into 64 Large Marine Ecosystems (LMEs)¹⁶⁵ for implementing actions to protect the marine environment.¹⁶⁶ The SCS region comprises two LMEs, the South China Sea LME and the Gulf of Thailand LME, and both can be considered a single unit because of their ecological unity.¹⁶⁷

- The WWF uses a “nested” system of classification founded on biogeographic bases to divide all coastal and shelf waters of the world into 12 realms, 62 provinces and 232 ecoregions.¹⁶⁸ According to the WWF’s classification, the SCS belongs to the Central Indo-Pacific realm and straddles four provinces: South China Sea, Sunda Shelf, South Kuroshio and Western Coral Triangle. It also comprises five ecoregions: Southern China, Gulf of Tonkin, South China Sea Oceanic Islands, Southern Vietnam and the Gulf of Thailand. It straddles with four other ecoregions: Sunda Shelf/Java Sea, Palawan/North Borneo, Eastern Philippines, Malacca and South Kuroshio.

¹⁶⁴ Such as the Intergovernmental Oceanographic Commission, the IUCN and the United Nations Environmental Programme; see, for example, Intergovernmental Oceanographic Commission, *Proceedings*, IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems, 1st Session, Paris, France, January 23-24, 1997, Doc. IOC-IUCN-NOAA-I/3; and UNEP, *Accounting for Economic Activities in Large Marine Ecosystems and Regional Seas*, UNEP Regional Seas Report and Studies No.181 (Nairobi: UNEP, 2006).

¹⁶⁵ The Large Marine Ecosystem approach, appearing as early as 1901, refers to determination of regions in the world ocean with distinct hydrographic, topographic and biological characteristics. Since 1984, the initiative of using LME as unit for the implementation of ecosystem based management has been developed by the United States National Oceanic and Atmospheric Administration; see Kenneth Sherman and Lewis Alexander (eds.), *Variability and Management of Large Marine Ecosystems* (Boulder: Westview, 1986) 3 and Kenneth Sherman *et al.*, *Global Applications of the Large Marine Ecosystem Concept 2007-2010* (Woods Hole, MA.: US Department Of Commerce, 2007) 2.

¹⁶⁶ *Large Marine Ecosystems of the World*, online: NOAA <<http://www.lme.noaa.gov/>>, accessed November 12, 2009.

¹⁶⁷ UNEP, SAP, *supra* note 107 at 63.

¹⁶⁸ Mark D. Spalding *et al.*, “Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas” (2007) 57 *BioScience* 573 at 576. According to Spalding, realms are the largest spatial units and are defined as “very large regions of coastal, benthic, or pelagic ocean across which biotas are internally coherent at higher taxonomic level, as a result of a shared and unique evolutionary history.” Within realms are provinces, which are “large areas defined by the presence of distinct biotas that have at least some cohesion over evolutionary time frames.” The smallest units are marine ecoregions (or sometimes called bioregions) which are “areas of relative homogeneous species composition, clearly distinct from adjacent systems”.

The reference to these different systems of dividing the ocean is quite diverse in practice. For instance, the UNEP's Regional Seas Programme uses a system of grouping very similar to the World Commission on Protected Areas' marine regions for the development of regional conventions and action plans on the protection of the marine environment.¹⁶⁹ The national networks of MPAs of Canada and Australia include local networks developed at the scale of marine bioregions.¹⁷⁰ As for the United States, its regional units are determined based on the LME approach.¹⁷¹

2.2.2.2 Evaluation of the Current Situation

In order to determine the appropriate goals and objectives of a network of MPAs, it is necessary to assemble and evaluate all relevant information about the natural, political, regulatory, socioeconomic and cultural situations relating to the region to be protected.¹⁷²

With regards to the ecological situation of the region, information about two subjects should be gathered: the current distribution and status and trend of its biodiversity.¹⁷³ It is important to list key biodiversity features that should be integrated and connected within the network. Different approaches can be used to identify these features (such as the landscape species approach, key biodiversity approach or

¹⁶⁹ See *About Regional Seas*, online: UNEP Regional Seas

<<http://www.unep.org/regionalseas/about/default.asp>>, accessed August 31, 2010.

¹⁷⁰ For details, see *National Framework for Canada's Network of Marine Protected Areas*, *supra* note 73 at 9 and ANZECC Task Force on Marine Protected Areas, *Strategic Plan of Action for the National Representative System of Marine Protected Areas: A Guide for Action by Australian Governments* (Canberra: Environment Australia, 1999) 17.

¹⁷¹ National Marine Protected Area Center-US Department of Commerce, *supra* note 82 at 36.

¹⁷² Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 129.

¹⁷³ Dudley and Parish, *supra* note 135 at 29.

vulnerable species approach) though the results obtained will likely be the same.¹⁷⁴ The other information that needs to be assessed is current threats to coastal and marine biodiversity. All threats identified also need to be ranked. The highest priority threats should be those that cause an irreversible change or damage such as habitat conversion or species extinction. High priority threats should include those whose effects are geographically far-reaching or which have existed for a long period of time. Threats that have low-level effects at a point in time but continue for long periods or are chronic should be classified as high priority too.¹⁷⁵

Information about the political, regulatory, socioeconomic and cultural context of the area is also very important for the development of a network of MPAs. The current policy and legislative framework in fields relating to MPAs such as environmental protection, ocean governance and fisheries, can support or constrain the process.¹⁷⁶ Meanwhile, socioeconomic and cultural assessments will help identify the cost and benefits of a network of MPAs.¹⁷⁷

Finally, an evaluation of current protection measures, in particular existing MPAs in the region should be conducted. This evaluation will help identify gaps in the current system.¹⁷⁸ Important data to be collected relating to current MPAs include their distribution, protection and their management effectiveness status.¹⁷⁹

¹⁷⁴ J. Ervin *et al.*, *Making Protected Areas Relevant: A Guide to Integrating Protected Areas into Wider Landscapes, Seascapes and Sectoral Plans and Strategies*, CBD Technical Series No. 44 (Montreal: Secretariat of the Convention on Biological Diversity, 2010) 23.

¹⁷⁵ Agardy, *supra* note 68, c5 at 188.

¹⁷⁶ *Ibid.* note 175 at 31 and Nigel Dudley *et al.*, *Towards Effective Protected Area Systems: An Action Guide to Implement the Convention on Biological Diversity Programme of Work on Protected Areas*, Technical Series No.18 (Montreal: Secretariat of the Convention on Biological Diversity, 2005) 52.

¹⁷⁷ IUCN, *supra* note 78 at 8.

¹⁷⁸ National Marine Protected Area Center-US Department of Commerce, *supra* note 82 at 31.

¹⁷⁹ Dudley and Parish, *supra* note 135 at 46.

2.2.2.3 Determination of Goals and Objectives

Goals and objectives¹⁸⁰ must be set for a network as a whole and each individual component within it.¹⁸¹ Three broad categories of goals and objectives should be considered: ecological, economic and socio-cultural. Ecological goals and objectives are to protect, manage and restore marine ecosystems and their components, including processes, structure, function and integrity, as well as wildlife and geographic features.¹⁸² Economic goals and objectives include providing for the continued welfare of people affected by the creation of MPAs,¹⁸³ short- and long-term view of their cost and benefits and how to distribute them.¹⁸⁴ Socio-cultural goals and objectives refer to the contribution of protected areas to the quality of life of the local community. Protected areas must be established to protect and preserve values of biodiversity that are directly beneficial to human health and well-being. They should also preserve, protect and manage historical and cultural sites and the natural aesthetic values of the areas.¹⁸⁵

2.2.2.4 Designation of New Marine Protected Areas

Once all gaps have been analysed and objectives identified, new MPAs should be designated pursuant to criteria described above.¹⁸⁶ A number of methodological approaches for MPA selection have been developed such as scoring and complementary

¹⁸⁰ Terms often used interchangeably but “goals” and “objectives” actually have different meaning. Goals are general directions, usually difficult to be measured. On the other hand, objectives are specific and measurable. One goal can comprise a number of objectives. For an example as to the difference between goal and objective, see Decision VII/5, *supra* note 85.

¹⁸¹ UNEP-WCMC, *supra* note 10 at 31.

¹⁸² IUCN, *supra* note 42 at 31.

¹⁸³ Graeme Kelleher and Richard Kenchington, *Guidelines for Establishing Marine Protected Areas* (Australia: Great Barrier Reef Marine Park Authority, 1991) 9.

¹⁸⁴ IUCN, *supra* note 42 at 31.

¹⁸⁵ *Ibid.* note 184 and Kelleher and Kenchington, *supra* note 183 at 9.

¹⁸⁶ See above 2.2.1 Criteria for a Network of Marine Protected Areas.

methods.¹⁸⁷ There is actually no best method to select a set of MPAs but it is possible to do the irreplaceability analysis to identify those areas that must be part of the network (areas that are necessary in any potential selection). Once these core areas are included, there are many options for choosing the remaining MPAs to fulfill the conservation goals.¹⁸⁸ However, as many stakeholders are expected to have a say on whether an MPA is designated, outcomes of the designation process are sometimes the result of a complex process of negotiation, trade-offs and agreements.¹⁸⁹

2.2.2.5 Implementation of the Network

Implementing a network of MPAs includes the implementation of conservation and management measures at the network and site-specific levels.¹⁹⁰ The purpose of management is to ensure that objectives set for a particular MPA or for a network of MPAs are met. To be effective, MPAs have to have an administrative basis that provides a framework for management activities.¹⁹¹ Issues relating to the implementation of the network of MPAs include different types of protected area governance; dealing with threats from outside the MPAs; the use of multiple-use MPAs and the institutional design for the network governance.

¹⁸⁷ The former consists of assigning scores to each site based on a set of criteria and ranking them in order of their priority according to the received scores. The site with the highest score will be added to the existing system and the process will stop when the size of the network is deemed desirable for protection and the cost of implementation has been set. The complementary approach takes into account the extent to which a site or set of sites contributes to meeting the desired objectives of the overall framework. It tries to find the most efficient solution to the problem of designing a network of MPAs that meets a specified conservation goal while engendering minimal costs, see S. M. J. Evans *et al.*, *Evaluation of Site Selection Methodologies for Use in Marine Protected Area Network Design* (Ottawa: Fisheries and Oceans Canada, 2004) 8.

¹⁸⁸ Michael W. Beck, "The Sea Around: Conservation Planning in Marine Regions" in Craig R. Groves, *A Practitioner Guide for Planning for Biodiversity* (Washington: Island Press, 2003) 319 at 322.

¹⁸⁹ Nigel Dudley *et al.*, *Safety Net: Protected Areas and Poverty Reduction* (Gland: WWF, 2008) 18.

¹⁹⁰ UNEP-WCMC, *supra* note 10 at 32.

¹⁹¹ Markus J. Kachel, *Particularly Sensitive Areas: The IMO's Role in Protecting Vulnerable Marine Areas* (Doctoral Thesis, International Max Planck Research School for Maritime Affairs at the University of Hamburg, 2008) 46.

Protected Area Governance Type

There are four approaches to protected area management (the IUCN uses the term “protected area governance”¹⁹²): government-managed areas; collaborative managed areas; community-conserved areas and private-protected areas.¹⁹³ A tool to select the appropriate category for governance of the protected areas in a question-answer format has been developed by World Commission on Protected Areas (WCPA), a Commission to promote the development of protected areas under the IUCN. Criteria taken into consideration for the choice of governance type include, *inter alia*, history, rights and equity, people-nature interaction, environmental services provided by the protected area, social values, and traditional occupancy.¹⁹⁴

Integrated Management of MPAs

To be effective, MPAs need to be developed and managed through integration with other management frameworks. This section explains rationales of the integrated management of MPAs and how it can proceed.

From a conceptual perspective, integrated management is recognized in various ocean governance concepts. For instance, the ecosystem approach asks for an integrated management of the ecosystem, which involves all relevant sectors of society.¹⁹⁵ As well, the concept of integrated coastal and marine management, recognized in various

¹⁹² IUCN, *supra* note 42 at 18.

¹⁹³ For details relating to each type of governance/management see Dudley *et al.*, *supra* note 176 at 46.

¹⁹⁴ For details, see Grazia Borrini-Feyerabend *et al.*, *Implementing the CBD Programme of Work on Protected Areas: Governance as Key for Effective and Equitable Protected Area System*, Briefing Note 8, February 2008, online: IUCN <<http://cmsdata.iucn.org>>, accessed July 27, 2010 at 2; Sue Stolton and Nigel Dudley, *Company Reserves: Integrating Biological Reserves Owned and Managed by Commercial Companies into the Global Protected Areas Network—a Review of Options* (Bristol: WWF International, 2007) 11 and Dudley, *supra* note 5 at 26. The description of government-managed areas and collaboratively managed areas shows that the distinction between these two categories does not appear that clear. The only difference between them seems to be the weight of the government power in the management process.

¹⁹⁵ Decision V/6, *supra* note 39.

international instruments,¹⁹⁶ States need to provide an “integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses” for its coastal and marine areas.¹⁹⁷

From a practical perspective, integrated management can prevent MPAs from threats originating from outside the areas. Because of linkages between marine environments and between marine and terrestrial environments¹⁹⁸, MPAs are affected by larger ecological, social, economic and political contexts of the coastal, island and ocean areas that surround them. Human action that lie outside the boundary of protected areas, ranging from marine transportation and fishing to land-based activities such as agriculture, urban runoff or industrial development, can have profound impacts on MPAs.¹⁹⁹ In addition, MPAs can also be affected by the effects of climate change.²⁰⁰

For these reasons, the development of a network of MPAs should be integrated within comprehensive spatial management frameworks, namely marine spatial planning

¹⁹⁶ See *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 3, preamble, line 3 [UNCLOS]; *Agenda 21*, the United Nations Conference on Environment and Development, Rio De Janeiro, Brazil, June 3-14, 1992, UNOR, Annex II, UN Doc.A/Conf.151/26/Rev.1 (Vol I), Chapter 17, paras 17.3 – 17.17 and “The Jakarta Ministerial Statement on the implementation of the Convention on Biological Diversity” in UNEP, *Report on the 2nd Meeting of the COP of the Convention on Biological Diversity*, UN Doc No. UNEP/CBD/COP/2/19 (1995), Appendix.

¹⁹⁷ *Agenda 21*, *ibid.*, para.17.5 (a).

¹⁹⁸ Kelleher and Kenchington, *supra* note 183 at 19.

¹⁹⁹ IUCN, *supra* note 42 at 36 and Mark D. Spalding *et al.*, “Protecting Marine Spaces: Global Targets and Changing Approaches” (2013) 27 *Ocean Yearbook* 213 at 220.

²⁰⁰ David Welch, “What Should Protected Area Managers Do To Preserve Biodiversity in the Face of Climate Change” in (2008) 9: 3&4 *Biodiversity* 84.

and integrated coastal zone management²⁰¹. Two sets of measures can be adopted for the integration of the network of MPAs into these frameworks. First, establishment and management of MPAs should be nested within a broader strategy for coastal areas, existing and emerging planning processes and institutional arrangements for coastal and marine management.²⁰² Second, the establishment of MPAs must be considered in synergy with other marine environment conservation and management tools, such as traditional fisheries management measures, prevention of marine pollution from land-based sources or control of invasive species.²⁰³

Use of Multiple-Use MPAs

At the large scale, the establishment of multiple-use MPAs²⁰⁴ can be a useful solution. Multiple-use protected areas generally have two types of sub-areas: a core zone which is strictly controlled and another zone in which some extractive uses may be allowed.²⁰⁵ This zoning practice can minimize the conflict between expanding coverage

²⁰¹ While both frameworks aim towards a holistic approach to manage marine resources, their geographical scope can be different. Integrated coastal management would focus more on the management of the coastal zone while marine spatial planning would focus on the marine space. See Ehler Charles and Fanny Douvère, *Marine Spatial Planning: a Step-by-Step Approach toward Ecosystem-Based Management*, Intergovernmental Oceanographic Commission and Man and the Biosphere Programme, IOC Manual and Guides No. 53, ICAM Dossier No. 6 (Paris: UNESCO, 2009) 23. However, this distinction is not always clear and depending on how it is defined, the coastal zone of a State can also include its marine areas, even the whole exclusive economic zone, see Jens C. Sorensen and Scott T. McCreary, *Institutional Arrangements for Managing Coastal Resources and Environment*, 2nd ed., Renewable Resources Information Series, Coastal Management Publication No.1 (Washington, D.C.: National Park Services, U.S. Department of Interior, 1990) 5.

²⁰² Biliana Cicin-Sain and Stefano Belfiore, "Linking Marine Protected Areas into Integrated Coastal and Ocean Management: A Review of Theory" (2005) 48: 11/12 *Ocean and Coastal Management* 847.

²⁰³ Toropova *et al.* (eds), *supra* note 48 at 21.

²⁰⁴ Multiple-use MPAs are defined by the National Marine Protected Areas Center of the United States as "multiple-use areas allow for integrated management of complete marine ecosystems, usually through a zoning process", see National Marine Protected Areas Center-US Department of Commerce, *Glossary*, online: National Marine Protected Areas Center <<http://www.mpa.gov/glossary.html>>, accessed October 16, 2012.

²⁰⁵ Dudley *et al.*, *supra* note 176 at 32.

of conservation and urgent economic pressures.²⁰⁶ Examples of multiple-use marine protected areas in the world include the Great Barrier Reef Marine Park²⁰⁷ in Australia and the Florida Keys National Marine Sanctuary²⁰⁸ in the United States.

Institutional Design for the Governance of a Network of MPAs

Institutions designated to manage MPAs and the manner in which they operate or coordinate are key concerns of any MPAs framework. Without effective institutions there will be no effective protected areas.²⁰⁹ There are two institutional approaches in managing MPAs: by designating a single body or by distributing responsibilities relating to MPAs among multiple institutions. It represents the choice between maximising internal consistency and maximising expertise in management. The choice made will depend on many factors including past experiences regarding effectiveness of inter-agency coordination, specificity of each agency's existing agency on relevant issues, question of continuity and many other socioeconomic and political issues. However, an absolute unitary approach is almost impossible and virtually all MPA institutions involve at least some level of distribution.²¹⁰ In this case, there is a need for building strong coordination and linkages between different agencies and for this interagency

²⁰⁶ James Sanderson, *Biodiversity Conservation Corridors: Planning, Implementing, and Monitoring Sustainable Landscapes* (Washington, D.C: Conservation International, 2003) 30.

²⁰⁷ The Great Barrier Reef Marine Park is divided by the Great Barrier Reef Marine Park Zoning Plan into nine zones with different objectives: general use zone, habitat protection zone, conservation park zone, buffer zone, scientific research zone, marine national park zone, preservation zone and Commonwealth Island zone; see Great Barrier Reef Marine Park Authority, *Great Barrier Reef Marine Park Zoning Plan 2003* (Queensland: Great Barrier Reef Marine Park Authority, 2004).

²⁰⁸ Pursuant to its Management Plan, the Florida Keys National Marine Sanctuary has five types of zones: sanctuary preservation areas, ecological reserves, special-use (research-only) areas, wildlife management areas and existing management areas, see Florida Keys National Marine Sanctuary, *Florida Keys National Marine Sanctuary Revised Management Plan* (December 2007), online: Florida Keys National Marine Sanctuary <<http://floridakeys.noaa.gov/management/welcome.html>>, accessed October 16, 2012.

²⁰⁹ Davey, *supra* note 135 at 32.

²¹⁰ Tomme Rosanne Young, "The Legal Framework for MPA and Successes and Failures in Their Incorporation into National Legislation" in FAO/Japanese Government Cooperative Programme, see *supra* note 45, para.221 at 254.

agreements should be adopted. Many countries have special legislation for individual MPAs, along with a variety of agencies with marine responsibilities, but few have strategic legislative frameworks or institutional arrangements for a representative network of MPAs.²¹¹

2.2.2.6 Monitoring

To evaluate the effectiveness of a network of MPAs, regular monitoring should be conducted. This allows the manager to measure whether the goals and objectives set earlier have been achieved and to make any refinement in management if necessary. Monitoring should not be seen as a system of watching and penalizing managers for inadequate performance.²¹² An important step but often underestimated in the process due to inadequate financial resources and management capacity,²¹³ monitoring and assessment structures should be built into network plans from the beginning along with the necessary resources provided.²¹⁴ Monitoring and assessment should be done at three levels: at the individual MPA level, biogeographic level and at the level of the network as a whole. Besides, the monitoring system should be appropriate, cost-effective, achievable and involve a transparent and consultative process.²¹⁵

Performance assessment of a network of MPAs also requires the development of performance indicators. These indicators are measures to gauge the extent to which

²¹¹ Kelleher and Kenchington, *supra* note 183 at 19 and IUCN, *supra* note 42 at 19.

²¹² Marc Hockings and Adrian Phillips, "How Well Are We Doing? – Some Thoughts on the Effectiveness of Protected Areas" in (1999) 9:2 *Parks: Management Effectiveness of Protected Areas* 5 at 6.

²¹³ ICEM, *Lessons Learned From Global Experience. Review of Protected Areas and Development in the Lower Mekong River Region* (Indooroopilly, Queensland: 2003) 11.

²¹⁴ IUCN, *supra* note 42 at 97 and AHTEG/MCPA, *supra* note 135 at 67.

²¹⁵ ANZECC Task Force on Marine Protected Areas, *supra* note 170 at 36 and AHTEG/MCPA, *supra* note 135 at 32.

targets are achieved.²¹⁶ They can measure the ecological and biological effects of MPAs such as changes in fish density, fish community composition and their socio-economic and distributional effects such as changes in income and wealth in specific group of people.²¹⁷

This sub-section provided an overview of main steps to develop a network of MPAs. The next sub-section discusses important factors that make such an endeavour successful.

2.2.3 Essential Factors for the Development of a Network of MPAs

For the successful development and operation of a network of MPAs, certain factors are very important in supporting the process: the participation of all relevant stakeholders, a supportive legal and political framework, the use of the best available knowledge, an effective system of compliance and enforcement, sustainable financing and the formation of a social network of MPAs. These factors are now discussed in detail.

2.2.3.1 Involvement of All Relevant Stakeholders

One of the most important conditions for success in the establishment and maintenance of individual MPAs and a network of MPAs is to involve all relevant stakeholders from the beginning of the process.²¹⁸ Stakeholder participation will help ensure equitable sharing of benefits from the creation of MPAs, allow decisions to be made in an inclusive and transparent way and facilitate the involvement in decision-

²¹⁶ ANZECC Task Force on Marine Protected Areas, *ibid.* at 35. For more details about performance indicators, see Hockings and Phillips, *supra* note 212 at 12.

²¹⁷ Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 121.

²¹⁸ Kelleher and Phillips (*eds*), *supra* note 4 at 20. “Stakeholders” can be defined as any individual or group who may be involved in, affected by, or express a strong interest in, the management of a particular resource or area; see ANZECC Task Force on Marine Protected Areas, *supra* note 170 at 28.

making and management of a wide range of players, increasing the likelihood of success.²¹⁹ Besides, many communities have customary rights over the protected territory and resources (which might not be officially recognized).²²⁰

Relevant stakeholders should be identified. Relevant to the process of development of a network of MPAs are people living within or close to the MPA, people whose livelihoods may be directly affected, people having a decision-making role (formally or informally), people representing a community interest and people whose activities will affect the success of the MPA.²²¹ Besides, other social actors may have an interest in MPAs management such as government agencies dealing with marine resources, relevant local authorities and businesses and industries that can be significantly affected by the status of natural resources in the MPA. Research institutions and NGOs concerned with the relevant territories or resources also need to be considered for inclusion.²²²

2.2.3.2 A Supportive Legal and Political Framework

A strong and effective MPAs system is generally supported by appropriate legal instruments and policies.²²³ The implementation of a network of MPAs should be accompanied by solid legal authority in form of clear rules. The relevant legal framework can be provided by statutory law or traditional customary rules.²²⁴ The content of the legislation should include details relating to individual MPAs and the network of MPAs such as authority to establish MPAs, the delineation of their

²¹⁹ AHTEG/MCPA, *supra* note 135 at 34.

²²⁰ Grazia Borrini-Feyerabend, *Collaborative Management of Protected Areas: Tailoring the Approach to the Context*, Issue in Social Policy (Gland: IUCN, 1996) 6.

²²¹ AHTEG/MCPA, *supra* note 135 at 34.

²²² Grazia Borrini-Feyerabend, *supra* note 220 at 6.

²²³ AHTEG/MCPA, *supra* note 135 at 51 and Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 65.

²²⁴ IUCN, *supra* note 42 at 32.

boundaries, roles and responsibilities of participants, enforcement mechanisms, rules dealing with threats to protected areas and the protection of rights and legitimate interests of affected people.²²⁵

Political commitment and support are also essential for developing a network of MPAs, so it is very important to involve politicians, decision-makers and legislators in its development. They must be involved early in the process and their involvement should be maintained throughout the duration of the development, establishment and management of the MPA. For long-term benefits, support for the network has to be ensured against the risk of changes in short-term political priorities, especially when there is a change of government.²²⁶

2.2.3.3 The Use of the Best Available Knowledge

Good information can lead to optimal design of a network of MPAs as they improve the quality of decision-making and enhance the capacity to predict the consequences of action or inaction.²²⁷ For this reason, from the beginning of the process to develop a network of MPAs, the manager must gather all the best available data and information for gap analysis, planning and decision-making. These data and information must be based on current knowledge about biodiversity, environmental services, social issues and management strategies. Also to be included is the traditional and local

²²⁵ Kelleher and Kenchington, *supra* note 183 at 20; Dudley *et al.*, *supra* note 176 at 51; Gillespie, *supra* note 55 at 183; AHTEG/MCPA, *supra* note 135 at 34; and Mary Gleason *et al.*, "Science-based and Stakeholder-driven Marine Protected Area Network Planning: A Successful Case Study from North Central California" (2010) 53: 2 Ocean and Coastal Management 52 at 56.

²²⁶ IUCN, *supra* note 42 at 32.

²²⁷ IUCN, *ibid.* at 35 and Davey, *supra* note 135 at 23.

knowledge that indigenous and local communities have gained relating to the area, accumulated by experience and passed on over generations.²²⁸

In case of uncertainty and lack of information, a network of MPAs still needs to be developed pursuant to the precautionary approach/principle.²²⁹ In any case, more research should be conducted to further understanding on how MPAs can be managed in the most effective way.²³⁰ At the same time, MPAs also present great opportunities to implement ecological experiments on specific spatial and temporal scales.²³¹

2.2.3.4 An Effective System of Compliance and Enforcement

Enforcement is an essential component in the successful management of MPAs. However, consistent and effective enforcement represents a major practical challenge for MPA implementation. Often, its obstacles range from lack of surveillance (far offshore or inaccessible sites), funding, failure to assign enforcement responsibility, or lack of public support for a protected area (resulting in socially acceptable poaching).²³²

²²⁸ IUCN, *ibid.*, pp. 34-35.

²²⁹ The precautionary approach/principle states that when there is a serious threat to the environment or human health, measures should be taken even there is a lack of full scientific certainty to prevent the degradation; see *Rio Declaration*, The United Nations Conference on Environment and Development, Rio De Janeiro, Brazil, June 3-14, 1992, UNOR, Annex I, UN Doc.A/Conf.151/26/Rev.1 (Vol I), Principle 15. For detailed analysis of the ecosystem approach/principle, see for example Donald R. Rothwell and David L. VanderZwaag (eds), *Towards Principled Oceans Governance. Australian and Canadian Approaches and Challenges* (Abingdon, OX: Routledge, 2006) 143; Poul Harremoës *et al.* (eds), *The Precautionary Principle in the XXth century: late lessons from early warnings* (Sterling, VA: Earthscan, 2002) and David Freestone and Ellen Hey, *The Precautionary Principle and International Law: The Challenge of Implementation* (The Hague: Kluwer Law International, 1996). In a dispute between the EU and the United States relating to the legal value of the precautionary principle/approach, the Appellate Body of the World Trade Organization ruled that the precautionary principle might have been considered by some as a customary rule of international environmental law but it is not clear that it had become a general rule of customary or general international law; see Appellae Body-World Trade Organization, *EC-Measures Concerning Meat and Meat Products (Hormones)*, Report of the Appellate Body, Doc. WT/DS26/AB/R (1998) 47, para.123.

²³⁰ Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 6 at 145.

²³¹ National Research Council, Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States, *supra* note 45 at 135.

²³² IUCN, *supra* note 42 at 100.

While many approaches have been used in MPAs enforcement globally, the ideal is the full compliance with the rules without active enforcement. For this reason, enforcement should be managed in a way that facilitates and encourages voluntary compliance. Thus, an effective system of enforcement and compliance should be an integral part of the management of a network of MPAs and should include the education of people, the development of surveillance programs and be supported through appropriate penalties.²³³ Sometimes, the use of economic incentives instead of sanctions can enhance the enforcement of a network of MPAs. One example is the sale of emission credits under the Kyoto Protocol and tradable development rights by which an owner of an environmentally sensitive area can sell development rights to the owner of a non-sensitive area.²³⁴

2.2.3.5 Sustainable financing

Financial sustainability of a protected area is defined under the framework of the CBD as “the ability to secure stable and sufficient long-term financial resources, and to allocate them in a timely manner and appropriate form, to cover the full costs of protected areas (direct and indirect) and to ensure that protected areas are managed effectively and efficiently”.²³⁵ Creating and maintaining a representative and effectively managed network of MPAs requires substantial funding and scaling up from individual MPAs to a network asks for even more comprehensive funding mechanisms.²³⁶ There are two major elements of cost relating to MPAs that need to be covered: compensation to local people for benefits foregone by the establishment of an MPA and the management

²³³ AHTEG/MCPA, *supra* note 135 at 27 and IUCN, *supra* note 42 at 100.

²³⁴ Sanderson, *supra* note 206 at 30.

²³⁵ Dudley *et al.*, *supra* note 176 at 62.

²³⁶ IUCN, *supra* note 42 at 88.

costs of the MPA.²³⁷ Lack of adequate financial resources is one of the main constraints on the effective management of protected areas.²³⁸

There are three basic ways to finance protected areas: annual budget allocations from government; grants and donations from individuals, corporations, foundations, and international donor agencies; and user fees, conservation taxes, fines and other revenues that are earmarked for funding protected areas. Each source of financing can have its specific advantages and disadvantages and none of them is a panacea. The financing of protected areas should rely on a combination of all these sources.²³⁹

Finally, financial sustainability is not only about the amount of money that can be received but also how effectively the money can be spent and how well benefits are provided to local stakeholders.²⁴⁰ So far, guidance on how to distribute the resources effectively seems to have received little attention.

2.2.2.6 Development of a Social Network of Marine Protected Areas

Finally, to maximize benefits of the process of networking MPAs, a network of MPA-based experts or a social network of MPAs at different levels (local, national, regional and international) should be formed. Practical experiences have shown that such a social network can participate in the management and financing of MPAs, share lessons, contribute to management initiatives taken by practitioners and contribute to the

²³⁷ Kelleher and Phillips (*eds*), *supra* note 4 at 53. It is a matter of fact that funding for the establishment and management of protected areas is usually insufficient. Data collected by the CBD indicated that there was a shortfall of one to 1.7 billion USD per year to maintain a network of protected areas; see Secretariat of the CBD, *supra* note 47 at 78.

²³⁸ ICEM, *supra* note 213 at 12.

²³⁹ Barry Spergel, *Raising Revenues for Protected Areas: A Menu of Options* (Washington DC: WWF, 2001), intro at 1.

²⁴⁰ Dudley *et al.*, *supra* note 176 at 62.

development of a collective information database about MPAs.²⁴¹ Members of a social network can include community members, traditional leaders, conservation staff, interdisciplinary academics and researchers, donors and decision-makers.²⁴²

2.2.4 A Network of Marine Protected Areas at the Regional Level and Transboundary Marine Protected Areas

When a network of MPAs is developed to protect an ecological unit at the regional or *supra*-national level, boundary and jurisdictional issues need to be taken into consideration. As national boundaries are artificially established and rarely correspond to natural ecosystems, important habitats could be located across the boundary or frontier between two or more countries or in a disputed area between them. Besides, areas beyond national jurisdiction (namely high seas and the Area²⁴³) which account for 64 percent of the ocean, have many highly diverse habitats such as cold water coral reefs, sea mounts and hydrothermal vents that are very fragile and need protection.²⁴⁴

²⁴¹ Patrick Christie and Alan T. White, “Best Practices in Governance and Enforcement of Marine Protected Areas: An Overview” in FAO/Japanese Government Cooperative Programme, see *supra* note 45, para. 183 at 196.

²⁴² Example of such a social network is the Local Marine Management Area Network which functions as a learning network at both national and international level in South Asia and the Pacific. It was developed at the initiative of the World Resources Institute, David and Lucile Packard Foundation and John D. and Catherine T. MacArthur Foundation in the 1990s to connect isolated community-based marine conservation projects throughout South East Asia and the Pacific. Its current members include people and organizations from Southeast Asia, Melanesia, Micronesia, Polynesia and the Americas, see Locally-Managed Marine Area Network, *What is the LMMA Network*, online: Lmmanetwork <http://www.lmmanetwork.org/Site_Page.cfm?PageID=8>, accessed July 2, 2010.

²⁴³ For the definition of high seas and the Area, see UNCLOS, *supra* note 196, arts 1(1) and 86.

²⁴⁴ UNEP-WCMC, *supra* note 10 at 104. For more about the need to protect the biodiversity of the areas beyond national jurisdiction, see Kristina M. Gjerde and Charlotte Breide, “Towards a Strategy for High Seas Marine Protected Areas” in *Proceedings of the IUCN, WCPA and WWF Experts Workshop on High Seas Marine Protected Areas January 15-17, 2003, Malaga, Spain* (Gland: IUCN, 2003); Nilufer Oral “Protection of Vulnerable Marine Ecosystems in Areas beyond National Jurisdiction: Can International Law Meet the Challenge?” in Anastasia Strati, Maria Gavouneli and Nikolaos Skourtos (eds), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (Leiden: Martinus Nijhoff Publishers, 2006) 85; Hjalmar Thiel, “Approach to the Establishment of PA on the High Seas” in Andree Kirchner (ed.), *International Marine Environmental Law: Institutions, Implementation, and Innovations* (The Hague: Kluwer Law International, 2003) 169 and Charlotte De Fontaubert, *The Status of Natural Resources on the High-Seas* (Gland: WWF, IUCN, 2001).

For the protection of these habitats, it might be necessary to establish transboundary MPAs.²⁴⁵ The IUCN defines a transboundary PA as:

An area of land and/or sea that straddles one or more boundaries between States, sub-national units such as provinces and regions, autonomous areas and/or areas beyond the limits of national sovereignty or jurisdiction, whose constituent parts are, especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, managed co-operatively through legal or other effective means.²⁴⁶

This is a generous definition that does not require the whole area to be considered as a protected area but just some of its components. The Union considers parks for peace or peace parks as a special category of transboundary protected areas, which not only has the purpose of protecting natural and cultural values but also the promotion of peace.²⁴⁷

There seems to be confusion between a network of protected areas, a transboundary network of protected areas and transboundary protected area. For instance, sometimes a transboundary protected area can be used to designate a network or a group of protected areas that is established in the frontier region and straddles the boundary or frontier. A transboundary network of protected areas can also be used to designate a large network of protected areas which cover more than one country and which is not limited in the boundary or frontier area. To avoid confusion, this dissertation uses the term “transboundary network of protected areas” to refer to a network of protected areas that is established in the border region and straddles the

²⁴⁵ Besides protecting transboundary resources, transboundary MPAs can also offer some specific benefits to communities. For details, see for example Simon C. Metcalfe, *Study on the Development of Transboundary Natural Resource Management Areas in Southern Africa: Community Perspectives* (Washington D.C: Biodiversity Support Program, 1999).

²⁴⁶ Trevor Sandwith, *Transboundary Protected Areas for Peace and Co-Operation, Based on the Proceedings of Workshops Held in Bormio (1998) and Gland (2000)* (Gland: IUCN, 2001) 3. The term “boundaries” used in the definition seems to include “boundary” and “frontier”; for the distinction between those terms, see above 1.2.1.2 Transboundary Resources Management.

²⁴⁷ *Ibid.* note 246.

boundary or frontier, while a regional or bilateral network of protected areas refers to a network which covers territories of more than one country but not limited to the border region.

This section of the dissertation discusses the elements of transboundary protected areas in two cases: when they are established to protect the boundary area between two or more States and when they are established to protect areas beyond national jurisdiction.

2.2.4.1 Transboundary Protected Areas between States

Few guidelines relating to the establishment and management of transboundary protected areas²⁴⁸ exist. At the global level, some specific guidelines have been developed by the IUCN.²⁴⁹ At the regional level, a famous example is the Biodiversity Support Program,²⁵⁰ which examined transboundary natural resource management in Africa and provided perspectives for the implementation of transboundary conservation processes in place.²⁵¹

According to IUCN, there is no single way to establish transboundary protected areas. Neighbouring countries can establish protected areas that are adjacent to each

²⁴⁸ From a terminological point of view, besides transboundary protected areas there are a number of different terms which designate an area-based management of inter-state transboundary resources, such as transboundary or transfrontier conservation areas and transboundary natural resources management area see Leo Barack, *Security Considerations in the Planning and Management of Transboundary Conservation Areas* (Gland: IUCN, 2006), box 1.1 at 3.

²⁴⁹ Sandwith *et al.*, *supra* note 246 and Leon Break, *ibid.* note 248.

²⁵⁰ The Biodiversity Support Program, operated from 1989-2001, is a consortium between WWF, The Nature Conservancy, World Resources Institute with funding from the United States Agency for International Development with mission to promote conservation of the world's biological diversity. For more details, see online: WWF <<http://www.worldwildlife.org/bsp/>>, accessed February 2, 2011.

²⁵¹ For more details, see Alan Rogers, John Mugabe and Christine Mathenge, *Beyond Boundaries: Regional Overview of Transboundary Natural Resource Management in Eastern Africa* (Washington: Biodiversity Support Program, 2001); Harry van der Linde *et al.*, *Beyond Boundaries: Transboundary Natural Resource Management in Sub-Saharan Africa* (Washington: Biodiversity Support Program, 2001) and David S. Willkie *et al.*, *Beyond Boundaries: Regional Overview of Transboundary Natural Resource Management in Central Africa* (Washington: Biodiversity Support Program, 2001).

other or protected areas that are close to the border but not adjacent to each other on a border. They can also establish protected areas on one side of the border and other measures of natural resource management or conservation on the other side.²⁵²

Relating to transboundary adjacent protected areas, there are six levels of cooperation, ranging from no-cooperation at all to full cooperation with joint planning and management of activities. These are presented in Table 1 below:

Levels of Cooperation	Characteristics
No-cooperation	No sharing or cooperation in any specific issue
Communication	Some two-way communication between PAs
Consultation	Notification of actions affecting the adjacent PA
Collaboration	Coordinated planning and consultation of the other PA before taking action
Coordination of planning	Treating the whole area as a single ecological unit
Full cooperation	Joint planning and management

Table 1 Levels of Cooperation between Transboundary Adjacent Protected Areas

(Adapted from Sandwith²⁵³)

The Organization also developed a Draft Code for Transboundary Protected Areas in times of peace and armed conflict to propose an enabling framework to promote transboundary cooperation through the establishment and management of transboundary protected areas.²⁵⁴ The Code sets out principles and duties of States relating to the establishment and management of transboundary protected areas, in particular during armed conflicts and afterwards. The IUCN suggests that the Code can be used as a basis to develop comparable documents suited to particular needs of a country or region.²⁵⁵

Guidelines for the establishment of transboundary protected areas also come from scholars. For instance, Jadev “Jay” Singh proposes some design principles for

²⁵² Sandwith, *supra* note 246 at 15.

²⁵³ Sandwith, *supra* note 246, box 3.9 at 34.

²⁵⁴ *Ibid.* at 39.

²⁵⁵ *Ibid.*

transboundary protected areas based on design principles for the management of natural resources shared by two or more communities which include clearly defined boundaries, establishment of collective frameworks for decision-making and establishment of conflict resolution mechanisms.²⁵⁶ Simon Metcalfe suggests a number of steps to improve the involvement of communities in transboundary natural resources management initiatives.²⁵⁷ They include, *inter alia*, to involve communities from the start of the process; to treat transboundary natural resources management as an extension of community-based management; and to improve communities' formal resources access rights.

However, those guidelines are not enough to provide a comprehensive guidance relating to transboundary protected areas. They are quite sketchy and repeat many management guidelines from the development of a network of protected areas at the national level. Most of the case studies are terrestrial transboundary protected areas and do not take into consideration boundary and jurisdictional disputes. Furthermore, the information provided is not up-to-date.²⁵⁸ Consequently, there is a need to develop more comprehensive and updated guidelines relating to the establishment and management of transboundary protected areas and at the same time more specialized ones for the transboundary MPA context.

According to the most recent inventory of transboundary protected areas done by the UNEP World Conservation Center, there were in 2007, 227 transboundary protected

²⁵⁶ Jaidev "Jay" Singh, *Study on the Development of Transboundary Natural Resource Management Areas in Southern Africa. Global Review: Lessons Learned* (Washington: Biodiversity Support Program, 1999) 27.

²⁵⁷ Metcalfe, *supra* note 245 at 32.

²⁵⁸ Most of case studies were undertaken in the early 2000s.

areas registered in the World Database on Protected Areas with a total area of more than 4.6 million km².²⁵⁹

2.2.4.2 Marine Protected Areas in Areas beyond National Jurisdiction

One particularity of a network of MPAs at the regional level, as compared to a network of MPAs at national level and also to a network of terrestrial protected areas, is the possibility of MPAs established in ocean areas beyond national jurisdiction.

The establishment of MPAs on the high seas and the Area may encounter some difficulties. First, the creation of MPAs on the high seas may limit all legally recognized freedoms of the high seas: freedom of navigation, fishing, laying submarine cables and pipelines and doing scientific research.²⁶⁰ It may be highly complicated to achieve a balance between legitimate uses of the oceans and the protection of marine biological diversity on the high seas considering all the various actors and activities involved.²⁶¹ Second, existing international instruments that provide some forms of high seas regulation (such as those relating to fisheries or shipping) depend primarily on flag State enforcement. Therefore, if some States agreed to establish MPAs on the high seas, such agreements would not be applicable to ships flying the flags of non-Parties. Establishing a new enforcement regime based on coastal State enforcement would require restructuring existing oceans governance under international law.²⁶² Besides, the existing structure of international ocean law regarding the protection of marine life and

²⁵⁹ I. Lysenko, C. Besançon and C. Savy, *2007 UNEP-WCMC Global List of Transboundary Protected Areas*, online: Global Transboundary Conservation Network <<http://www.tbpa.net/page.php?ndx=78>>, accessed May 20, 2010.

²⁶⁰ UNCLOS, *supra* note 196, arts. 88 and 137.

²⁶¹ Yoshifumi Tanaka, *A Dual Approach to Ocean Governance: the Cases of Zonal and Integrated Management in the International Law of the Sea* (Farnham: Ashgate Pub., 2008) Ch.5 at 203.

²⁶² *Ibid.* at 204 and Oral, *supra* note 244 at 105.

biodiversity is quite fragmented.²⁶³ Although the issue has been debated in different international *fora*,²⁶⁴ there is no global treaty that provides for the creation of MPAs on the high seas. Finally, from a practical perspective, the high seas are very vast (in total about 64 percent of the world's ocean²⁶⁵) and at a considerable distance from the shore of coastal States. As such it is very difficult and costly even for developed States to survey and patrol in those areas to ensure compliance.

The establishment of MPAs in areas beyond national jurisdiction is currently discussed in two international *fora*, namely, the CBD²⁶⁶ and the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction under the United Nations General Assembly (Ad Hoc Open-ended Informal Working Group).²⁶⁷

Three important documents have been adopted by the COP of the CBD to provide guidance for the establishment of MPAs in areas beyond national jurisdiction. They are the scientific criteria for identifying ecologically or biologically significant marine areas in need of protection in open-ocean waters and deep-sea habitats; the scientific guidance for selecting areas to develop a representative network of marine protected areas, including in open ocean waters and deep-sea habitats; and the four initial

²⁶³ Oral, *supra* note 244.

²⁶⁴ Such as under the World Park Congress, Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction under the United Nations General Assembly, and COP of the CBD.

²⁶⁵ UNEP-WCMC, *supra* note 10 at 104.

²⁶⁶ See below 3.1.2 Convention on Biological Diversity, 1992.

²⁶⁷ *Ad Hoc Open-Ended Informal Working Group to Study Issues relating to the Conservation and Sustainable Use of Marine Biological Diversity beyond Areas of National Jurisdiction*, online: United Nations-Division for Ocean Affairs and the Law of the Sea <<http://www.un.org/Depts/los/biodiversityworkinggroup/biodiversityworkinggroup.htm>>, accessed June 13, 2011.

steps to be considered in the development of a representative network of MPAs.²⁶⁸ The COP also invites States and relevant organizations to use “The scientific guidance on the use and further development of biogeographic classification systems” adopted at the Ottawa Expert Workshop²⁶⁹ to establish MPAs and networks of MPAs.²⁷⁰

The Ad hoc Open-ended Informal Working Group recommended the UNGA in 2011 to initiate a process to ensure that the legal framework for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction effectively addresses those issues by identifying gaps and ways forward. The process, which could result in the development of a multilateral agreement under the Convention on the Law of the Sea, would address the issue of establishing MPAs in areas beyond national jurisdiction.²⁷¹ The recommendation of the Working Group was adopted by the UNGA at its 66th session in the same year²⁷² and further endorsed in “The Future We Want”,²⁷³ the outcome document of the United Nations Conference on Sustainable Development, 2012.²⁷⁴

To this point, this dissertation has reviewed the existing guidance for and literature relating to the development of a network of MPAs in general, in particular a

²⁶⁸ *Marine and Coastal Biodiversity*, Decision IX/20, Annex I, 9th Meeting of the COP to the CBD, Bonn, Germany, May 19-30, 2008.

²⁶⁹ The Expert Workshop on Scientific and Technical Guidance on the Use of Biogeographic Classification Systems and Identification of Marine Areas beyond National Jurisdiction in Need of Protection, Ottawa, Canada, September 29 to October 2, 2009, see Subsidiary Body on Scientific, Technical and Technological Advice, *Report of the Expert Workshop on Scientific and Technical Guidance on the Use of Biogeographic Classification Systems and Identification of Marine Areas Beyond National Jurisdiction in Need of Protection*, Item 3.1.3 of the provisional agenda, 14th meeting, Nairobi, May 10-21, 2010, Doc.UNEP/CBD/SBSTTA/14/INF/4 (2010).

²⁷⁰ *Marine and Coastal Biodiversity*, Decision X/29, 10th Meeting of the COP to the CBD, Nagoya, Japan, October 18-29, 2010, line 29.

²⁷¹ UNGA, *Letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly*, UNGA OR, 66th session, UN Doc. A/66/119 (2011).

²⁷² *Ocean and the Law of the Sea*, GA Res.66/231, UNGA OR, 66th session, Agenda item 76 (a), A/RES/66/231 (2011), para. 167.

²⁷³ *The Future We Want*, GA Res.66/288, UNGA OR, Agenda item 19, UN Doc. A/RES/66/288 (2012), para.162.

²⁷⁴ See below 3.2.1.4 United Nations Conference on Sustainable Development, 2012.

regional network of MPAs. This review shows that the development of a network of MPAs is a long, complicated and costly process, of which the achievement of desired outcomes is still uncertain. However, these challenges should not stop actions to be taken pursuant to the precautionary principle/approach. In fact, efforts have been undertaken in many sea areas in the world, at both national and regional level, to establish MPAs and a network of MPAs.

The next sections of this Chapter focus on the prospect for the development of a network of MPAs in the context of the SCS. Concretely, section 2.2.4 discusses existing academic suggestions for the development of a regional network of MPAs in the SCS and section 2.2.5 identifies challenges for undertaking this initiative, in particular legal and political challenges.

2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea

The most detailed suggestions for the establishment of both a network of MPAs and a transboundary MPA in the South China Sea have come from academics,²⁷⁵ in particular John McManus, Noel Ludwig and Aldo Chircop.

As early as 1992, John McManus advocated for the development of a network of MPAs in the SCS with the starting point as a marine peace park in the Spratlys.²⁷⁶

²⁷⁵ From a governmental perspective, the Philippines has advocated for the establishment of a transboundary MPA in the Spratlys. For details, see Department of Foreign Affairs of the Republic of Philippines, *A Rules-Based Regime in the South China Sea*, statement by Albert F. Del Rosario, Filipino Secretary of Foreign Affairs (June 7, 2011), online: Department of Foreign Affairs of the Republic of Philippines <<http://www.dfa.gov.ph/main/index.php/about-the-dfa/office-location/3141-a-rules-based-regime-in-the-south-china-sea-by-albert-f-del-rosario-secretary-of-foreign-affairs>>, accessed October 26, 2011. Taiwan also called for the establishment of a marine peace park in Itu Aba island and Ban Than/Zhongzhou Reef in the Spratlys, see Yann-Huei Song, “A Marine Biodiversity Project in the South China Sea: Joint Efforts Made in the SCS Workshop Process” (2011) 26 *The International Journal on Marine and Coastal Law* 119 at 262.

²⁷⁶ J. W. McManus, “The Spratly Islands: A Marine Park Alternative” (1992) 17:3 *Naga: The ICLARM Quarterly* 4.

According to McManus, there are strong evidences that the Spratlys play the role of a “resource saving bank” for the region. Fishes that spawn in its productive coral reefs could circle through almost all the coastal waters of SCS countries such as the Philippines, China, Vietnam, and Indonesia before returning to the islands themselves.²⁷⁷

The author suggested that coastal countries can ignore the Spratlys altogether and turn the islands into a neutral, international marine reserve to benefit from the living resources emanating from the area. Precedents for this initiative include the Antarctic and Torres Strait Treaties.²⁷⁸ For the management of the park, he suggests a management strategy with five elements: an international management board, a contracted research and management institution, a private surveillance force, tourism facilities and research facilities and programs.²⁷⁹ More recently in 2010, John McManus *et al.* proposed the establishment of a full-area peace park in the Spratlys islands.²⁸⁰

Noel Ludwig in 2001 expressed his preference for the establishment of a regional biosphere reserve with a fully protected core area and buffer zones in the Spratlys. The core area could include reefs with unique species, ecosystems or habitats, and areas of steep underwater drop-off that are likely to include a wide range of habitats and species. The activities allowed in the core area would be conservation, scientific research and

²⁷⁷ *Ibid.* at 5. More details on the ecological rationales for a marine park in the Spratlys were presented by McManus and Menez at the 8th International Coral Reef Symposium in 1997, which include insufficient recruitment in coastal waters due to overfishing, biological richness of the Spratly area and the favourable current direction, timing, larval behaviour and oceanic conditions for passing species from off-shore areas to coastlines; see J. W. McManus and L. A. B. Menez, “The Proposed International Spratly Island Marine Park: Ecological Considerations” in Proceedings of the 8th International Coral Reef Symposium, Vol.2 (1997) at 1943.

²⁷⁸ See *The Antarctic Treaty*, 1 December 1959, 402 U.N.T.S 71 and *Treaty between Australia and the Independent State of Papua New Guinea Concerning Sovereignty and Maritime Boundaries in the Area between the Two Countries, including the Area known as Torres Strait, and Related Matters*, 28 December 1978, 1985 A.T.S 4.

²⁷⁹ J. W. McManus, *supra* note 276 at 8.

²⁸⁰ John W. McManus, Kwang-Tsao Shao and Szu-Yin Lin, "Toward Establishing a Spratly Islands International Marine Peace Park: Ecological Importance and Supportive Collaborative Activities with an Emphasis on the Role of Taiwan" (2010) 41: 3 *Ocean Development & International Law* 270.

ecotourism. He also suggests some potential places for the reserve, which include Loaita island, Thitu island, Lankiam Cay and Subi Reef (for the location of these features in the Spratlys, see Figure 3 below). The management of this area could be entrusted to a board consisting of members representing the claimants or to the State to which the feature or features have been allotted (in case the claimants agree to divide the Spratlys among themselves). Special regulations for ship routeing could be established for the shipping traffic traversing the area.²⁸¹

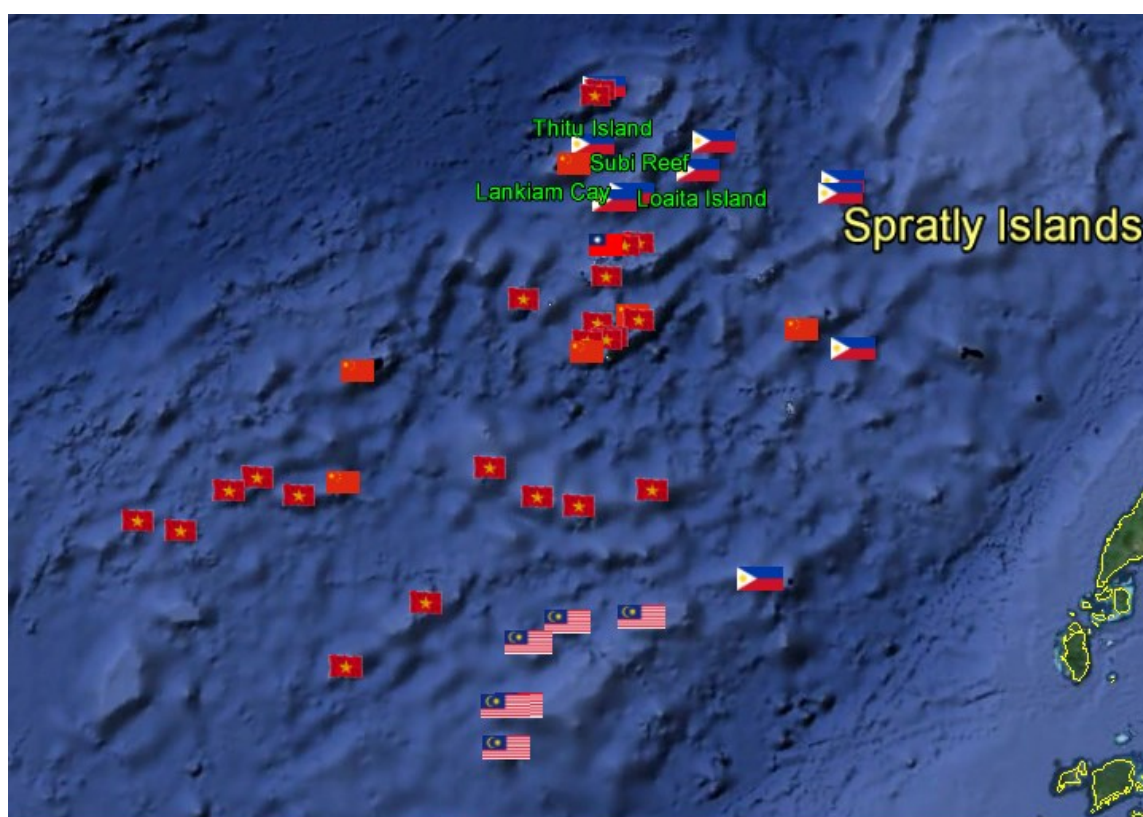


Figure 3 Occupied Features of the Spratly Islands

(Created by the author using Google Earth, July 2013)

²⁸¹ Noel Ludwig, “Sword into Timeshares: An International Marine Park in the Spratly Islands?” in Aldo Chircop, Moira L. McConnell and Scott Coffen-Smout (eds), *Ocean Yearbook 15* (Leiden: Martinus Nijhoff Publishers, 2001) 7 at 29.

In 2010, Aldo Chircop proposed the development of a system of MPAs throughout the SCS.²⁸² According to the author, the system would include both disputed and undisputed areas and should be designed to address the particular structure, function and processes of the SCS Large Marine Ecosystem as they may be defined in spatial and ecosystemic terms. He also suggested the designation of the SCS as a special area under the MARPOL 73/78 or as a Particularly Sensitive Sea Area under the IMO framework to provide an additional layer of protection for the regional sea against pollution and damage from maritime activities.

All above-mentioned suggestions have the merit of pointing out the importance of having a regional network of MPAs in the SCS, in particular with a transboundary MPA in the Spratlys, primarily for the protection of its marine environment, living resources and but also for the reduction of tension among claimants. In terms of solutions, although they provide very interesting ideas, they are still limited to general suggestions. What is needed are detailed studies on existing international and regional legal and political frameworks for the development of a network of MPAs in the SCS, assessment of relevant experiences from other regions and consideration of concrete options that SCS States may follow to initiate the process of developing a regional network of MPA.

This dissertation seeks to fill the gaps of existing scholarly suggestions by examining the above-mentioned topics after a discussion of challenges to develop a regional network of MPAs in the SCS in the next section.

²⁸² Aldo Chircop, “Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation” (2010) 41:4 *Ocean Development & International Law* 334 at 346.

2.2.6 Challenges for the Development of a Network of Marine Protected Areas in the South China Sea

A number of legal and political challenges to the development of a network of MPAs in the SCS have been listed and discussed.²⁸³ They are: the complexity of SCS disputes, lack of awareness of countries in the region regarding the need to protect the marine environment, limited influence from the SCS epistemic community,²⁸⁴ the reluctance of China towards regionalism and multilateralism, the “ASEAN way”²⁸⁵ of multilateral regime building and the weak influence of NGOs at the regional level. Two additional challenges could be added to this list, namely the diversity of SCS countries and possible strong resistance from existing users of the sea. These additional challenges are now explained in detail.

2.2.6.1 Diversity of South China Sea States

National diversity is a recognized obstacle to regional marine regime-building and regional cooperation in the Asia-Pacific and Southeast Asian regions.²⁸⁶ States and territories surrounding the SCS are very different in many aspects, some of which might

²⁸³ See Hai Dang Vu, “Towards a Regional MPA Network in the South China Sea: General Perspectives and Specific Challenges” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook* 26 (Leiden: Martinus Nijhoff Publishers, 2012) 291 at 312.

²⁸⁴ For a definition of the epistemic community, see below 6.3 Lessons for the South China S.

²⁸⁵ The “ASEAN way” refers to the traditional resort to multilateral regime building that has strongly influenced Asian diplomatic relations. It focuses on discretion, informality, pragmatism, consensus-building and non-confrontational bargaining styles. Pursuant to this approach, Asian countries try to agree on common grounds and to deal with contentious issues later; see Amitav Acharya, “Ideas, Identity, and Institutions-building: From “ASEAN way” to the “Asia-Pacific Way” (1997) 10 *The Pacific Review* 319 at 320 and Nicholas Busse, “Constructivism and Southeast Asian Security” (1999) 12 *The Pacific Review* 39 at 46.

²⁸⁶ See Barbara Johnson, “Regionalism and the Law of the Sea: New Aspects of Dominance and Dependency” in Douglas Johnston (ed.), *Regionalisation of the Law of the Sea: Proceedings* (University of Hawaii, 1978) 103 at 120 and Mark Valencia (ed.), *Maritime Regime Building: Lessons Learned and their Relevance for Northeast Asia* (The Hague: Martinus Nijhoff Publishers, 2001) 8 for regional marine regime-building and Jim Rolfe, “A Complex of Structures: Functional Diversity, Regional Consolidation, and Community Development in the Asia-Pacific” (2007) 33 *Asian Affairs: An American Review* 217 at 224 and Kristina Jönsson, “Unity-in-Diversity? Regional Identity-Building in Southeast Asia” (2010) 2 *Journal of Current Southeast Asian Affairs* 41 at 52 for regional cooperation in Asia-Pacific and Southeast Asia.

affect the effort to develop a regional network of MPAs. These differences relate to geography, political and legal regimes, economic development levels and socio-economic situations. For instance, in terms of geography, the SCS region hosts China, the 4th largest State in the world; Indonesia and the Philippines, the two largest archipelagic States; Singapore and Brunei, two of the world's smallest States and as well, a number of Asian mainland medium-sized States such as Thailand, Vietnam and Cambodia. As for political regime, the region includes communist States (such as China and Vietnam), constitutional monarchies (such as Thailand and Cambodia) and Brunei, which is a sultanate. The legal system within each country is influenced differently from the Civil law, Common law, Soviet law, Islamic law and traditional custom.

Relating to economic development, some of these States are among those that have the highest GDP per capita in the world such as Brunei and Singapore along with those with very low ones such as Cambodia and Vietnam. Concerning socio-economic conditions as expressed through the Human Development Index,²⁸⁷ there are in the SCS region, States with very high human development (such as Singapore and Brunei) and those with medium human development (such as Vietnam and Cambodia). For more details about the diversity of SCS States, see Table 2 below.

²⁸⁷ The Human Development Index is a composite statistic used by the UNDP to rank States according to their levels of "human development" based on performance in three basic areas: health, education and standard of living. Accordingly, the countries and territories in the world can be divided into four groups in terms of human development: very high, high, medium and low. For more detail, see Human Development Index, online: UNDP <<http://hdr.undp.org/en/statistics/hdi/>>, accessed April 22, 2012.

Countries/ Territories	Different National Indices					
	<i>Area (km²)</i>	<i>Coastline (km)</i>	<i>Population (people)</i>	<i>GDP – PPP (USD)</i>	<i>GDP per capita – PPP (USD)</i>	<i>Human Development Index</i>
China	9,596,961 (4 th)	14,500 (10 th)	1,343,239,923 (1 st)	11.29 (3 rd)	8,400 (122 nd)	0.687 (101 st)
Taiwan	35,980	1,566.3	23,234,936	875.9 billion	37,700	N.A
Hong Kong	1,104	733	7,153,519	351.5 billion	49,400	0.898
Macau	28.2	41	578,025	18.47 billion	33,000	N.A
Philippines	300,000 (73 rd)	36,289 (4 th)	103,775,002 (12 th)	391.1 billion (33 rd)	4,100 (162 nd)	0.644 (112 th)
Brunei	5,765 (173 rd)	161 (130 th)	408,786 (175 th)	21.03 billion (127 th)	49,500 (9 th)	0.838 (33 rd)
Malaysia	329,847 (67 th)	4,675 (29 th)	29,179,952 (43 rd)	463.7 billion (30 th)	16,200 (75 th)	0.761 (61 st)
Singapore	679 (192 nd)	193 rd (126 th)	5,353,494 (114 th)	314.9 billion (40 th)	59,700 (5 th)	0.866 (26 th)
Indonesia	1,904,569 (15 th)	54,716 (2 nd)	248,645,008 (4 th)	1.125 trillion (16 th)	4,700 (157 th)	0.617 (124 th)
Thailand	513,120 (51 st)	3,219 (34 th)	67,091,089 (20 th)	602.2 billion (25 th)	9,400 (114 th)	0.682 (103 rd)
Cambodia	181,035 (90 th)	443 (100 th)	14,952,665 (67 th)	33.82 billion (107 th)	2,200 (188 th)	0.523 (139 th)
Vietnam	331,210 (66 th)	3,444 (33 rd)	91,519,289 (14 th)	300 billion (42 nd)	3,400 (166 th)	0.593 (128 th)

Table 2 A Number of National Indices of SCS States and their Positions in the World²⁸⁸

(Source: World Fact Book²⁸⁹)

2.2.6.2 Possible Strong Resistance from Existing Users of the Sea

Restrictions on activities due to the designation of new MPAs in general may meet with the protests from people working in at least three sectors, namely fisheries, oil

²⁸⁸ Due to the special situation of the territories of Taiwan, Hong Kong and Macau, relevant data are provided without their ranking positions.

²⁸⁹ online: Central Intelligence Agency of the United States <<https://www.cia.gov/library/publications/the-world-factbook/#>>, accessed January 22, 2013 and United Nations Development Programme, *Human Development Report 2011 Sustainability and Equity: A Better Future for All* (New York: United Nations Development Programme, 2011), Table 1 Human Development Index and its Components).

and gas and shipping. The problem in the SCS is that the marine region is used extensively by these three sectors. As stated earlier, the SCS region lands every year around six million tonnes of catch, accounting for 10 percent of the world total.²⁹⁰ Except the city-state of Singapore, all coastal countries have active oil and gas fields in the SCS, some of which have contributed substantially to the overall national production of relevant energy.²⁹¹ As for marine shipping, it was explained earlier that the SCS is one of the busiest searoutes in the world, where one quarter of the world's merchandise and half of the world's oil have been transported through.²⁹² For this reason, the establishment of MPAs in the SCS could potentially meet with strong protests from fishermen, oil and gas companies and ship operators and have little support from governments if they limit those activities.

²⁹⁰ See above 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea.

²⁹¹ So far SCS have been the only source for the production of oil and gas of Vietnam, Brunei, Philippines (oil only) and potentially offshore production of oil and gas of Cambodia. Active offshore wells in the marine region also contribute a large part to the production of oil and gas of Malaysia, Thailand and China. For more details see: *Production of more than 250 Million Tons of Crude Oil and 50 Billion Cubic Meters of Gas* (12/05/2010) online: PetroVietnam <http://english.pvn.vn/?portal=news&page=detail&category_id=74&id=3292>, accessed April 24, 2012; *Brunei Darussalam: Energy in Brief* (Brunei Darussalam: Energy Division-Prime Minister Office, 2007), Petroleum Map at 6; *Oil*, online: Department of Energy of the Philippines <<http://www.doe.gov.ph/ER/Oil.htm>>, accessed April 24, 2012; *Offshore Operations*, online: Cambodian National Energy Authority <http://www.cnpa.gov.kh/index.php?option=com_content&view=article&id=51&Itemid=126>, accessed April 24, 2012; *Malaysia: Country Analysis Brief* (December 14, 2011) online: U.S. Energy Information Administration <<http://www.eia.gov/countries/cab.cfm?fips=MY>>, accessed April 23, 2012 at 2; and *Sector Briefing: Oil & Gas Opportunities in Thailand* (2010), online: United Kingdom Trade and Investment <http://www.ukti.gov.uk/download/120447_105002/Oil%20&%20gas%20opportunities%20in%20Thailand.pdf.html>, accessed April 24, 2012 and *China: Country Brief Analysis* (November 2010) online: U.S. Energy Information Administration <<http://www.eia.gov/countries/cab.cfm?fips=CH>>, accessed February 3, 2012. See also South China Sea-U.S. Energy Information Administration, *supra* note 126.

²⁹² See Wilkinson *et al.*, *supra* note 89 at 20 and Zhang Xuegang, "Southeast Asia and Energy: Gateway to Stability" (2007) 3:2 China Security 18 at 19.

Conclusion

This Chapter has examined background issues, of which the understanding is necessary for the further discussion of the dissertation. It reviewed what an MPA and a network of MPAs are and how to develop a network of MPAs. It also discussed why the SCS needs to develop a network of MPAs and what are the challenges to make it happen.

Three important conclusions may be drawn from the analysis of the first Chapter. There are important ecological and political rationales for having a network of MPAs in the SCS, namely to protect the region's marine environment and living resources and to promote peace between coastal States. The development of a network of MPAs in the SCS needs a supportive legal and policy framework. Many important challenges, in particular legal and political challenges, need to be overcome for the undertaking of such an endeavour.

The background provided by this Chapter also provides a context for looking at the topic from a more legal perspective, that is, the current status of international, regional and national laws relevant to the development of a network of MPAs. Chapter III looks at the international legal framework for the establishment of MPAs and networks of MPAs.

Chapter III. International Legal Framework for Marine Protected Areas and Networks of Marine Protected Areas

As discussed earlier, the development of a network of MPAs in the SCS needs a supportive legal and policy framework. As the first common legal framework that all SCS countries share is international law, it is necessary to see what it provides on relevant issues. For this reason, this Chapter discusses stipulations under international law that can apply to the process to develop a regional network of MPAs in the SCS. The following stipulations (referred to generally in this dissertation as “MPA relevant stipulations”) are highlighted:

- i) Stipulations relevant to networks of MPAs in general and networks of MPAs at the regional level in particular;
- ii) Stipulations that provide a commitment towards the implementation of the ecosystem approach as networking MPAs is a means to implement the ecosystem approach;¹
- iii) Stipulations relevant to protected areas in general but also applicable to MPAs;
- iv) Stipulations relevant to MPAs specifically;
- v) Stipulations that provide commitment towards the protection of biodiversity because they can be interpreted as being an indirect framework for the establishment of protected areas (protected areas are considered a tool to protect biodiversity²);
- vi) Stipulations that provide commitment towards conservation, management of fisheries and the restoration of fish stocks because they can be interpreted as

¹ See above 2.1.2 From Marine Protected Areas to a Network of Marine Protected Areas.

² See above 2.1.1.2 Purposes of Marine Protected Areas.

being an indirect framework for the establishment of MPAs (MPA is considered a tool for conservation and management of fisheries³);

vii) Stipulations relating to transboundary MPAs;⁴

viii) Stipulations relating to regional cooperation to establish MPAs or more generally to protect marine biodiversity or to protect the marine environment as the development of a regional network of MPAs will require regional cooperation;

The situation of how they have been implemented in the SCS region by SCS States is also briefly overviewed.

Stipulations adopted under the framework of two main types of instruments of international law are reviewed: international treaties and international non-legally binding texts. Each type of instrument is discussed subsequently hereafter.

3.1 International Treaties

MPA relevant stipulations can be found under treaties relating to the law of the sea, fisheries management, the preservation of biodiversity, protection of a particular type of habitat or species and prevention of marine pollution. The official text of, and decisions, recommendations and resolutions adopted under the following treaties are reviewed:

3.1.1 UNCLOS of 1982⁵ and relevant instruments adopted under its framework such as the UN Fish Stock Agreement⁶ and the International Seabed

³ *Ibid.*

⁴ See above 2.2.4 A Network of Marine Protected Areas at the Regional Level and Transboundary Marine Protected Areas. Stipulations relating to MPAs in areas beyond jurisdiction are not a focus for study in this Chapter as it is not clear whether there are high seas and an Area in the SCS because of the extent of the Chinese U-shape claim, see Hai Dang Vu, “Towards a Regional MPA Network in the South China Sea: General Perspectives and Specific Challenges” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook 26* (Leiden: Martinus Nijhoff Publishers, 2012) 291 at 312.

Authority's Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area.⁷

3.1.2 CBD of 1992;⁸

3.1.3 World Heritage Convention of 1972;⁹

3.1.4 Ramsar Convention of 1972;¹⁰

3.1.5 Convention on the Conservation of the Migratory Species and Wild Animals (CMS) of 1979;¹¹

3.1.6 International Whaling Convention of 1946;¹²

3.1.7 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) of 1973;¹³

3.1.8 International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 (MARPOL 73/78),¹⁴ and

3.1.9 International Convention for the Safety of Life at Sea (SOLAS) of 1974.¹⁵

⁵ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 3 [UNCLOS].

⁶ *The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 4 August 1994, online: United Nations Division for Ocean Affairs and the Law of the Sea <http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm>, accessed February 10, 2010 [UN Fish Stock Agreement].

⁷ International Seabed Authority, Assembly, *Decision of the Assembly relating to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, 6th session, Doc. ISBA/6/A/18 (2000).

⁸ *Convention on Biodiversity*, 5 June 1992, 760 U.N.T.S. 79 [CBD].

⁹ *Convention Concerning the Protection of the World Cultural and Natural Heritage*, 6 November 1972, 1037 U. N. T. S. 152 [World Heritage Convention].

¹⁰ *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, 2 February 1971, as amended by the Paris Protocol, 3 December 1982 and Regina Amendment, 28 May 1987, 996 U.N.T.S. 445 [Ramsar Convention].

¹¹ *Convention on the Conservation of the Migratory Species and Wild Animals*, 23 June 1979, 1651 U.N.T.S. 333 [CMS].

¹² *International Convention for the Regulation of Whaling*, 2 December 1946, 161 U.N.T.S. 74 [International Whaling Convention].

¹³ *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, 3 March 1973, 993 U.N.T.S. 224 [CITES].

¹⁴ *The International Convention for the Prevention of Pollution from Ships*, as modified by Protocol of 1978, 2 November 1973, 1340 U.N.T.S. 184 [MARPOL 73/78].

The status of the membership of SCS States with regards to these treaties is also discussed at the end of this section (in sub-section 3.1.10).

3.1.1 United Nations Convention on the Law of the Sea, 1982

The UNCLOS¹⁶ contains many stipulations relevant to MPAs. It determines the extent of rights that a State can have concerning a specific marine zone, in particular with regards to the protection of the marine environment and living resources. It imposes on States the obligation to protect the marine environment, to cooperate regionally for this purpose and to conserve and manage marine living resources. It also gives relevant coastal State the right to use the area-based approach to protect certain areas under its jurisdiction. Besides, stipulations relating to MPAs appear equally in other instruments developed under its framework, those considered here are the UN Fish Stocks Agreement and the International Seabed Authority's Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area. These stipulations are now discussed in detail.

3.1.1.1 Stipulations Determining the Extent of Coastal States' Rights over Different Marine Zones

The most important stipulations of the UNCLOS concern the division of the world ocean into seven different jurisdictional zones. These are internal waters, territorial seas, contiguous zones, exclusive economic zones, continental shelves, high seas and the

¹⁵ *The International Convention for the Safety of Life at Sea*, 1 November 1974, 1184 U.N.T.S 277 [SOLAS].

¹⁶ The UNCLOS, signed in 1982 in Montego Bay, Jamaica, entered into force in 1994. So far, it has received ratifications from 161 countries in the world, see United Nations-Division for Ocean Affairs and the Law of the Sea, *Status of the United Nations Convention on the Law of the Sea, of the Agreement relating to the implementation of Part XI of the Convention and of the Agreement for the Implementation of the Provisions of the Convention relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, online: United Nations-Division for Ocean Affairs and the Law of the Sea <http://www.un.org/Depts/los/reference_files/status2010.pdf>, accessed October 23, 2012.

Area. The extent of the rights and power that a State has in the marine area is different in each of these zones: from full sovereignty in internal waters,¹⁷ sovereignty with the exception of innocent passage in territorial seas,¹⁸ sovereign rights and jurisdiction in the exclusive economic zone¹⁹ and continental shelves²⁰ and freedom of navigation and “common heritage of mankind” in the areas beyond national jurisdiction.²¹ Besides, there is a special zone regulated by UNCLOS because of the importance of its geographical location to navigation: straits used for international navigation or international straits.²² In these areas, all ships and aircrafts enjoy the right of transit passage but the coastal State may adopt laws and regulations relating a number of fields including the protection of marine environment and living resources.²³

The difference in the extent of power that a coastal State can have relating to these different maritime zones, in particular in regard to the protection of the marine environment, can have implications for the management of MPAs. For instance, if an MPA is designated in the internal waters or territorial sea of a State, this State will have a much greater power to adopt conservation measures in this area. It also has the ability, within the contiguous zone, to prevent and punish violation of its custom, fiscal, immigration and sanitary rules relating to these MPAs.²⁴ If a State wants to designate MPAs in areas such as the exclusive economic zone (including the continental shelf) and in an international strait, it will need to take care not to hamper the relevant freedoms of other States, namely freedom of navigation, overflight and laying submarine cables and

¹⁷ UNCLOS, *supra* note 5, art.8.

¹⁸ UNCLOS, *supra* note 5, arts 2, 3, 7, 8, 17, 18 19, 21 and 24.

¹⁹ UNCLOS, *supra* note 5, arts 55-58.

²⁰ UNCLOS, *supra* note 5, arts 76, 77 and 79.

²¹ The high seas and Area respectively, see UNCLOS, *supra* note 5, arts 1, 76, 86, 87, 88, 136 and 137.

²² UNCLOS, *supra* note 5, art.34

²³ UNCLOS, *supra* note 5, arts 38-44.

²⁴ UNCLOS, *supra* note 5, art.33.

pipelines. Finally, no State can unilaterally establish an MPA in areas beyond its national jurisdiction.

3.1.1.2 Stipulations Relating to the Protection of the Marine Environment

Article 192 of UNCLOS recognizes a general obligation of all States to protect and preserve the marine environment.²⁵ To undertake this obligation, article 194 states that the coastal State shall take all measures necessary to protect and preserve rare or fragile ecosystems as well as habitats of depleted, threatened or endangered species and other forms of marine life.²⁶ The Convention also provides coastal States with two concrete area-based tools to strengthen the protection of the marine environment against pollution from vessels, which are the general “special area” and the ice-covered area.

Article 211 (6) gives coastal States the possibility to adopt laws and regulations that go further than existing international rules and standards in clearly defined areas within their exclusive economic zones that need special measures to protect ecosystem and resources against pollution from vessels.²⁷ Various authors think that the international organization mentioned in the article is the IMO and that the international rules and standards refer to the main body of rules and regulations adopted under its

²⁵ UNCLOS, *supra* note 5, art. 192.

²⁶ UNCLOS, *supra* note 5, art. 194.

²⁷ The requirement for such an endeavour is to consult with other States concerned and to seek the approval of a competent international organization. Once approved, the concerned coastal State may, for that area, adopt relevant laws and regulations implementing such international rules and standards or navigational practices as are made applicable, through the organization, for special areas. If coastal States intend to adopt additional laws and regulations for the same area; they shall notify them to the organization at the same time with the mentioned communication. Such additional laws and regulations shall not require foreign vessels to observe design, construction, manning or equipment standards other than generally accepted international rules and standards; see UNCLOS, *supra* note 5, art. 221 (6).

framework.²⁸ They also observe that although this stipulation may somehow refer to the special area regime under the MARPOL 73/78 of IMO,²⁹ it actually gives coastal States a broader power by allowing the adoption of additional laws and regulations. As shown later in this Chapter, this article is actually linked to the regime of particularly sensitive sea areas under the framework of IMO.³⁰

Article 234 of UNCLOS concerns areas covered by ice for most of the year. In those areas, the pollution of the marine environment could cause major harm or irreversible disturbance of the ecological balance. If such ice-covered areas are located within the exclusive economic zone of a coastal State, it can adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels.³¹

3.1.1.3 Stipulations Specific to the Conservation and Management of Marine Living Resources

The UNCLOS imposes on States a duty to protect marine living resources in both waters under their jurisdiction and in the high seas. Article 61(6) asks States to ensure

²⁸ See for example Markus J. Kachel, *Particularly Sensitive Areas: The IMO's Role in Protecting Vulnerable Marine Areas* (Doctoral Thesis, International Max Planck Research School for Maritime Affairs at the University of Hamburg, 2008) 82; Tullio Scovazzi, *Marine Specially Protected Areas: the General Aspects and the Mediterranean Regional System* (The Hague: Kluwer Law International, 1999) 35; "Marine Protected Areas in Conservation of Marine Biological Diversity: in Search of an Integrated Management Approach" in Yoshifumi Tanaka, *A Dual Approach to Ocean Governance: the Cases of Zonal and Integrated Management in International Law of the Sea* (Farnham: Ashgate Pub., 2008) 161 at 171; Rainer Lagoni, "MPA in the EEZ" in Andree Kirchner (ed.), *International Marine Environmental Law: Institutions, Implementation, and Innovations* (The Hague: Kluwer Law International, 2003) 157 at 162; and "Marine Habitat Protection through the Establishment and Management of Marine Protected Areas (MPAs)" in Veronica Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Leiden: Martinus Nijhoff Publishers, 2007) 331 at 335.

²⁹ For more details, see below 3.1.8 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978.

³⁰ See below 3.2.7 Particularly Sensitive Sea Areas .

³¹ UNCLOS, *supra* note 18, art. 234. The territorial scope of application of this article seems to be limited only to the ice-covered polar region (principally the Arctic); probably that is why it is sometimes called the "Arctic" article, see Myron H. Norquist *et al.*, *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol. IV (Charlottesville, Virginia: Center for Ocean Law and Policy, 1991) 393.

through proper conservation and management measures that the maintenance of living resources in their exclusive economic zones is not endangered by over-exploitation.³² As well, article 117 imposes on States the duty to take measures to ensure that the activities of their respective nationals do not undermine the conservation of the marine living resources of the high seas.³³

3.1.1.4 Stipulations relating to Regional Cooperation to Protect the Marine Environment and Living Resources

Regional cooperation or similar wording implying the same thing appears in many of the UNCLOS's stipulations relating to the protection and preservation of the marine environment. Article 197 asks States to cooperate "as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features."³⁴ Different articles ask States to harmonize their policies at the regional level or establish regional rules, standards and recommended practices and procedures to combat marine pollution from different sources.³⁵ Relating to the conservation of marine living resources, States are required to cooperate regionally in the exploitation, management and protection of shared stocks.³⁶ Article 66 relating to conservation, exploitation and management of

³² UNCLOS, *supra* note 5, art. 61(6).

³³ UNCLOS, *supra* note 5, art. 117.

³⁴ UNCLOS, *supra* note 5, art. 197.

³⁵ UNCLOS, *supra* note 5, arts 207 (3), 208(4), 210 (4) and 212 (3)

³⁶ UNCLOS, *supra* note 5, arts 61(2), 63 and 64. FAO distinguishes between four types of shared fish stocks, namely "transboundary stocks", "highly migratory species", "straddling stocks" and "discrete high seas fish stocks", see Gordon Munro, Annick Van Houtte and Rolf Willmann, *The Conservation and Management of Shared Fish Stocks: Legal and Economic Aspects*, FAO Fisheries Technical Paper 465 (Rome: FAO Legal Office, 2002) 3.

anadromous stocks also asks States of origin of these stocks and other States fishing them to “make arrangements” for its implementation.³⁷

The UNCLOS establishes a geographical unit where States should cooperate for the protection of the marine environment, namely in enclosed and semi-enclosed seas.³⁸ Article 123 asks relevant States to endeavour to coordinate, whether directly or through appropriate regional organizations in the exploitation, management and conservation of marine living resources and the protection and preservation of the marine environment. It also encourages these States to invite other interested States or international organizations to cooperate with them in the implementation of such initiatives.³⁹

In addition to these above-mentioned stipulations, two instruments developed under the framework of the UNCLOS contain provisions that could provide a framework for the establishment of MPAs in areas beyond national jurisdiction. These are the UN Fish Stocks Agreement⁴⁰ and the International Seabed Authority’s⁴¹ Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area.⁴² The UN Fish Stocks

³⁷ UNCLOS, *supra* note 5, art. 66.

³⁸ An enclosed or semi-enclosed sea is defined by UNCLOS 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”, see UNCLOS, *supra* note 5, art. 122. The SCS seems to fulfill conditions to be considered a semi-enclosed sea according to this article.

³⁹ UNCLOS, *supra* note 5, art. 123.

⁴⁰ Adopted on July 28th 1994, the Convention has the objective to ensure long-term conservation and sustainable use of straddling and highly migratory fish stocks and is applicable in general to areas beyond national jurisdiction, see *Final Act of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks*, United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, 6th session, UNGA OR, UN Doc. A/CONF.164/38 (1995) and UN Fish Stock Agreement, *supra* note 6, art. 2. Up to 2013, the Agreement has been ratified by 80 countries, see United Nations-Department for Ocean Affairs and the Law of Sea, *supra* note 16.

⁴¹ The International Seabed Authority was established by the UNCLOS to govern the activities in the Area, in particular those relating to its resources, see UNCLOS, *supra* note 5, arts 156 and 157. To fulfill its mission, the Authority has the power to adopt rules, regulations and procedures relating to the activities of prospecting, exploration and exploitation in the Area, see UNCLOS, *supra* note 5, art. 162 (2)(o)(ii). These rules, regulations and procedures are enforceable by the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, see UNCLOS, *supra* note 5, arts 186 and 187.

⁴² International Seabed Authority, Assembly, *supra* note 7.

Agreement requires coastal States and States fishing in the high seas to cooperate to adopt measures to ensure long-term sustainability of straddling fish stocks and highly migratory fish stocks.⁴³ The International Seabed Authority's Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area states that if a contractor applies for exploration, it shall propose areas to be set aside and used exclusively as impact reference zones and preservation reference zones.⁴⁴ The preservation reference zone, by definition,⁴⁵ can be considered a type of MPA against mining in the Area.

Even though having no stipulation on MPAs, the UNCLOS provides an important legal framework for the establishment of MPAs and networks of MPAs. It defines both the duties of States to protect the marine environment and living resources and the extent to which coastal States can do so without affecting legitimate rights and interests of other States. Another treaty also provides a framework of the establishment of MPAs and networks of MPAs. This treaty is discussed in the next section.

3.1.2 Convention on Biological Diversity, 1992

Currently, the CBD⁴⁶ provides the most comprehensive and concrete legal framework for protected areas, MPAs and networks of protected areas. This section discusses relevant stipulations under the text of the Convention and decisions adopted by the COP of the CBD that are relevant to the establishment and management of protected, MPAs and their networks.

⁴³ UN Fish Stock Agreement, *supra* note 6, art. 8 (1).

⁴⁴ International Seabed Authority, Assembly, *supra* note 7, Regulation 31(7).

⁴⁵ *Ibid.*

⁴⁶ One of most important outcomes of the United Nations Conference on Environment and Development in Rio De Janeiro in 1992, the CBD entered into force in December 1993 with 193 Parties to date, see *List of Parties*, online: CBD <<http://www.cbd.int/convention/parties/list/>>, accessed October 21, 2012.

3.1.2.1 Protected Areas and Networks of Protected Areas in the Text of the CBD

The CBD contains stipulations highly relevant to protected areas and networks of protected areas. Article 1 defines many important keywords relating to protected areas, such as “biological diversity”, “ecosystem”, “*in-situ*” and “*ex-situ*” conservation, “habitat”, “sustainable use” and “protected area”.⁴⁷ Article 8 asks States to implement a series of tasks to ensure *in-situ* conservation.⁴⁸ Those tasks include, *inter alia*, developing a system of protected areas; developing guidelines for the selection, establishment and management of protected areas; and regulating or managing biological resources important for the conservation of biological diversity whether within or outside protected areas. They are also asked to promote environmentally sound and sustainable development in areas adjacent to protected areas.

3.1.2.2 Relevant Decisions adopted by the COP of the CBD

The COP is the governing body of the CBD made up of delegations from all parties.⁴⁹ It meets every two years to review progress in the implementation of the Convention to adopt programs of work and to provide necessary policy guidance.⁵⁰ Its meetings have produced many decisions that are relevant to protected areas and MPAs, in particular, those relating to the programme of work on protected areas, the Global Strategy for Plant Conservation, the Strategic Plan on Biodiversity and the Programme of Work on Marine and Coastal Biodiversity.

⁴⁷ CBD, *supra* note 8, art. 1.

⁴⁸ *Ibid.*, art. 8.

⁴⁹ Rules of Procedure of the Conferences of the Parties of the CBD, rule 16 in UNEP, *Report of the First Meeting of the COP of the Convention on Biological Diversity*, UN Doc. UNEP/CBD/COP/1/17(1995), Annex III.

⁵⁰ *Convention Bodies*, online: CBD <<http://www.cbd.int/convention/bodies.shtml>>, accessed February 27, 2011.

This section discusses the specific content of these decisions. First, it explores commitments towards the establishment of protected areas, MPAs and networks of protected areas set out in these decisions. Then, it highlights the basic principles, measures, tools and guidelines for the establishment of protected areas, MPAs and networks of protected areas recognized and provided by them.

The Programme of Work on Protected Areas

At the COP of the CBD's 7th Meeting in 2004, a programme of work on protected areas was adopted by decision VII/28. The objective is stated to be “the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas that collectively, *inter alia*, through a global network, contribute to achieving the three objectives of the Convention and the 2010 target to significantly reduce the current rate of biodiversity loss”.⁵¹ This program has four elements: direct actions for planning, selecting, establishing, strengthening, and managing protected area systems and sites; governance, participation, equity and benefit sharing; enabling activities; and standards, assessment, and monitoring.

For each of these elements, the program determines, with deadlines, a number of concrete objectives and suggests specific activities to be undertaken by States and the Secretariat of the CBD to achieve these objectives. For example, for the first element, one of the goals to be achieved is:

By 2010, terrestrially and 2012 in the marine area, a global network of comprehensive, representative and effectively managed national and regional

⁵¹ “Programme of Work on Protected Areas” in *Protected areas (Articles 8 (a) to (e))*, Annex, Decision VII/28, 7th Meeting of the COP to the CBD, Kuala Lumpur, Malaysia, February 9-20, 2004 [Decision VII/28]. For the origin of the 2010 target, see below 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

protected area systems is established as a contribution to (i) the goal of the Strategic Plan of the Convention and the World Summit on Sustainable Development of achieving a significant reduction in the rate of biodiversity loss by 2010; (ii) the Millennium Development Goals-in particularly goal 7 on ensuring environmental sustainability; and (iii) the Global Strategy for Plant Conservation⁵²

To achieve this goal, the program of work asks States to take various actions, including establishing suitable time-bound and measurable national and regional level protected area targets and indicators and to establish or expand protected areas in some important natural ecosystems. At the same time, the Secretariat of the CBD must take some supportive steps, such as identifying options for protected area targets and indicators that could contribute to the 2010 target and the Millennium Development Goals⁵³ and to invite relevant international and regional organizations to offer their assistance to the Parties in conducting national-level gap analyses.

The implementation of the program of work is reviewed every two years at each COP of the CBD meetings subsequent to 2004. In the 2010 review, the COP requested the Executive Secretary to “align the targets of the programme of work on protected areas with specific indicators and timelines that are based on the Aichi Biodiversity Targets and the Strategic Plan for Biodiversity 2011-2020”.⁵⁴ According to the review of the progress of the implementation of the program of work and achievement of the Aichi Biodiversity Targets in 2012 prepared by the Executive Secretary, up to June 2012, more

⁵² Decision VII/28, *ibid.*

⁵³ See below 3.2.2 United Nations Millennium Development Goals.

⁵⁴ *Protected Areas*, Decision X/31, 10th Meeting of the COP to CBD, Nagoya, Japan, October 18-29, 2010 [Decision X31], for details about the Aichi Biodiversity Targets and the Strategic Plan for Biodiversity 2011 – 2020 see below 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

than 100 long-term action plans for the implementation of the program of work have been submitted by Parties.⁵⁵

The Strategic Plan for the Conservation of Biological Diversity

In 2002, at its 6th meeting in The Hague (the Netherlands), the COP of the CBD adopted the Strategic Plan for the Conservation of Biological Diversity. The Strategic Plan had for its mission “a more effective and coherent implementation of the three objectives of the Convention, to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth”.⁵⁶ To fulfill this mission, the Plan determines four goals that, in turn, are followed by smaller objectives to be achieved. The four big goals are:

- The Convention is to fulfill its leadership role in international biodiversity issues;
- Parties are to have improved financial, human, scientific, technical, and technological capacity to implement the Convention;
- National biodiversity strategies and action plans are to integrate biodiversity concerns into relevant sectors to serve as effective frameworks for the implementation of the objectives of the Convention; and

⁵⁵ *Protected Areas: Progress in the Implementation of the Programme of Work and Achievement of the Aichi Biodiversity Target 11*, Note by the Executive Secretary, 11th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Hyderabad, India, October 8-19, 2012, Doc. No. UNEP/CBD/COP/11/26 (2012), para.3. The report also quoted the World Database on Protected Areas stating that up to 2011, 12.7 per cent of the world’s terrestrial surface and 4 per cent of its marine surface under national jurisdiction have been protected.

⁵⁶ *Strategic Plan for the Convention on Biological Diversity*, Annex, Decision VI/26, 6th Meeting of the COP to the CBD, The Hague, Netherlands, April 7-19, 2002.

- There is to be a better understanding of the importance of biodiversity and of the Convention, and this is to lead to broader engagement across society in implementation.

In 2006, the COP of the CBD adopted decision VIII/15 relating to the framework for monitoring implementation of the achievement of the 2010 target. Among those issues endorsed by this decision are the outcome-oriented indicators to measure progress towards the 2010 target. In regard to the promotion of conservation of the biological diversity of ecosystems, habitats and biomes, there are two targets to be achieved: at least 10 percent of each of the world's ecological regions should be effectively conserved and areas of particular importance to biodiversity protected. Relevant indicators for the achievement of these targets are the coverage of protected areas, trends in extent of selected biomes, ecosystems and habitats and trends in abundance and distribution of selected species.⁵⁷ The decision also stipulated that a new Strategic Plan would be adopted at the 10th meeting of the COP of the CBD in 2010.⁵⁸

According to different statistics,⁵⁹ far less than 10 percent of the world marine ecoregion was covered by MPAs in 2010. It was shown that at the time, MPAs covered only 4.2 million km² which correspond to 1.17 percent of the surface of the global

⁵⁷ "Annex II, Indicators Relevant to the Provisional Framework of Goals and Targets" in *Framework for Monitoring Implementation of the Achievement of the 2010 Target and Integration of Targets into the Thematic Programmes of Work*, Decision VIII/15, 8th Meeting of the COP to the CBD, Curitiba, Brazil, March 20-31, 2006.

⁵⁸ *Ibid.*, line 2.

⁵⁹ See for example, Caitlyn Toropova *et al.* (eds), *Global Ocean Protection: Present Status and Future Possibilities* (Gland: IUCN, 2010); Lauren Coad *et al.*, "Progress Towards the Convention on Biological Diversity's 2010 and 2012 Targets for Protected Area Coverage", *A Technical Report for the IUCN international workshop "Looking to the Future of the CBD Programme of Work on Protected Areas"*, Jeju Island, Republic of Korea, September 14-17, 2009 (Cambridge: UNEP-WCMC, 2009) and Louisa J. Wood *et al.*, "Assessing Progress towards Global Marine Protection Targets: Shortfalls in Information and Action" (2008) 42: 3 *Oryx* 340 at 348.

ocean.⁶⁰ Some authors even contended that according to the rate of growth of MPAs at the time (4.6 percent per year), the CBD's target of 10 percent of global ocean being protected would be reached in...2067.⁶¹ The current global set of MPAs cannot be viewed as an effective network or system of MPAs. In most areas, the growth of MPAs has been *ad hoc* with individual designations gradually building up to form very loose networks.⁶²

In the opinion of the author of this dissertation, there seems to be an important misunderstanding about the conservation target set under the CBD. According to the CBD's Strategic Plan, the 10 percent target is concerned with the area of the marine ecological region to be effectively managed, for which the coverage of MPAs is just one of the relevant indicators. Different evaluations of the achievement of this target have confused this target with 10 percent of ocean surface to be covered by MPAs. The confusion might come from the fact that evaluators seem to consider the general category of MPAs as comprising all marine area-based conservation measures while the CBD sees it as one of the area-based conservation measures for the protection of the ocean. This

⁶⁰ Toropova *et al.* (eds), *ibid.* at 25. Concretely, only 12 of 190 States and territories with a marine area achieved or surpassed the 10 percent objective in 2010 (namely Dominican Republic, Ecuador, Estonia, Germany, Guam, Heard and McDonald Islands, Jordan, Kiribati, New Zealand, Northern Marianas Islands, South Africa and the United States minor outlying islands). In contrast, 75 percent of these States have less than 1 percent of their exclusive economic zone or equivalent covered by MPAs. From a jurisdictional point of view, most MPAs are restricted to territorial seas and only a few countries have designated extensive MPAs right across their exclusive economic zones or equivalent areas such as Australia, New Zealand, Germany and the United States; see Toropova *et al.* (eds), *supra* note 59 at 25. From a marine ecoregional perspective, a study in 2009 found that six of the 12 marine realms reached 10 percent protected area coverage of their coastal belt; this reduced to only 1 realm for shelf coverage (The Eastern Indo-Pacific). A recorded number of 26 of the 62 provinces (42 percent) had 10 percent or more of their coastal area protected, and this fell to 11 (18 percent) for shelf area. Finally, 93 of the 232 marine ecoregions (40 percent) had 10 percent or more of their coastal area protected, and this fell to 18 percent for shelf area; see Coad *et al.*, *ibid.* at 15.

⁶¹ Wood *et al.*, *supra* note 59 at 348.

⁶² Toropova *et al.* (eds), *supra* note 59 at 38.

dangerous misunderstanding has thus set aside other relevant indicators and so has projected a wrong picture of the status of marine conservation efforts.⁶³

Some authors also contend that the coverage of 10 percent of each ecological region by protected areas does not automatically mean habitats being protected and species are conserved.⁶⁴ First, the 10 percent target is an arbitrary and policy-driven indicator that does not account for the actual distribution of biodiversity across the world, including area requirements of particular species and small-scale habitat variations. Even the 10 percent target could be achieved, protected areas might not be adequately representative of the ecological character of the ecoregion because of their small size, wrong shape or exclusion of important species. Second, the designation of protected area alone does not ensure effective biodiversity conservation as the protected area still needs to be effectively managed.⁶⁵ Finally, this target-driven approach has led to the designation of extremely large no-take MPAs which pose significant long-term monitoring and enforcement challenges. They may also undermine people's livelihoods by excluding a large portion of the ocean from fisheries and other exploitation activities.⁶⁶

A new Strategic Plan for Biodiversity 2011-2020 was adopted at the 10th meeting of the COP of the CBD in 2010. The mission of the new Strategic Plan is "to take

⁶³ See also Mark D. Spalding *et al.*, "Protecting Marine Spaces: Global Targets and Changing Approaches" (2013) 27 *Ocean Yearbook* 213 at 232.

⁶⁴ Lauren Coad *et al.*, *The Ecological Representativeness of the Global Protected Areas Estate in 2009: Progress towards the CBD 2010 Target* (Cambridge: UNEP-WCMC, WWF-US & ECI, University of Oxford, 2009) 16; Leona K. Svanka *et al.*, "Policy-Driven Versus Evidence-Based Conservation: A Review of Political Targets and Biological Needs" (2005) 55:11 *BioScience* 989 and Ana S. L. Rodrigues *et al.*, "Effectiveness of the Global Protected Area Network in Representing Species Diversity" (2004) 248 *Nature* 640.

⁶⁵ Spalding *et al.*, *supra* note 63 at 239

⁶⁶ Elizabeth M. De Santo, "Missing Marine Protected Areas (MPA) Targets: How the Push for Quantity over Quality Undermines Sustainability and Social Justice" (2013) *Journal of Environmental Management*, forthcoming.

effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication".⁶⁷ New strategic goals are also set along with new targets to achieve these goals (Aichi targets). One of the strategic goals set by the new Strategic Plan is to improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. To achieve this goal, the first target (target number 11) requires that:

By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.⁶⁸

The above provision shows an evolution of the position of the COP of the CBD towards a stronger affirmation of the role of protected areas and networks of protected areas. In 2006, the COP of the CBD considered protected areas and networks of protected areas just one of the tools to protect biodiversity. In 2010, it considers them the main tool to do so. It also recognizes that MPAs could be used not only to protect biodiversity but also to safeguard ecosystem services.⁶⁹

An indicator framework for the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets was adopted at the 11th Meeting of the COP of the CBD along with a list of indicators to assess progress towards the goals of the Strategic Plan.⁷⁰ In

⁶⁷ *Strategic Plan for Biodiversity 2011-2020*, Decision X/2, 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Nagoya, Japan, October 18-29, 2010, Annex, line 12.

⁶⁸ *Ibid.*, line 13.

⁶⁹ Spalding *et al.*, *supra* note 63 at 219.

⁷⁰ *Monitoring Progress in Implementation of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets*, 11th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Hyderabad, India, October 8-19, 2012, Doc. UNEP/CBD/COP/11/35 (2012), para.3

regard to protected areas as mentioned above, the indicators include trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches.⁷¹ This indicator framework could be adapted by Parties taking into account different national circumstances and capabilities.⁷²

A recent study based on the data in the WDPA by Mark Spalding showed that up to the end of 2012, more than 10 thousand MPAs were designated worldwide, covering about 8.3 million km² or 2.3 percent of global ocean area. The majority of MPAs were located in areas under national jurisdiction. The study also pointed to the trend of designating new very large MPAs, some of which covered more than 100 thousand km² (such as South Georgia and South Sandwich Islands, Chagos Islands and Phoenix Islands).⁷³

Targets relating to the establishment of protected areas are also set in other strategies and programs of work under the COP of the CBD such as the Global Strategy for Plant Conservation and the Programme of Work on Marine and Coastal Biodiversity. These strategies and programmes of work are discussed as follows.

The Global Strategy for Plant Conservation

The Global Strategy for Plant Conservation was adopted by the decision VI/9 of the COP of the CBD in 2002 with the overall objective to halt the loss of the plant biodiversity.⁷⁴ The Strategy is applicable to plants in general, which means it includes marine plants. It determines 16 targets to be achieved by 2010 among which three are relevant to protected areas, namely:

⁷¹ *Ibid.*, Annex.

⁷² *Ibid.*, para.4.

⁷³ Spalding *et al.*, *supra* note 63 at 225.

⁷⁴ *Global Strategy for Plant Conservation*, Decision VI/9, 6th Meeting of the COP to the CBD, the Hague, Netherlands, April 7-19, 2002 [Decision VI/9].

- Target 4: at least 10 percent of each of the world's ecological regions is effectively conserved. This implied an increase in the representation of different ecological regions in protected areas and of the effectiveness of protected areas.
- Target 5: protection of 50 percent of the most important areas for plant diversity is assured. This protection would be ensured through effective conservation measures, including protected areas.
- Target 7: 60 percent of the world's threatened species is conserved *in-situ*. Conservation *in-situ* in this case means that populations of the species are effectively maintained in at least one protected area or through other *in-situ* management measures.

In 2010, a consolidated version of the Strategy was adopted for the period 2011-2020.⁷⁵ Consequently, the Strategy is to be “a catalyst for working together at all levels (local, national, regional and global) to understand, conserve and use sustainably the world's immense wealth of plant diversity whilst promoting awareness and building the necessary capacities for its implementation”. The targets relevant to protected areas were also modified as follows:

- Target 4: At least 15 per cent of each ecological region or vegetation type is secured through effective management and/or restoration.
- Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region are protected with effective management in place for conserving plants and their genetic diversity.

⁷⁵ *Consolidated Update of the Global Strategy for Plant Conservation 2011-2020*, Decision X/17, 10th Meeting of the COP to the CBD, Nagoya, Aichi Prefecture, Japan, October 18-29, 2010.

- Target 7: At least 75 per cent of known threatened plant species is conserved *in-situ*.

In 2012, at its 11th meeting, the COP of the CBD noted the applicability of the indicator framework to the Strategic Biodiversity Plan 2011-2020 for the purpose of monitoring the implementation of the Global Strategy for Plant Conservation and requested the Executive Secretary to assist Parties to establish linkages between the two action plans at the national level.⁷⁶

The Programme of Work on Marine and Coastal Biodiversity

Coastal and marine biodiversity received the attention of the COP of CBD very early. As early as its 2nd meeting in 1995, a decision was adopted on the conservation and sustainable use of coastal and marine biodiversity. In this decision, the COP considered integrated marine and coastal area management the most suitable framework for addressing human impacts on marine and coastal biological diversity and for promoting conservation and sustainable use of this biodiversity. It also encouraged Parties to establish and/or strengthen institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems, plans and strategies for marine and coastal areas and their integration within national development plans.⁷⁷ Besides, in “The Jakarta Ministerial Statement on the implementation of the Convention on Biological Diversity”, the participating Ministers reaffirmed that “there is a critical need for the Conference of the Parties to address the conservation and sustainable use of marine and coastal biological diversity” and urged

⁷⁶ *Global Strategy for Plant Conservation*, Decision XI.26, 11th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Hyderabad, India, October 8-19, 2012, Doc. UNEP/CBD/COP/11/35 (2012) paras 6 and 15.

⁷⁷ *Conservation and Sustainable Use of Marine and Coastal Biological Diversity*, Decision II/10, 2nd Meeting of the COP to the CBD, Jakarta, Indonesia, November 6-17, 1995.

Parties to “initiate immediate action to implement the decisions adopted on this issue”. They welcomed the declaration by the COP of the CBD on a new global consensus on the importance of marine and coastal biological diversity enshrined in "Jakarta Mandate on Marine and Coastal Biological Diversity".⁷⁸

At the 3rd meeting of COP of the CBD in 1998 in Bratislava (Slovakia), a programme of work on marine and coastal biological diversity was adopted. Its purpose is to assist the implementation of the Jakarta Mandate on Marine and Coastal Biological Diversity at all levels.⁷⁹ In its principles, the program affirms that “protected areas should be integrated into wider strategies for preventing adverse effects to marine and coastal ecosystems from external activities and take into consideration, *inter alia*, the provisions of Article 8 of the Convention”. The program has five elements: integrated marine and coastal area management, marine and coastal living resources, marine and coastal protected areas, mariculture and alien species and genotypes. Within each element, it defines operational objectives and priority activities with timeline to achieve the objectives. Regarding “marine and coastal protected areas”, the operational objectives are:

- Facilitating research and monitoring activities related to the value and effects of marine and coastal protected areas or similarly restricted management areas on sustainable use of marine and coastal living resources; and
- Developing criteria for the establishment of, and for management aspects of, marine and coastal protected areas.

⁷⁸ “The Jakarta Ministerial Statement on the implementation of the Convention on Biological Diversity” in UNEP, *Report on the 2nd Meeting of the Conference of the Parties of the Convention on Biological Diversity*, UN Doc.UNEP/CBD/COP/2/19, November 30, 1995, Appendix.

⁷⁹ *Conservation and Sustainable Use of Marine and Coastal Biological Diversity, including a Programme of Work*, Decision IV/5, Annex, 4th Meeting of the COP to the Convention on Biological Diversity, Bratislava, Slovakia, May 4-15, 1998.

The implementation of the programme of work on marine and coastal biological diversity has been reviewed at subsequent meetings of the COP of the CBD. In 2004 at the 7th meeting, the program of work was refined to take into account developments and new priorities and a newly elaborated programme of work on marine and coastal biological diversity was adopted.⁸⁰ The overall mission of this program was to promote the implementation of the three objectives of the CBD and to achieve significant reduction in the current rate of marine and coastal biological diversity loss by 2010.

Relating to MPAs, the goal is to achieve:

The establishment and maintenance of marine and coastal protected areas that are effectively managed, ecologically based and contribute to a global network or marine and coastal protected areas, building upon national and regional systems, including a range of levels of protection, where human activities are managed, particularly through national legislation, regional programmes and policies, traditional and cultural practices and international agreements, to maintain the structure and functioning of the full range of marine and coastal ecosystems, in order to provide benefits to both present and future generations.⁸¹

To achieve this goal, five operational objectives are set along with the suggestion of activities to be undertaken. These five objectives are:

- To develop and strengthen national and regional systems of marine and coastal protected areas integrated into a global network and as a contribution to globally agreed goals,
- To enhance the conservation and sustainable use of biological diversity in marine areas beyond the limits of national jurisdiction,
- To achieve effective management of existing marine and coastal protected areas,

⁸⁰ CBD, *supra* note 8, Annex.

⁸¹ *Marine and Coastal Biological Diversity*, Decision VII/5, 7th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Kuala Lumpur, Malaysia, February 9-20, 2004, Annex [Decision VII/5].

- To provide support for and facilitate monitoring of national and regional systems of marine and coastal protected areas,
- To facilitate research and monitoring activities that reflect identified global knowledge gaps and priority information needs of management of marine and coastal protected areas.

This elaborated program of work remained in effect for six years from 2004 to 2010. In 2010, at the 10th meeting of the COP of the CBD in Nagoya (Japan), an in-depth review of the implementation of the elaborated program of work on marine and coastal biological diversity was undertaken. The outcome of this review was the decision X/29, “Marine and coastal biodiversity”.⁸² Relating to MPAs, the COP notes with concern the slow progress towards achieving the 2012 target for the establishment of MPAs compared to nearly 15 percent for protected area coverage on land. It encourages States to endeavour to improve coverage, representativeness and other properties of the global network of MPAs, and to identify ways to accelerate progress in establishing ecologically representative and effectively managed MPAs. They must also promote full and effective participation of indigenous and local communities in this effort and to effectively manage MPAs. The COP aligned the targets of the programme of work on marine and coastal biodiversity with specific indicators and timelines, included in the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets. Consequently, it asked Parties to link these indicators and timelines to national targets and indicators, and to use the framework to focus their monitoring efforts.

⁸² *Marine and Coastal Biodiversity*, Decision X/29, 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Nagoya, Japan, October 18-29, 2010.

Basic Principles, Tools and Measures for the Establishment and Management of Marine Protected Areas and Networks of Marine Protected Areas recognized by the CBD

A number of basic principles for the establishment and management of protected areas and networks of protected areas have been adopted or recognized by the COP of the CBD. They are to be observed in the implementation of the programme of work on protected areas, the Global Strategy for Plant Conservation, the Strategic Plan on Biodiversity and the programme of work on marine and coastal biodiversity. These principles are as follows:

- Insurance of fair and equitable sharing of benefits arising from the use of genetic resources;
- Application of *in-situ* conservation;
- Adoption of a multidisciplinary approach to conservations taking into account scientific, social and economic factors;
- Application of the ecosystem and precautionary approaches to the process;
- Adoption of science-based management measures;
- Involvement of indigenous and local people and taking into consideration traditional knowledge;
- Implementation at national, regional global levels.⁸³

The COP of the CBD also recognizes the relevance of existing measures and tool kits to the establishment and management of protected areas and networks of protected areas, such as those provided by the IUCN system of classification of protected areas,⁸⁴ the IUCN Red List of Threatened Species, the MAB Programme, the World Heritage

⁸³ Decision VI/9, *supra* note 74; Decision VII/28, *supra* note 51; and Decision IV/5, *supra* note 79.

⁸⁴ Decision VII/28, *supra* note 51, line 31.

Convention, the Ramsar Convention, and Key Biodiversity Areas and Important Bird Areas.⁸⁵ Relating to MPAs, it asks States to implement measures under the International Coral Reef Initiative.⁸⁶ It also acknowledges the report on Global Open Oceans and Deep Seabed Biogeographic Classification published by the Intergovernmental Oceanographic Commission of UNESCO and IUCN as a source of scientific and technical information for the identification of representative networks of MPAs.⁸⁷

Guidelines for the Establishment and Management of Protected Areas and Networks of Protected Areas Provided by the Convention on Biological Diversity

The COP of the CBD provides in its decisions some guidelines to States for the establishment and management of protected areas and networks of protected areas. For instance, it urges States to elaborate outcome-oriented targets for the extent, representativeness and effectiveness of their national systems of protected areas.⁸⁸ At the regional level, the COP of the CBD invites States to foster regional initiatives and formulate regional plans to implement the programme of work on protected areas and other relevant programs of work.⁸⁹ Relating to MPAs, the COP of the CBD states that marine and coastal protected areas should be part of a wider marine and coastal management framework and urges States to adopt such a framework.⁹⁰

⁸⁵ Decision X/31, *supra* note 54, line 1(h).

⁸⁶ *Progress Report on the Implementation of the Programme of Work on Marine and Coastal Biological Diversity (Implementation of Decision IV/5)*, Decision V/3, 6(d), 5th Meeting of the COP to the CBD, Nairobi, Kenya, May 15-26, 2000. For more details about the International Coral Reef Initiative, see below 3.2.8 International Coral Reef Initiative.

⁸⁷ UNESCO, *Global Open Oceans and Deep Seabed Biogeographic Classification*, IOC Technical Series, 84 (Paris: UNESCO-IOC, 2009).

⁸⁸ *Protected areas (Articles 8 (a) to (e))*, COP 7 Decision VII/28, line 23, 7th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Kuala Lumpur, Malaysia, February 9-20, 2004, para. 21.

⁸⁹ *Ibid.* note 85, para. 3.

⁹⁰ Decision VII/5, *supra* note 81, line 20.

The CBD is the most important international framework for the development of networks of MPAs. Not only it explicitly requires States to develop networks of protected areas but also provides them with relevant targets, principles and guidance to guide and support their efforts. Other important international treaties relevant to MPAs and networks of MPAs are analyzed as follows.

3.1.3 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971

The Ramsar Convention⁹¹ provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.⁹² Both the text of the Convention and the resolutions and recommendations adopted under its framework contain MPA relevant stipulations.

3.1.3.1 The Text of the Convention

The Ramsar Convention provides the international framework for an area-based management of wetlands.⁹³ Article 2 of the Convention asks States to designate at least one wetland with clearly determined boundaries located in their territory to be included in a List of Wetlands of International Importance. Wetlands should be selected based on their international significance in terms of ecology, botany, zoology, limnology or

⁹¹ Ramsar Convention, *supra* note 10. Adopted in 1971 (and entered into force in 1975) with 160 parties so far, the Ramsar Convention is currently the only global treaty that deals with a specific ecosystem, see *About Ramsar*, online: Ramsar Convention <http://www.ramsar.org/cda/en/ramsar-about-introductory-ramsar/main/ramsar/1-36%5E16849_4000_0>, accessed March 15, 2011; *The Ramsar Convention and its Mission*, online: the Ramsar Convention <http://www.ramsar.org/cda/en/ramsar-about-mission/main/ramsar/1-36-53_4000_0>, accessed March 15, 2011.

⁹² *About Ramsar*, online: Ramsar Convention <http://www.ramsar.org/cda/en/ramsar-about-introductory-ramsar/main/ramsar/1-36%5E16849_4000_0>, accessed March 15, 2011; *The Ramsar Convention and its mission*, *ibid*.

⁹³ The Convention defines wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres”; see Ramsar Convention, *supra* note 10, art.1. Many important coastal and near-shore habitats come within the scope of application of the Convention, such as salt marshes, brackish or seawater swamps, estuaries, tidal flats, mangroves and coral reefs; see *The Ramsar Convention and its mission*, *ibid*.

hydrology with priority given to those important to waterfowl. The article also requires States to consider their international responsibilities for the conservation, management and wise use of migratory stocks of waterfowl, both when designating and modifying wetlands in the List.⁹⁴

The duties of States relating to the conservation and wise use of wetlands and waterfowl are described in articles 3, 4 and 5 of the Convention. They include the formulation and implementation of planning for conservation and wise use, monitoring ecological changes, establishment of reserves, compensation of loss of resources, and encouragement of research and exchange of information. Where a wetland extends across territories where a water system is shared by more than one State, the parties shall consult each other in implementing the obligations of the Convention. They must endeavour to coordinate and support policies and regulations concerning the conservation of wetlands and their flora and fauna.⁹⁵

Article 4 (1) of the Convention asks States to “promote the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are included in the List or not”.⁹⁶ It means that the fact of designating a wetland area to be included in the List and implementing all other prescribed conservation measures do not necessarily mean that this area will be considered a “nature reserve” by the Ramsar Convention. For this area or any part of it to be considered a “nature reserve” under the Convention, States might still need to provide a formal recognition, possibly under another legal framework for the site as such. It shows that the Ramsar Convention provides for a restrictive understanding of the concept of “nature reserve”.

⁹⁴ Ramsar Convention, *supra* note 10, art.2.

⁹⁵ *Ibid.*, arts 3, 4 and 5.

⁹⁶ *Ibid.*, art. 4 (1).

3.1.3.2 Resolutions and Recommendations of the Conference of the Parties

Resolutions and recommendations of the COP of the Ramsar Convention⁹⁷ contain: criteria for identifying wetlands of international importance; stipulations relating to the establishment of protected areas and networks of protected areas to protect these wetlands; regional cooperation in their management; guidelines for the protection of wetlands; and a system to monitor ecological changes in wetlands. These are discussed in more details below.

Criteria for Identifying Wetlands of International Importance

The criteria for identifying Wetlands of International Importance were adopted initially by recommendation 3.1 in 1987⁹⁸ and have been amended many times. The latest amendment of the criteria was adopted by resolution IX.1 in 2005.⁹⁹ Pursuant to the current version of the list of criteria, there are nine alternative criteria for which a wetland site should be considered as having international importance. These nine criteria are grouped into two categories: sites containing representative, rare or unique wetland types and sites of international importance for conserving biological diversity.¹⁰⁰ The resolution also set as an objective that the List of Wetlands of International Importance must include at least 2,500 sites covering 250 million hectares by 2010. As pointed out at the end of this section, this objective was not achieved.

⁹⁷ The Conference of the Parties of the Ramsar Convention is competent to discuss the implementation of the Convention, the additions and changes to the List of Wetlands of International Importance and consider information regarding changes in the ecological character of wetlands included in the List; see Ramsar Convention, *supra* note 16, art.6.

⁹⁸ *Criteria for Identifying Wetlands of International Importance and Guidelines on their Use*, Recommendation 3.1, The 3rd Meeting of the Conference of the Contracting Parties of the Ramsar Convention, Regina, Canada, May 27- June 5, 1987.

⁹⁹ *Revised Strategic Framework and Guidelines for the Future Development of the List of Wetlands of International Importance*, Resolution IX.1, Annex B, 9th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Kampala, Uganda, November 8-15, 2005 [Resolution IX.1].

¹⁰⁰ *Ibid.*

Establishment of Protected Areas and Networks of Protected Areas in Wetlands

As early as 1984, the COP of the Ramsar Convention called for the establishment of a protected area to protect the River Senegal Basin in Mauritania.¹⁰¹ More generally, in 1990, the COP called upon States to develop in their territories, national networks of nature reserves covering both listed and non-listed wetlands. It also asked States to develop conservation education programs linked to the development of such networks. It was further suggested that they should review their legal mechanisms to ensure that there are adequate measures for the establishment and effective protection of wetland nature reserves.¹⁰² Most recently, in 2005, the COP called upon States to consider developing processes that integrate efforts to develop a broader system of protected areas, to expand the network of Ramsar sites, to nominate World Heritage sites and to identify Biosphere Reserves. It also invited States which are parties to the CBD to review their national processes for implementation of the Jakarta Mandate programme of work to ensure that such reviews integrate fully the identification and designation of Ramsar sites.¹⁰³

Regional cooperation

In 1999, the COP of the Ramsar Convention adopted Guidelines for international cooperation in its resolution VII.19.¹⁰⁴ Two parts of these Guidelines relate to regional cooperation: managing shared wetlands and river basins and managing shared wetlands-dependent species.

¹⁰¹ *Establishment of a Protected Area in the River Senegal Basin in Mauritania*, Recommendation 2.8, 2nd Meeting of the Conference of the Contracting Parties of the Ramsar Convention, Groningen, the Netherlands, May 7-12, 1984.

¹⁰² *Establishment of Wetland Reserves*, Recommendation 4.4, 5th Meeting of the Conference of the Contracting Parties of the Ramsar Convention, Kushiro, Japan, June 9-16, 1993.

¹⁰³ *Ramsar Sites and Systems of Protected Areas*, Resolution IX.22, 9th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Kampala, Uganda, November 8-15, 2005.

¹⁰⁴ *Guidelines for International Cooperation under the Ramsar Convention*, Resolution VII.19, 7th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, San José, Costa Rica, May 10-18, 1999.

Relating to the management of shared wetlands and river basins, the Guidelines urge States to identify all their shared wetland systems and cooperate in their management with adjoining jurisdictions through formal joint management arrangements or collaboration to develop and implement management plans for the sites. For shared coastal wetlands, States are urged to develop frameworks of cooperation that embody LME concepts and within existing regional seas programs. The Guidelines expect the same cooperation for shared or international river basins and coastal systems through the establishment of bilateral or multilateral management commissions.¹⁰⁵

As for the management of shared wetland-dependent species, States should identify and designate all sites that satisfy the waterbird criteria for identifying Wetlands of International Importance. They should develop and implement management plans in these sites. Besides, States have the responsibility to designate and manage wetland habitats important for other shared wetland-dependent species (such as fishes). The resolution also promotes networking between wetland sites of shared species for information sharing and technical and financial assistance.¹⁰⁶

In addition to this resolution, the COP has provided concrete support to regional cooperation relating to wetlands. For instance, it has endorsed six regional initiatives to

¹⁰⁵ *Ibid.*, Annex, Section 2.1.

¹⁰⁶ *Ibid.*, Annex, Section 2.2.

operate within the framework of the Ramsar Convention.¹⁰⁷ The implication is that these initiatives are considered appropriate to receive financial support from the Convention. Relating to the protection of shared wetlands species, the Conference of the Parties calls for the establishment of a network of Ramsar-listed and other wetlands of international importance of migratory shorebirds along the East Asian-Australasian Flyway¹⁰⁸ to maintain their suitability for migratory shorebirds.¹⁰⁹

Guidelines for the Protection of Wetland Sites

The COP of the Ramsar Convention has provided guidelines for the protection of wetland sites which can be relevant to various aspects of reserves management in these areas. They are measures relating to wise use, monitoring, integrated management of wetlands, dealing with invasive species, the involvement of indigenous people and communities in the management of wetlands and the consideration of the cultural value of wetlands. For example, recommendation 4.10 in 1990 provides guidelines on how to

¹⁰⁷ Those six regional initiatives are: Mediterranean Wetlands Committee, West African Coastal Zone Wetlands Network, ChadWet (for the Lake Chad Basin), NigerWet (for the Niger River Basin), Partnership for the conservation and sustainable use of sites of international importance for migratory waterbirds in East Asia, South East Asia and Australasia; Regional Strategy for the Conservation and Wise Use of High Andean Wetlands-Neotropics, Regional initiative for the protection and wise use of wetlands for the Pacific Islands-Oceania; see *Collaborative Structure for Mediterranean Wetlands*, Resolution VII.22, 7th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, San José, Costa Rica, May 10-18, 1999 for Mediterranean Wetlands Committee and The Ramsar Convention, *Regional Initiatives in the Framework of the Ramsar Convention*, Resolution IX.7, 9th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands, Kampala, Uganda, November 8-15, 2005 for other initiatives.

¹⁰⁸ The East-Asian Australian Flyway is one of nine major migratory waterbird flyways around the globe, extending from within the Arctic Circle in Russia and Alaska, southwards through East and South-east Asia, to Australia and New Zealand in the south. It is home to over 50 million migratory waterbirds, from over 250 different populations, including 28 globally threatened species. For more details, see Partnership for East Asian-Australian Flyway, online: <<http://www.eaaflyway.net/>>, accessed March 18, 2011.

¹⁰⁹ *The "Brisbane Initiative" on the Establishment of a Network of Listed Sites along the East Asian-Australasian Flyway*, Recommendation 6.4, 6th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Brisbane, Australia, March 19-27, 1996.

implement the “wise use” of wetlands under the Convention.¹¹⁰ Resolution IX.1 in 2005 provides for an integrated framework for the inventory, assessment and monitoring of wetlands.¹¹¹ Resolution VII.18 in 2002 provides guidelines for integrating wetland conservation and wise use into river basin management.¹¹² Resolution VIII.18 in 2002 asks States to deal with the issue of invasive species in wetlands “in a decisive and holistic manner making use of the tools and guidance developed by various institutions and processes, including relevant guidelines or guiding principles adopted under other conventions”.¹¹³ Resolution VII.8 in 1999 provides guidelines for establishing and strengthening local communities’ and indigenous people’s participation in the management of wetlands.¹¹⁴ The COP also adopted resolution VIII.19 in 2002 on guiding principles for taking into account the cultural values of wetlands for the effective management of sites.¹¹⁵

International Monitoring of Listed Wetlands

The COP also established a system of international monitoring of designated sites. A record of Ramsar sites where changes in ecological character¹¹⁶ have occurred,

¹¹⁰ *Guidelines for the Implementation of the Wise Use Concept*, Recommendation 4.10, Annex, 4th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Montreux, Switzerland, June 27-July 4, 1990.

¹¹¹ Resolution IX.1, *supra* note 99, Annex E.

¹¹² *Guidelines for Integrating Wetland Conservation and Wise Use Into River Basin Management*, Resolution VII.18, 7th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, San José, Costa Rica, May 10-18, 1999.

¹¹³ *Invasive Species and Wetlands*, Resolution VIII.18, 8th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Valencia, Spain, November 18-26, 2002.

¹¹⁴ *Guidelines for Establishing and Strengthening Local Communities’ and Indigenous People’s Participation in the Management of Wetlands*, Resolution VII.8 Annex, 7th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, San José, Costa Rica, May 10-18, 1999.

¹¹⁵ *Guiding Principles for Taking into Account the Cultural Values of Wetlands for the Effective Management of Sites*, Resolution VIII.19, 8th Meeting of the Conference of the Contracting Parties to the Ramsar Convention, Valencia, Spain, November 18-26, 2002.

¹¹⁶ For definitions of “ecological character” and “change in ecological character” see *Working Definitions of Ecological Character, Guidelines for Describing and Maintaining the Ecological Character of Listed sites, and Guidelines for Operation of the Montreux Record*, Resolution VI.1, 6th Meeting of the Conference of Contracting Parties to the Ramsar Convention, Montreux, Switzerland, March 19-27, 1996.

are occurring or are likely to occur for priority action was created in 1990.¹¹⁷ A wetland site can be included in this site at the initiative of a State of the Convention Bureau.¹¹⁸ The State Party whose site is listed in the Montreux Record must report to the Convention Bureau on its conservation status every three years or at the request of the Bureau. The site will be removed from the list if there is no longer a risk of change in its ecological character.¹¹⁹

To date, the List of Wetlands of International Importance of the Ramsar Convention consists of more than 2000 sites, covering a surface area of almost 200 million hectares and located in more than 160 countries.¹²⁰ Among those, a total of 15 sites are located in the coastal and marine areas of the SCS.¹²¹

¹¹⁷ *Change in ecological character of Ramsar sites [and establishment of the Montreux Record]*, Recommendation 4.8, 4th Meeting of the Conference of the Contracting Parties to Ramsar Convention, Montreux, Switzerland, June 27-July 4, 1990. Resolution V.4 in 1993 named this Record “Record of Ramsar sites where changes in ecological character have occurred, are occurring, or are likely to occur” or shortly “Montreux Record”; see *The Record of Ramsar Sites where Changes in Ecological Character Have Occurred, Are Occurring, or Are Likely to Occur ("Montreux Record")*, Resolution V.4, 5th Meeting of the Conference of the Contracting Parties to Ramsar Convention, Kushiro, Japan, June 9-16, 1993.

¹¹⁸ For the organization of the Ramsar Convention Bureau, see Ramsar Convention, *supra* note 10, art.5 and *Secretariat matters*, Resolution 3.1, The 3rd Meeting of the Conference of the Contracting Parties to Ramsar Convention, Regina, Canada, May 27-June 5, 1987.

¹¹⁹ *Working Definitions of Ecological Character, Guidelines for Describing and Maintaining the Ecological Character of Listed sites, and Guidelines for Operation of the Montreux Record*, Resolution VI.1, 6th Meeting of the Conference of Contracting Parties to the Ramsar Convention, Montreux, Switzerland, March 19-27, 1996.

¹²⁰ *The List of Wetlands of International Importance*, online: Ramsar Convention <http://www.ramsar.org/cda/en/ramsar-documents-list/main/ramsar/1-31-218_4000_0>, accessed January 15, 2013. It means that the objective set by resolution IX.1 in 2005 was not achieved; see above 3.1.3.2 Resolutions and Recommendations of the Conference of the Parties.

¹²¹ Namely: China: Dongzhaigang (Hainan province), Zhangjiangkou National Mangrove Nature Reserve (Fujian), Haifeng Wetlands (Guangdong), Beilun Estuary National Nature Reserve (Guangxi), Huidong Harbor Sea Turtle National Nature Reserve (Guangdong), Mai Po Marshes and Inner Deep Bay (Hong Kong), Shankou Mangrove Nature Reserve (Guangxi), Zhanjiang Mangrove National Nature Reserve (Guangdong); Malaysia: Kuching Wetlands National Park (state of Sarawak), Tanjung Piai (Johor), Sungai Pulai (Johor); Thailand: Don Hoi Loi (Samut Songkhram province), Kuan Ki Sian of the Thale Noi Non-Hunting Area (Songkhla), Mu Koh Ang Thong Marine National Park (Surathani province) and Vietnam: Xuan Thuy Natural Wetland Reserve (Nam Dinh Province); see Ramsar Convention, *supra* note 120.

3.1.4 Convention on Migratory Species of Wild Animals, 1979

The CMS¹²² was adopted in 1979 to protect terrestrial, marine and avian migratory species through their range.¹²³ It divides migratory species into two categories: those threatened with extinction, listed in its Appendix I¹²⁴ and those that need or would significantly benefit from international cooperation for their conservation and management, listed in Appendix II.¹²⁵ A species can be listed in both Appendices I and II. Among the listed species, many are marine animals, such as whales, dolphins, sharks and turtles.¹²⁶

Although the terms “protected areas” or “MPAs” are not mentioned expressly in the articles of the CMS, many of its stipulations can be interpreted as asking States to establish and provide tools for the establishment of protected areas and networks of protected areas among range States¹²⁷ to protect the habitats of migratory species. For instance, the Convention asks that States shall endeavour to conserve and restore habitats of the protected species in Appendix I, to prevent, remove, compensate for or minimize the adverse effects of activities or obstacles that seriously impede or prevent their migration and reduce or control factors that can contribute further to their extinction.¹²⁸ As for species in Appendix II, the Convention asks range States to endeavour to conclude Agreements which could benefit those species and give priority to those in an

¹²² CMS, *supra* note 11.

¹²³ *Introduction to the Convention on Migratory Species*, online: CMS <<http://www.cms.int/about/intro.htm>>, accessed April 28, 2011. It entered into force in 1983 and currently has 115 Members, see *List of CMS Parties*, online: CMS <http://www.cms.int/about/part_lst.htm>, accessed March 21, 2011.

¹²⁴ See CMS, *supra* note 11, art. III.

¹²⁵ See CMS, *supra* note 11, art. IV.

¹²⁶ *List of Common Names, CMS Appendices I and II-March 2009*, online: CMS <<http://www.cms.int/species/index.htm>>, accessed March 21, 2011.

¹²⁷ Article I.f) of CMS defines "range" as all the areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route.

¹²⁸ CMS, *supra* note 11, art.III.4

unfavourable conservation status. They are encouraged to “take action to conclude agreements for any population or any geographically separate part of the population of any species or lower taxon of wild animals, members of which periodically cross one or more national jurisdictional boundaries.”¹²⁹

The Convention provides guidelines for the agreements to be concluded in its article V. These agreements should have the objective to restore the migratory species concerned or to maintain them in a favourable conservation status and should deal with all aspects of their conservation and management to achieve this objective. Each agreement should cover the whole range of the migratory species and be open to all range States of this species, even those which are not parties to the CMS. The content of what each agreement should provide for is also suggested.¹³⁰

So far, 26 instruments have been adopted under article 4 of the CMS, which include seven Agreements and 19 MOUs.¹³¹ Among them, two MOUs on species present in the SCS have been concluded. These are the Indian Ocean-South East Asian Marine Turtle Memorandum of Understanding, 2001 and the Memorandum of Understanding on the Conservation and Management of Dugongs (*Dugong dugong*) and their Habitats

¹²⁹ *CMS*, *supra* note 11, art.IV.3 and 4.

¹³⁰ For instance, each agreement should provide for, *inter alia*, periodic review of the conservation status of the migratory species concerned and the identification of the factors which may be harmful to that status; co-ordinated conservation and management plans; conservation and, where required and feasible, restoration of the habitats of importance in maintaining a favourable conservation status, and protection of such habitats from disturbances, including strict control of the introduction of, or control of already introduced, exotic species detrimental to the migratory species; maintenance of a network of suitable habitats appropriately disposed in relation to the migration routes; prevention, reduction or control of the release into the habitat of the migratory species of substances harmful to that migratory species; procedures for co-ordinating action to suppress illegal taking, see *CMS*, *supra* note 11, art.V.

¹³¹ For the complete list of concluded instruments, see *Agreement Summary Sheet*, online: CMS <http://www.cms.int/publications/agr_sum_sheets.htm>, accessed June 4, 2012.

throughout their Range, 2007. A more detailed analysis of these two MOUs is provided later in the dissertation.¹³²

Commitments relating to networks of protected areas have also been adopted under the framework of the COP to the CMS, the decision-making organ of the Convention.¹³³ For instance, in the CMS Strategic Plan 2006-2011 adopted by the COP to the CMS at its 8th meeting in 2005, two relevant targets were set, namely to conserve, restore and effectively manage habitats of key importance for some species, and to protect and connect key habitats/sites for migratory species, where appropriate, through networks of protected areas and corridors.¹³⁴ At the most recent meeting in 2011, the COP to the CMS adopted a resolution recognizing the importance of and calling for the establishment of ecological networks of protected sites for the protection of migratory animals.¹³⁵

3.1.5 Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973

The CITES of 1973¹³⁶ aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. It distinguishes three categories of species listed in different Appendices:

- 1st Appendix: Species threatened with extinction which are or may be affected by trade;

¹³² See below 4.3 Regional Agreements under the Convention on Migratory Species Relevant to the South China Sea.

¹³³ CMS, *supra* note 11, art. VII.

¹³⁴ *CMS Strategic Plan 2006-2011*, adopted by the COP to the CMS at its 8th Meeting, Nairobi, 20-25 November 2005, UNEP OR, Doc. UNEP/CMS/Resolution 8.2, targets 2.3 and 2.7.

¹³⁵ *The Role of Ecological Networks in the Conservation of Migratory Species*, Resolution of the COP to the CMS at its 10th Meeting, Bergen, Norway, November 20-25, 2011, UNEP OR, Doc. UNEP/CMS/Resolution 10.3.

¹³⁶ CITES, *supra* note 13. Entered into force in 1975, the Convention has now 175 parties, see *What is CITES*, online: CITES <<http://www.cites.org/eng/disc/what.shtml>>, accessed March 22, 2011.

- 2nd Appendix: Species which may become threatened with extinction unless trade in their specimens is subject to strict regulation and other species which must be subject to regulation in order that trade in specimens of the former ones may be brought under effective control;
- 3rd Appendix: Species which any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties to control trade in them.¹³⁷

Roughly, over five thousand species of animals and 28 thousand species of plants are covered by CITES's Appendices. Many of these are marine species such as black corals, whale, shark, dugong, sturgeon, wrasse and seahorses.¹³⁸

For the regulation of trade relating to each category of species, the Convention has separate stipulations for their export, import and re-export.¹³⁹ For instance, a permit can only be granted for the export of species in Appendix I if:

- the export will not be detrimental to the survival of that species;
- the specimen of the species was not obtained in contravention of the laws of the State of export for the protection of fauna and flora;
- any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment; and
- an import permit has been granted for the specimen.

The introduction from the sea of specimen species in Appendix I and II shall require the prior grant of a certificate from a Management Authority of the State of

¹³⁷ CITES, *supra* note 13, art.II.

¹³⁸ For the complete list of all species, see *Appendices I, II and III*, valid from October 14, 2010, online: CITES <<http://www.cites.org/eng/disc/species.php>>, accessed January 15, 2013.

¹³⁹ CITES, *supra* note 13, arts III, IV and V.

introduction. Such a certificate can only be granted if two conditions are met. First, a Scientific Authority of the State of introduction must advise that the introduction will not be detrimental to the survival of the species involved. Second, a Management Authority of the State of introduction must be satisfied that any living specimen will be so handled as to minimize the risk of injury, damage to health or cruel treatment.¹⁴⁰ Furthermore, article VIII requires States to take appropriate measures to enforce the provisions of the Convention. In particular, the measures must include those intended to penalize trade in, or possession of specimens prohibited for trade, or both.

The CITES is thus a legal tool that provides an additional layer of *ex situ* protection for protected species. In addition to the regulations forbidding the poaching of protected species in protected areas, it empowers States to adopt and enforce measures to control international trade in those species, which would normally take place outside the areas.

3.1.6 International Convention for the Regulation of Whaling, 1946

The International Whaling Convention of 1946¹⁴¹ aims to ensure the proper conservation of the whale stocks and the orderly development of the whaling industry.¹⁴² The Convention itself does not contain substantive provisions relating to the conservation of whales and the management of whaling activities, which are stipulated in a Schedule attached to the Convention and considered an integral part of it.¹⁴³ The most important part of the Convention is the establishment of an International Whaling

¹⁴⁰ CITES, *supra* note 13, arts III and IV.

¹⁴¹ International Whaling Convention, *supra* note 12. The Convention now has 88 Members worldwide, see *Status of International Convention for the Regulation of Whaling*, online: International Whaling Commission <<http://www.iwcoffice.org/commission/members.htm>>, accessed March 21, 2011.

¹⁴² International Whaling Convention, *supra* note 12, preamble.

¹⁴³ International Whaling Convention, *supra* note 12, art.I.

Commission with diverse functions. It is in charge first of implementing or pushing for studies and investigations, collecting and analyzing statistical data and disseminating information relating to whales, whaling, and the conservation and increase of whale stocks.¹⁴⁴ The Commission is competent to amend the provisions of the Schedule by adopting regulations with respect to the conservation and utilization of whale resources. It can also make recommendations to Contracting Governments on matters relating to whales or whaling and on the objectives and purposes of the Convention.¹⁴⁵ Relating to MPAs, the Commission has power to adopt regulations relating to “open and closed waters, including the designation of sanctuary areas”.¹⁴⁶ This provision is reflected under the Convention in two ways: first in stipulations in the Convention and its Schedule and second in measures adopted in the Annual Meetings of the Commission. These two sources are discussed below in turn.

3.1.6.1 Stipulations in the Convention and its Schedule

The Schedule of the International Convention on Whaling contains provisions relating to operations of whaling and limits to season and areas for the capture of whales.¹⁴⁷ As to limits to areas for capturing whales, the Schedule prohibits commercial whaling in two areas designated as the Indian Ocean Sanctuary¹⁴⁸ and the Southern

¹⁴⁴ International Whaling Convention, *supra* note 12, arts III and IV.

¹⁴⁵ International Whaling Convention, *supra* note 12, arts V and VI.

¹⁴⁶ International Whaling Convention, *supra* note 12, art. V.

¹⁴⁷ *The Schedule*, as amended by the International Whaling Commission at the 62nd Annual Meeting, June 21-25 2010, Agadir, Morocco, June 1, 2010 [The Schedule].

¹⁴⁸ This comprises the waters of the Northern Hemisphere from the Coast of Africa to 100°E, including the Red and Arabian Seas and the gulf of Oman; and the waters of the Southern Hemisphere in the sector from 20°E to 130°E, with the Southern boundary set at 55°S, for more details, see *The Schedule*, *ibid.*, para.7 (a), as amended by the International Whaling Commission at the 62nd Annual Meeting, Agadir, Morocco, June 1, 2010.

Ocean Sanctuary.¹⁴⁹ Besides, it forbids the use of a factory ship or a whale catcher for the purpose of taking or treating baleen, except minke whales¹⁵⁰ in a number of specifically determined areas.¹⁵¹

3.1.6.2 Stipulations from the Annual Meetings of the Commission

According to the Schedule, the Indian Ocean Sanctuary should be reviewed by the Commission at its Annual Meeting in 2002 and the Southern Ocean Sanctuary, at its Annual Meeting in 2004.¹⁵² At the 52nd Annual Meeting in 2002, the Commission agreed to continue the prohibition in the Indian Ocean Sanctuary but did not discuss whether it should set a time for another review.¹⁵³ At the 56th Annual Meeting of the Commission in 2004, a report to review the Southern Ocean Sanctuary was submitted by the Scientific Committee¹⁵⁴ to the Commission, which observed that whales are not effectively protected in this area and that it is impossible to review the effectiveness of the

¹⁴⁹ They comprise the waters of the Southern Hemisphere southwards of the following line: starting from 40 degrees S, 50 degrees W; thence due east to 20 degrees E; thence due south to 55 degrees S; thence due East to 130 degrees E; thence due North to 40 degrees S; thence due east to 130 degrees W; thence due south to 60 degrees S; thence due east to 50 degrees W; thence due north to the point of beginning, for more details, see The Schedule, *supra* note 147, para.7 (b), as amended by the International Whaling Commission at the 62nd Annual Meeting, Agadir, Morocco, June 1, 2010.

¹⁵⁰ A type of minke whale.

¹⁵¹ For the list of these areas, see The Schedule, *supra* note 147, para.8, as amended by the International Whaling Commission at the 62nd Annual Meeting, Agadir, Morocco, June 1, 2010.

¹⁵² The Schedule, *supra* note 147, para.7 (a) and (b).

¹⁵³ *Ibid.* note 147.

¹⁵⁴ Established to provide scientific advice to the International Whaling Commission, for more details, see International Whaling Commission, *Rule of Procedure and Financial Regulations*, at 15, amended by the Commission at the 62nd Annual Meeting, June 21-25 2010, Agadir, Morocco, June 1, 2010.

sanctuary.¹⁵⁵ Besides, Japan tried to propose the abolition of the Southern Ocean Sanctuary, but did not obtain enough votes for it.¹⁵⁶

There have also been proposals for the establishment of two additional sanctuaries in the South Pacific and South Atlantic. However, they have never achieved enough votes to be adopted. The opponents of these proposals include Japan, St Kitts and Nevis, Antigua and Barbuda, Norway, and Iceland.¹⁵⁷

A Technical Committee Working Group on whale sanctuaries was established by the International Whaling Commission in 1981 to examine the general concept of whale sanctuaries and its characteristics. It produced a report in 1982 providing guidelines for the consideration of proposals for the establishment of whale sanctuaries. Although the Commission did not adopt the guidelines, they have been referred to in subsequent submissions in support for whale sanctuaries, as well as in counterarguments.¹⁵⁸

¹⁵⁵ International Whaling Convention, *Chair's Report of the 56th Annual Meeting*, July 19-22, 2004, Sorrento, Italy [Chair's Report of the 56th Meeting].

¹⁵⁶ For details, see Chair's Report of the 56th Meeting, *ibid.*; International Whaling Convention, *Chair's Report of the 57th Annual Meeting*, June 20-24 2005, Ulsan, Republic of Korea [Chair's Report of the 57th Annual Meeting]; International Whaling Convention, *Chair's Report of the 58th Annual Meeting*, June 16-20, 2006, St. Kitts and Nevis [Chair's Report of the 57th Meeting]. For details on the voting procedure under the International Whaling Commission, see International Whaling Commission, *Rules of Procedure and Financial Regulations*, at 3, amended by the Commission at the 62nd Annual Meeting, June 21-25, 2010, Agadir, Morocco, June 1, 2010.

¹⁵⁷ See, for example, Chair's Report of the 56th Annual Meeting, *ibid.*; Chair's Report of the 57th Annual Meeting, *ibid.*; Chair's Report of the 58th Annual Meeting, *ibid.*; International Whaling Convention, *Chair's Report of the 59th Annual Meeting*, May 28-31, 2007, Anchorage, Alaska; International Whaling Convention, *Chair's Report of the 60th Annual Meeting*, June 23-27, 2008, Santiago, Chile; International Convention for the Regulation of Whaling, *Chair's Report of the 64th Annual Meeting*, July 2-6, 2012, Cambridge, United Kingdom.

¹⁵⁸ Elisa Morgera, "Whale Sanctuaries: An Evolving Concept within the International Whaling Commission" (2004) 35 *Ocean Development & International Law* 319 at 322. According to these guidelines, a whale sanctuary is an area closed to whaling for a specific period of time in which whales are to be afforded protection in order to provide for their long-term conservation. The primary objective of a whale sanctuary is to ensure the conservation and utilization of whale resources. Additional objectives may relate to the establishment of reference areas for present and future management. The whale sanctuary must have certain characteristics. First, its boundaries should be based, as far as possible, on ecological considerations and the size should be sufficient to fulfill the objectives of the sanctuary. Second, sanctuary provisions may apply to certain or all whale species. Finally, research in whale sanctuaries should be based largely on, but not limited to, nonlethal techniques.

Since the 1986's general commercial whaling moratorium¹⁵⁹ has become a *de facto* long-lasting measure,¹⁶⁰ the utility of whale sanctuaries has been questioned. One of the reasons advanced by Japan for proposing the removal of the Southern Ocean Sanctuary was its redundancy after the entry into force of the commercial whaling moratorium.¹⁶¹

3.1.7 Convention concerning the Protection of the World Cultural and Natural Heritage, 1972

The World Heritage Convention of 1972¹⁶² sets out the duties of States in the identification and protection of sites of World Heritage located in their territories. It also makes provision on international assistance to help States to fulfill these duties. These sites can be natural habitats that have an important value from a point of view of science, conservation or aestheticism. Thus, the Convention provides States with a tool recognized by international law, the status of World Heritage, to protect and manage protect areas.

This sub-section discusses relevant stipulations under the text of the Convention and the Operational Guidelines for its Implementation.

3.1.7.1 In the Text of the Convention

Articles 1 and 2 of the World Heritage Convention provide a list of what can be considered parts of the cultural and natural heritage under the Convention. Pursuant to

¹⁵⁹ The Schedule, *supra* note 147, para. 10(e).

¹⁶⁰ The moratorium was adopted in 1982, originally for the 1985/1986 season. Planned to be reviewed in 1990, it is still in place today; for more details, see International Convention for the Regulation of Whaling, *Chair's Report of the 34th Annual Meeting*, July 19-24, 1982, Brighton, UK at 2; International Convention for the Regulation of Whaling, *Chair's Report of the 42nd Annual Meeting*, July 2-4, 1990, Noordwijk, Netherlands at 29 and *Commercial Whaling*, online: International Whaling Commission <<http://iwc.int/commercial>>, accessed April 24, 2013.

¹⁶¹ Chair's Report of the 57th Annual Meeting, *supra* note 156 at 45.

¹⁶² So far, the Convention has been ratified by 187 countries, see *States Parties: Ratification Status*, online: UNESCO Heritage Center <<http://whc.unesco.org/en/statesparties/>>, accessed March 21, 2011.

article 2, natural heritage is composed of natural features, geological and physiographical formations, and natural sites and areas that have outstanding universal value.¹⁶³ It is up to each State to identify and delineate the characteristics of potential heritages located in its territory.¹⁶⁴

Duties of State Parties relating to their heritage are detailed in articles 4, 5, 6, 27 and 29 of the Convention. For instance, State Parties must identify, protect, conserve, present and transmit to future generations the cultural and natural heritage situated on their territory. They must also consider natural and cultural heritage in their territory as part of a world heritage, cooperation to protect which is the duty that they owe to the international community as a whole to cooperate.¹⁶⁵

At the global level, the Convention creates an Intergovernmental Committee for the Protection of the Cultural and Natural Heritage of Outstanding Universal Value (the World Heritage Committee) to facilitate international protection for world heritages.¹⁶⁶ The main duty of this Committee is to establish, keep up to date and publish a “World Heritage List” that is based on inventories of properties forming part of heritage submitted by States. To fulfill this mission, the Committee must determine which properties have outstanding universal value based on its own criteria. The inclusion of a property in the World Heritage List requires the consent of the State in whose territory it is located.¹⁶⁷

The Committee also has the duty to establish, keep up to date and publish another list: the “List of World Heritage in Danger”. It comprises properties appearing in the

¹⁶³ World Heritage Convention, *supra* note 9, art.2

¹⁶⁴ *Ibid.*, art. 3.

¹⁶⁵ *Ibid.*, arts 4 and 6.

¹⁶⁶ *Ibid.*, arts 7 and 8 para. 1.

¹⁶⁷ *Ibid.*, art.11 paras 1, 2 and 3.

World Heritage List for the conservation of which major operations are necessary and for which assistance has been requested. The properties entering into this list must be threatened by serious and specific dangers as identified under the Convention. The Committee may, in case of urgency, make a new entry in the List of World Heritage in Danger and publicize it immediately. It must also determine criteria on the basis of which a property belonging to cultural and natural heritage may be included in this list.¹⁶⁸

Another mission of the Committee is to receive and study requests for international assistance from States Parties with respect to property forming part of the heritage located in their territories, and included or potentially suitable for inclusion in the two above-mentioned lists. It decides on the action to be taken with regards to these requests as well as the nature and extent of the assistance needed. It must draw up, keep up-to-date and publicize a list of properties for which international assistance has been granted.¹⁶⁹

Finally, a Fund for the Protection of the World Cultural and Natural Heritage of Outstanding Universal Value (or World Heritage Fund) is established to assist States Parties in their implementation of the Convention.¹⁷⁰ Decisions on how to use the Fund

¹⁶⁸ *Ibid.*, art. 11 paras 4 and 5.

¹⁶⁹ *Ibid.* note, art. 13 paras 1, 2, and 3.

¹⁷⁰ *Ibid.* note, art. 15 paras 1 and 3. Resources for this Fund come from various sources such as compulsory and voluntary contributions made by States parties or contributions, gifts or bequests from international organizations and public or private bodies or individuals.

and the procedure for requesting it must be made by the World Heritage Committee.¹⁷¹
Forms of assistance granted by the World Heritage Fund are detailed in article 22.¹⁷²

3.1.7.2 The Operational Guidelines for the Implementation of the World Heritage Convention

The Operational Guidelines for the Implementation of the World Heritage Convention were adopted by the World Heritage Committee to facilitate the implementation of the Convention.¹⁷³ The content is made up of many provisions adopted under the Convention, such as decisions of the World Heritage Committee and resolutions of the General Assembly of the World Heritage Convention.¹⁷⁴ Since its adoption in 1977,¹⁷⁵ the text has been revised periodically to reflect decisions of the World Heritage Committee.¹⁷⁶

The main content of the Operational Guidelines comprises details on conditions for the inscription of a property on the World Heritage List, procedures to nominate a property to the List, the process of monitoring the state of conservation of World Heritage properties and those relating to the World Heritage Fund and international assistance. For instance, the Operational Guidelines defines what “outstanding universal

¹⁷¹ *Ibid.* note, art. 13, para.6.

¹⁷² They include studies concerning artistic, scientific and technical problems raised by protection, conservation, presentation and rehabilitation of the cultural and natural heritage; provisions of experts, technicians and skilled labour to ensure that the approved work is correctly carried out; training of staff and specialists at all levels in the field of identification, protection, conservation, presentation and rehabilitation of the cultural and natural heritage; supply of equipment which the State concerned does not possess or is not in a position to acquire; low-interest or interest-free loans which might be repayable on a long-term basis; and the granting, in exceptional cases and for special reasons, of non-repayable subsidies, see *ibid.* note, art.22.

¹⁷³ UNESCO Heritage Centre, *Operational Guidelines for the Implementation of the World Heritage Convention* (Paris: UNESCO Heritage Centre, 2012) [Operational Guidelines].

¹⁷⁴ World Heritage Convention, *supra* note 9, art.8 (1).

¹⁷⁵ World Heritage Committee, *Operational Guidelines for the World Heritage Committee*, 1st session, Paris, June 27-July 1, 1977, UN Doc.CC-77/CONF.001/8 (June 30, 1977).

¹⁷⁶ Operational Guidelines, *supra* note 173, para.2. The most recent revision was in 2012, see “Revision of the Operational Guidelines”, *Decision 36COM 13.I*, 36th session of the World Heritage Committee, Saint Petersburg, Russian Federation, 24 June–6 July, 2012.

value” is and which criteria determine whether a property has an outstanding universal value.¹⁷⁷ The Guidelines also prescribe the role of Advisory Bodies of the Convention, the nomination process to them¹⁷⁸ and how the inscribed properties can be monitored.¹⁷⁹

Currently, there are almost 1,000 properties located in 151 States that form part of the world heritage of outstanding universal value. Among them are 188 natural heritages and 29 mixed cultural and natural heritages. Three of these natural heritages are located in coastal and marine areas of the SCS, namely the Puerto-Princessa Subterranean River National Park of Philippines, the Kinabalu Park of Malaysia and Ha Long Bay of Vietnam.¹⁸⁰

3.1.8 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978

The International Convention for the Prevention of Pollution from Ships of 1973 or MARPOL 73/78¹⁸¹ aims to prevent pollution of the sea from the discharge of harmful substances or effluents containing such substances.¹⁸²

The main body of MARPOL 73/78 does not contain any stipulation relating to which substances are prohibited from being discharged into the sea; it only has general

¹⁷⁷ *Ibid.* note 173, paras 50, 53 and 77.

¹⁷⁸ Those bodies are the International Centre for the Study of the Preservation and Restoration of Cultural Property, the International Council on Monuments and Sites (ICOMOS) and IUCN. See *Ibid.* note 173, paras 134-151.

¹⁷⁹ *Ibid.* note 173, paras 169-198.

¹⁸⁰ For details, see *World Heritage List*, online: UNESCO World Heritage Center <<http://whc.unesco.org/en/list>>, accessed January 15, 2013.

¹⁸¹ MARPOL 73/78, *supra* note 14. The Convention has been modified substantively by the Protocols of 1978 and 1997, see *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships*, 1973, 17 February 1978, 1340 U.N.T.S. 62 and *Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships of 2 November 1973, as modified by the Protocol of 17 February 1978*, 26 September 1997. To date, 152 countries are members of MARPOL 73/78, representing 99.20 percent of the world shipping tonnage, see *Summary Status of Convention*, as updated to February 28, 2011, online: IMO <<http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx>>, accessed October 24, 2012.

¹⁸² *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships*, 1973, 17 February 1978, 1340 U.N.T.S. 62, art. 1(1).

obligations for the Convention's application. For instance, article 3 stipulates that it shall apply to ships flying under the flag or operating under the authority of a party. Article 5 gives the port State the power to inspect ships as to their possession of valid certificates granted under the Regulations of the Convention's Annexes. Article 6 asks States parties to cooperate to detect violation and enforce the Convention "using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence".¹⁸³

MARPOL 73/78 has six Annexes regulating the discharge of six sources of substances from ships: oil (Annex I);¹⁸⁴ noxious liquid substances carried in bulk (II);¹⁸⁵ harmful substances carried by sea in packaged forms or in freight containers, portable tanks or road and rail tank wagons (III);¹⁸⁶ sewage (IV);¹⁸⁷ garbage (V);¹⁸⁸ and air pollution (VI).¹⁸⁹ Annexes I, II, IV and V provide States with tools to enhance the protection of some sea areas having particular oceanographical and ecological characteristics: the mechanism of a "special area". A special area is a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods

¹⁸³ MARPOL 73/78, *supra* note 14, arts 3, 5 and 6(1).

¹⁸⁴ *Ibid.*, Annex I "Regulations for the Prevention of Pollution by Oil".

¹⁸⁵ *Ibid.*, Annex II "Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk".

¹⁸⁶ *Ibid.*, Annex III "Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Forms or in Freight Containers, Portable Tanks or Road and Rail Tank Wagons".

¹⁸⁷ *Ibid.*, Annex IV "Regulations for the Prevention of Pollution by Sewage from Ships".

¹⁸⁸ *Ibid.*, Annex V "Regulations for the Prevention of Pollution by Garbage from Ships".

¹⁸⁹ For details see *Amendments to the Annex of the Protocol of 1997 to Amend the International Convention for the Prevention of Pollution from Ships, 1973, as Modified by the Protocol of 1978 relating thereto*, IMO's MEPC Resolution 176 (58), IMO OR, Doc. MEPC 58/23/Add.1 Annex 13 (2008), Annex, Regulations 5, 6-9, 11, 12-16 and 18.

for the prevention of sea pollution from relevant sources is required.¹⁹⁰ In the special area, more restrictive conditions can be adopted for the discharge of oil, noxious liquid substances, sewage and disposal of garbage into the sea.¹⁹¹ Annex VI uses an equivalent mechanism of emission control areas which refer to an area where more restrictive requirements for emissions from ships is needed to prevent, reduce and control air pollution from certain substances namely NO_x, SO_x and particulate matter.¹⁹²

Details about the criteria and procedure for the designation of a special area under MARPOL 73/78 are provided in resolution A 927 (22), 2001 of IMO.¹⁹³ According to the resolution, three groups of conditions must be fulfilled for the designation of a special area under the Convention: oceanographic conditions, ecological conditions and vessel traffic characteristics.¹⁹⁴ A proposal to designate a given sea area as a special area

¹⁹⁰ See MARPOL 73/78, *supra* note 14, Annex I regulation 1(10), Annex II regulation I (7) and Annex V regulation I (3). See also *Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships, 1973*, Marine Environmental Protection Committee Resolution MEPC 200 (62), adopted July 15, 2011, online: IMO <<http://www.imo.org/KnowledgeCentre/HowAndWhereToFindIMOInformation/IndexofIMOResolutions/Pages/Marine-Environment-Protection-Committee-%28MEPC%29.aspx>>, accessed January 11, 2013 [MEPC 200(62)]; *Amendments to the Annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution From Ships, 1973 (Revised MARPOL Annex V)*, Resolution MEPC 201(62), adopted July 15, 2011, online: IMO <[http://www.imo.org/blast/blastDataHelper.asp?data_id=30760&filename=201\(62\).pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=30760&filename=201(62).pdf)>, accessed January 11, 2013 [MEPC 201(62)] and *Amendments to the Annex of the Protocol of 1997 to Amend the International Convention for the Prevention of Pollution from Ships, 1973, as Modified By the Protocol of 1978 Relating Thereto*, Resolution MEPC 202(62), adopted July 15, 2011, online: IMO <<http://www.imo.org/KnowledgeCentre/HowAndWhereToFindIMOInformation/IndexofIMOResolutions/Pages/Marine-Environment-Protection-Committee-%28MEPC%29.aspx>>, accessed January 11, 2013 [MEPC 202(62)].

¹⁹¹ For details relating to those restrictions, see *ibid.* note 190, Annex I, Regulations 10 (2) and (7); Annex II, Regulations 5 and Appendix II and Annex V regulation 5 (8); MEPC 62/24, Annex, Regulation 11 (B); and MEPC 201(62), Annex, Regulation 6.

¹⁹² *Ibid.* note 190, Annex VI, Regulations 2(11), 13.6 and 14.

¹⁹³ *Guidelines for the Designation of Special Areas under MARPOL 73/78 and Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, IMO Assembly Res.A.927(22), Annex I, adopted 29 November 2001, IMO OR, 22nd Session, Agenda Item 11, IMO Doc. A 22/Res.927 (2002) [Resolution A.927(22)].

¹⁹⁴ *Ibid.* note 193, paras 2.3-2.6.

should be submitted to the Marine Environment Protection Committee¹⁹⁵ for its consideration. It should contain a draft amendment to MARPOL 73/78 and a background document setting forth all the relevant information to explain the need for the designation.¹⁹⁶

So far, 22 marine areas have been designated as special areas under different Annexes,¹⁹⁷ as set out in Table 3 below:

¹⁹⁵ The senior technical body of IMO on marine pollution-related matters; see *Marine Environment*, online: <<http://www.imo.org/OurWork/Environment/Pages/Default.aspx>>, accessed April 11, 2011.

¹⁹⁶ Resolution A.927(22), *supra* note 193, paras 3.1-3.4. The relevant information include the definition of the area proposed, type of special area proposed, general description of the area, an analysis of how the area fulfills the criteria for the designation of special areas and information relevant reception facilities.

¹⁹⁷ *Special Areas under MARPOL*, online: IMO <<http://www.imo.org/OurWork/Environment/PollutionPrevention/SpecialAreasUnderMARPOL/Pages/Default.aspx>>, accessed March 25, 2011.

Special Areas	Date of Adoption	Date of Entry into Force	In Effect from
Annex I: Oil			
Mediterranean Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Baltic Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Black Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Red Sea	2 Nov 1973	2 Oct 1983	Not yet *
"Gulfs" area	2 Nov 1973	2 Oct 198	1 Aug 2008
Gulf of Aden	1 Dec 1987	1 Apr 1989	Not yet *
Antarctic area	16 Nov 1990	17 Mar 1992	17 Mar 1992
North West European Waters	25 Sept 1997	1 Feb 1999	1 Aug 1999
Oman area of the Arabian Sea	15 Oct 2004	1 Jan 2007	Not yet*
Southern South African waters	13 Oct 2006	1 Mar 2008	1 Aug 2008
Annex II: Noxious Liquid Substances			
Antarctic area	30 Oct 1992	1 Jul 1994	1 Jul 1994
Annex IV: Sewage			
Baltic Sea	15 July 2011	1 January 2013	Not yet*
Annex V: Garbage			
Mediterranean Sea	2 Nov 1973	31 Dec 1988	1 May 2009
Baltic Sea	2 Nov 1973	31 Dec 1988	1 Oct 1989
Black Sea	2 Nov 1973	31 Dec 1988	Not yet*
Red Sea	2 Nov 1973	31 Dec 1988	Not yet*
"Gulfs" area	2 Nov 1973	31 Dec 1988	1 Aug 2008
North Sea	17 Oct 1989	18 Feb 1991	18 Feb 1991
Antarctic area (south of latitude 60 degrees south)	16 Nov 1990	17 Mar 1992	17 Mar 1992
Wider Caribbean region including the Gulf of Mexico and the Caribbean Sea	4 July 1991	4 Apr 1993	1 May 2011
Annex VI: Prevention of air pollution by ships (Emission Control Areas)			
Baltic Sea (SOx)	26 Sept 1997	19 May 2005	19 May 2006
North Sea (SOx)	22 July 2005	22 Nov 2006	22 Nov 2007
North American (SOx and NOx)	26 March 2010	1 August 2011	1 August 2012
United States, Caribbean Sea ECA (SOx, Nox and PM)	26 July 2011	1 January 2013	1 January 2014

*: because of the lack of notification from the State about existence of adequate reception facilities

Table 3 Special Areas under MARPOL 73/78

(Source: IMO¹⁹⁸)

The mechanism of special areas under MARPOL 73/78 can be an effective tool for the protection of an MPA against pollution from ship's oil, noxious liquid substances,

¹⁹⁸ *Special Areas under MARPOL*, online: IMO <<http://www.imo.org/OurWork/Environment/PollutionPrevention/SpecialAreasUnderMARPOL/Pages/Default.aspx>>, accessed January 15, 2013.

sewage, garbage as well as air pollution from ships, especially when the MPA is located in the EEZ where freedom of navigation is recognized.

3.1.9 International Convention on the Safety of Life at Sea, 1974

The main objective of the SOLAS of 1974¹⁹⁹ is to determine minimum standards for the construction, equipment and operation of ships for their safety.²⁰⁰ Under this Convention, ships' routing was originally defined implicitly as the practice of ships to follow routes adopted for navigational safety purposes.²⁰¹ Today, it has a broader scope of application, including the protection of the marine environment.²⁰²

Ships' routing can be made mandatory for ships and IMO is recognized as the only international body for developing guidelines, criteria and regulations at the international level for ships' routing systems. States Parties have the responsibility to initiate action to establish ships' routing systems. If more than one Party has a common interest in a particular area, they could formulate joint proposals for the delineation and use of a routing system therein on the basis of an agreement between them.²⁰³

¹⁹⁹ The SOLAS was adopted originally in 1914 in response to the Titanic accident and has since been modified many times. The current version of the SOLAS was adopted in 1974 but it has been constantly amended, see SOLAS, *supra* note 15. Considered as "the most important of all international treaties concerning the safety of merchant ships", the SOLAS has currently 159 States Parties representing more than 99 percent of the world tonnage, see *ibid.* note 200 and *Status of Conventions*, online: IMO <<http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx>>, accessed March 28, 2011.

²⁰⁰ *International Convention for the Safety of Life at Sea (SOLAS), 1974*, online: IMO <<http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Safety-of-Life-at-Sea-%28SOLAS%29,-1974.aspx>>, accessed March 28, 2011.

²⁰¹ SOLAS, *supra* note 15, Chapter V, Regulation 8.

²⁰² IMO, *SOLAS Consolidated Edition 2009* (London: IMO, 2009), Chapter V, Regulation 10 (1).

²⁰³ *Ibid.*, Regulation 10 (2), (3) and (5).

A list of concrete measures to be used for ships' routeing is provided by resolution A.572 (14) of the IMO General Assembly.²⁰⁴ Regarding the procedure for adopting a ships' routeing system, resolution A.572 (14) requires governments which propose the establishment of a new system of routeing or the amendment of an existing one which lies wholly or partly outside their territorial seas to consult IMO. They must furnish all relevant information relating to the routeing system, in particular the geodetic datum of the chart of reference used, reasons for excluding ships from using the system and the existence of alternative routes for those ships. If the proposal is adopted by IMO, it will come into force after the date of the promulgation of the new system by the government, which in turn, shall not be earlier than six months after its adoption.²⁰⁵

In the SCS, a number of ships' routeing measures have been adopted near Northern and Southern limits of the marine region (in the Straits of Singapore and Malacca, and near Hong Kong respectively). For instance, traffic schemes were adopted in the following areas: One Fathom Bank, Port Klang to Port Dickson, Port Dickson to Tanjung Keling, Malacca to Iyu Kecil, off Sultan Shoal Lighthouse, in the Singapore Main Strait, off Saint John's Island, off Changi/Pulau Batam, at Horsburgh lighthouse area and in the East Lamama and Tathong Channels. Deep-sea routes and associated rules and recommendations on navigation and mandatory ship reporting system were adopted for the Straits of Malacca and Singapore.²⁰⁶

²⁰⁴ Ships' routeing measures include traffic separation schemes, separation zones or lines, traffic lanes, roundabouts, inshore traffic zones, two-way routes, recommended routes, recommended tracks, deep water routes, precautionary areas, areas to be avoided, established direction of traffic flow, and recommended directions of traffic flow; for more detailed explanation of these measures see *General Provisions on Ships' Routeing*, IMO Assembly Res.A.572 (14), IMO OR, 14th Session, Agenda item 10(b), IMO Doc. A17/Res.572 (14) (1985).

²⁰⁵ *Ibid.* note 204.

²⁰⁶ IMO, *Ships' Routeing*, 2010 ed. (London: IMO, 2010) pp. I/14, III/2-III/3, V/1-V/10 and 7.

Similar to the mechanism of special areas under MARPOL 73/78, ships' routing systems are very useful measures to provide an extra protection to MPAs located outside the territorial seas of a State and against the negative effects of ship navigation.

3.1.10 Membership Status of South China Sea States with Regards to the Foregoing Treaties

A significant problem is that not all SCS States²⁰⁷ are members of all the treaties discussed above. For instance, only four treaties have the membership of all SCS States: the CBD, CITES, SOLAS and Annexes I and II of MARPOL 73/78. The UNCLOS has been ratified by all but Thailand. The UN Fish Stocks Agreement has only Indonesia as a member and the CMS has the Philippines as its sole SCS Member State. This pattern could be explained by many factors: worries about the impact of the ratification of the treaties on unresolved disputes or on their current State practice of the States in the subject-matters of the treaties and on the different levels of interest of the SCS States in the issues governed by the treaties.

However, differences in the ratification of the relevant international treaties among the SCS States should not affect the cooperation to develop a network of MPAs in the region. As the CBD contains the most comprehensive framework relating to networks of MPAs, the ratification of this treaty by all SCS States should be enough to provide a common conventional commitment by all of them to the development of a network of MPAs in this region. Besides, the nearly universal ratification of the UNCLOS in the region offers another common legal framework for their cooperation in this matter. Table 4 below provides details of the status of each State in regard to the treaties discussed.

²⁰⁷ The discussion in this section excludes Taiwan due to its special status, see below 7.2.7 Increasing the Participation of Taiwan in Regional Marine Conservation Efforts.

Instruments		Countries								
		China	Philippines	Brunei	Malaysia	Indonesia	Singapore	Thailand	Cambodia	Vietnam
UNCLOS		x	x		x	x	x	s	x	x
CBD		x	x		x	x	x	x	x	x
Ramsar Convention		x	x		x	x		x	x	x
CMS			x							
CTIES		x	x		x	x	x	x	x	x
International Whaling Convention		x							x	
UN Fish Stocks Agreement		s				x				
World Heritage Convention		x	x		x	x		x	x	x
MARPOL	Annex I&II	x	x		x	x	x	x	x	x
	Annex III	x	x		x	x	x		x	
	Annex IV	x	x		x	x	x		x	
	Annex V	x	x		x	x	x	x	x	
	Annex VI	x				x	x		x	
SOLAS		x	x	x	x	x	x	x	x	x

x: ratified or acceded; s: signed

Table 4 Status of South China Sea States in Relation to Treaties relevant to MPAs

As the dissertation has finished analyzing MPA relevant stipulations under international treaties, it now discusses similar stipulations under international non-legally binding instruments and processes, an important source of international environmental law.

3.2 International Non-Legally Binding Instruments and Processes

Although the validity of non-legally binding instruments²⁰⁸ is still under debate,²⁰⁹ they play a significant role in international relations and in the international legal order. These instruments create political and moral commitments to be followed.²¹⁰ They provide proof of the consciousness to be bound by a rule of law or *opinio juris* and thus, evidence the possible emergence of international customary law. They are the first steps in a process which can lead to the conclusion of a treaty. They can also provide the rules of interpretation or technical guidelines for the implementation of a treaty. An example is the role of United Nations resolutions in leading to the emergence of the UN Charter.²¹¹

The discussion that follows reviews key stipulations relevant to protected areas, MPAs, networks of protected areas and regional cooperation for the protection of the marine environment under the framework of some of the most important non-binding

²⁰⁸ Non-binding or soft law instruments refer to texts that are not legally binding adopted as declarations, resolutions, codes of conduct or programs of action. A big difference from international treaties is that the former are not enforceable by international tribunals. The benefits for using non-binding instruments can be multiple: to make reaching agreement between parties easier, to avoid the complicated ratification process of treaties or to create a preliminary, flexible regime providing for its development in stages; see Alan Boyle, "Some Reflections on the Relationship of Treaties and Soft Law" (1999) 48:4 *International and Comparative Law Quarterly* 901 at 901; Alexander Kiss and Dinah Shelton, *Guide to International Environmental Law* (Leiden: Koninklijke Brill NV, 2007) 8 and Hartmut Hillgenberg, "A Fresh Look at Soft Law" (1999) 3 *European Journal of International Law* 499 at 499.

²⁰⁹ Jan Klabbers, *The Concept of Treaty in International Law* (The Hague: Kluwer Law International, 1996) 157. It should be noted that the term "soft-law" can also be used to mean those conventional rules which are confined in simple declarations of intent and not binding on the signatories of the treaty, such as the Part IV of the General Agreement on Tariffs and Trade (GATT) which was added to take into account of the situation of developing countries, see Antonio Cassese and Joseph H. H. Weiler (eds), *Change and Stability in International Law-Making* (Berlin: Walter de Gruyter, 1988) 72. For details about Part IV of GATT, see *General Agreement on Tariffs and Trade*, 30 October 1947, online: World Trade Organization <http://www.wto.org/english/docs_e/legal_e/index_g_e.htm>, accessed April 10, 2013, Part IV.

²¹⁰ *Ibid.* and Roberto Andorno, "The Invaluable Role of Soft Law in the Development of Universal Norms in Bioethics" presented at *Workshop "Die Umsetzung bioethischer Prinzipien im Internationalen Vergleich (The Implementation of Bioethical Principles in International Comparison)*, Berlin, Germany, February 15, 2007, online: German UNESCO Commission <<http://www.unesco.de/1507.html>>, accessed March 29, 2011.

²¹¹ Boyle, *supra* note 208 at 906.

international processes and instruments relating to the protection of the environment. The instruments considered are as follows:

- 3.2.1 Outcomes of major United Nations conferences relating to the environment, namely the United Nations Conference on the Human Environment of 1972, United Nation Conference on Environment and Development of 1992, World Summit on Sustainable Development of 2002 and the United Nations Conference on Sustainable Development of 2012;
- 3.2.2 United Nations Millennium Development Goals;
- 3.2.3 UNGA Resolutions on Oceans and the Law of the Sea and Sustainable Fisheries;
- 3.2.4 United Nations World Charter for Nature;²¹²
- 3.2.5 Man and Biosphere Programme;
- 3.2.6 Instruments on responsible fisheries adopted under the framework of FAO, namely the Code of Conduct for Responsible Fisheries,²¹³ FAO International Plans of Action, the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem²¹⁴ and FAO technical guidelines;
- 3.2.7 Particularly Sensitive Sea Areas regime under IMO; and
- 3.2.8 International Coral Reef Initiative.

²¹² *World Charter for Nature*, GA Res. 37/7, UNGAOR, 37th session, Annex, UN Doc.A/RES/37/7 (1982) at 2.

²¹³ *Code of Conduct for Responsible Fisheries*, 28th FAO Conference, 31 October 1995 (Rome: FAO, 1995).

²¹⁴ “Reykjavik Declaration on Responsible Fisheries in Marine Ecosystem” in FAO, Report of the Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem, Reykjavik, Iceland, October 1-4, 2001 at 115, FAO Fisheries Report No. 658 (Rome: FAO, 2002).

3.2.1 Major United Nations Conferences Relating to the Environment

From the 1970s, the UNGA began to provide a framework within the United Nations for comprehensive consideration of the problems of the environment to raise the awareness of governments and the public about the urgency of this question and to identify issues that can only or best be solved through international cooperation.²¹⁵ For this reason, it convened the United Nations Conference on the Human Environment in Stockholm, Sweden, in June 1972 (the Stockholm Conference). Since this first initiative, three other conferences of similar nature have been organized. The most recent one was the United Nations Conference on Sustainable Development, Rio de Janeiro, Brazil, June 20-22, 2012.²¹⁶

Important provisions relevant to networks of MPAs adopted by these Conferences are now considered.

3.2.1.1 United Nations Conference on the Human Environment, 1972

The two most important outcomes of the Stockholm Conference of 1972 were the Declaration of the United Nations Conference on Human Environment²¹⁷ (the Stockholm Declaration) and the Action Plan for the Human Environment (the Stockholm Action Plan).

The Stockholm Declaration recognizes different issues relating to the human environment, along with some principles to inspire and guide peoples in its preservation and enhancement. Two principles of the Declaration can be interpreted as implicitly

²¹⁵ *Problems of the Human Environment*, GA Res. 23/2398, UNGA OR, 23rd session, UN Doc.A/RES/2398(XXIII) (1968).

²¹⁶ Rio+20 United Nations Conference on Sustainable Development, online: UNCS2012 <<http://www.uncsd2012.org/futurewewant.html>>, accessed October 24, 2012.

²¹⁷ *Declaration of the United Nations Conference on the Human Environment*, United Nations Conference on the Human Environment, Stockholm June 5-16, 1972 in *Report of the United Nations Conference on the Human Environment*, Stockholm, June 5-16, 1972 (New York: United Nations, 1973) 3.

providing framework to the establishment of protected areas and networks of protected areas, namely principles 2 and 4. Principle 2 states that “the natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management”.²¹⁸ Principle 4 recognizes the responsibility of man to “safeguard and wisely manage the heritage of wildlife and its habitat”.²¹⁹ Although the term “protected areas” is not mentioned explicitly in these principles, the presence of other terms such as “representative samples of natural ecosystems”, “safeguarded for the benefit of present and future generations”, “careful planning and management” and “habitat” suggests the recognition of the role of protected areas and area-based conservation in ensuring sustainable development.

The Action Plan for the Human Environment provides recommendations for action from the Conference to Governments and international institutions in three broad areas: environmental assessment, environmental management and supporting measures.²²⁰ Among those recommendations, many are MPA relevant stipulations. For instance, the Secretary-General was tasked to ensure that an appropriate mechanism was created for the exchange of information between countries relating to parks and that UN agencies assist developing countries to manage the inflow of visitors into their protected areas. Governments were asked to cooperate to manage neighbouring and contiguous protected areas and by agreement, to set aside areas representing ecosystems of international significance for protection.²²¹ Finally, the Action Plan recommended that

²¹⁸ *Ibid.*, Principle 2.

²¹⁹ *Ibid.*, Principle 4.

²²⁰ *Report of the United Nations Conference on the Human Environment*, *supra* note 217, C.II.

²²¹ *Ibid.*, C.II, Recommendations 34-38.

international organizations should “vigorously” pursue the Man and Biosphere Programme.²²²

3.2.1.2 United Nations Conference on Environment and Development, 1992

The United Nations Conference on Environment and Development of 1992²²³ ended with the adoption of a number of important texts, both treaties and non-binding instruments.²²⁴ Among them, Agenda 21²²⁵ comprises many MPA relevant stipulations in its Chapters 15 and 17.

Chapter 15 of Agenda 21, titled “Conservation of biological diversity”, is intended to improve the conservation of biological diversity and the sustainable use of biological resources.²²⁶ It asks governments to take action where necessary to conserve biological diversity through *in-situ* conservation of ecosystems and natural habitats and to ensure the maintenance and recovery of viable populations of species in their natural surroundings. It specifies that “*in situ* measures should include the reinforcement of terrestrial, marine and aquatic protected area systems and embrace, *inter alia*, vulnerable freshwater and other wetlands and coastal ecosystems, such as estuaries, coral reefs and mangroves”. They should also promote the rehabilitation and restoration of damaged

²²² *Ibid.*, C.II, Recommendation 64. For details about the Man and Biosphere Programme, see below 3.2.5 The World Network of Biosphere Reserves .

²²³ The United Nations Conference on Environment and Development was organized in Rio de Janeiro, 3-16 June, 1992. The main purposes of the Conference were to review actions taken to protect the environment, assess environmental problems, risks and opportunities associated with economic activities and make recommendations to strengthen cooperative action; see *United Nation Conference on Environment and Development*, UNGA Resolution 43/196, UNGA OR, 43rd session, UN Doc.A/RES/43/196 (1988).

²²⁴ There were two treaties: the CBD and the United Nations Framework Convention on Climate Change and three non-binding instruments: The Rio Declaration on Environment and Development, Agenda 21 and Statement of Forest Principles.

²²⁵ Agenda 21 is a program of action to achieve sustainable development. It comprises 40 chapters covering many issues that affect sustainability such as human consumption, poverty eradication, deforestation, sustainable agriculture and rural development; see *Agenda 21*, the United Nations Conference on Environment and Development, Rio De Janeiro, Brazil, June 3-14, 1992, UNOR, Annex II, UN Doc.A/Conf.151/26/Rev.1 (Vol I).

²²⁶ *Ibid.*, C15.

ecosystems, the recovery of threatened species and environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas. Finally, it asks governments to promote improved international coordination of measures for the effective conservation and management of endangered/non-pest migratory species, including appropriate levels of support for the establishment and management of protected areas in transboundary locations.²²⁷

Chapter 17 of the Agenda 21 is titled “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”.²²⁸ It provides new approaches to the management and development of the marine and coastal areas by determining activities to be undertaken at all levels in seven different aspects of ocean governance.²²⁹ Many activities suggested under this Chapter relate to MPAs, such as the establishment and management of protected areas to maintain biological diversity and productivity of marine species and habitats under national jurisdiction, more vigorous enforcement of MARPOL 73/78 and assurance of adequate coordination and cooperation in enclosed and semi-enclosed seas.²³⁰

One of the program areas under this Chapter is “Strengthening international, including regional, cooperation and coordination”. As a basis for action under this program area, the Agenda recognizes that the implementation of activities under Chapter 17 requires “effective institutional arrangements at national, subregional, regional and

²²⁷ *Ibid.*, 15.5 (g), (h), (j) and 15.7 (g).

²²⁸ *Ibid.*, C17.

²²⁹ Namely integrated management and sustainable development of coastal areas; marine environmental protection and sustainable use and conservation of marine living resources of the high seas; sustainable use and conservation of marine living resources under national jurisdiction; addressing critical uncertainties for the management of the marine environment and climate change; strengthening international, including regional, cooperation; and coordination, and sustainable development of small islands; see *ibid.*, 17.1.

²³⁰ *Ibid.*, 17.7, 17.30 (a) (iii) and 17.58.

global levels, as appropriate”.²³¹ To this end, States should integrate relevant sectoral activities to address environment and development in marine and coastal areas at, *inter alia*, the regional level. They should also promote effective information exchange and institutional linkages between bilateral, regional and multilateral institutions dealing with environment and development in marine and coastal areas.²³²

In 1997, five years after the adoption of Agenda 21, at the 19th Special Session of the UNGA, representatives of governments, international institutions and NGOs met to review progress in realizing the objectives set out at the Rio Conference in 1992 and to define further actions needed to achieve them. The result of the meeting was the adoption of the Plan to Further Implementation of Agenda 21.²³³ Relating to the objective of conservation and sustainable use of biological diversity, the Plan asks governments and international organizations to take decisive action to conserve and maintain genes, species and ecosystems with a view to promoting the sustainable management of biological diversity. It also asks them to implement fully the CBD, including recommendations under the Jakarta Mandate.²³⁴

3.2.1.3 World Summit on Sustainable Development, 2002

The World Summit on Sustainable Development of 2002²³⁵ ended with the adoption of two documents, one of which includes many MPA relevant stipulations,

²³¹ *Ibid.*, 17.115.

²³² *Ibid.*, 17.116 (a) and (b).

²³³ *Programme for the Further Implementation of Agenda 21*, GA Res.S-19-2, UNGAOR, 19th special session, Annex, UN Doc.A/RES/S-19/2 (1997) para 1.

²³⁴ *Ibid.*, paras 66 (a) and (b).

²³⁵ The World Summit on Sustainable Development of 2002 was held in August 2002 in Johannesburg, South Africa. Its objective was to review the progress in the implementation of the Rio Conference’s outcomes and to reinvigorate global commitments to sustainable development; see *Ten-Year Review of Progress Achieved in the Implementation of the Outcome of the United Nations Conference on Environment and Development*, UNGA OR, Agenda item 95 (a), 55th session, UN Doc.A/RES/55/199(2001), para 1 at 2.

namely the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan).²³⁶

The Johannesburg Plan builds on achievements in the implementation of the Rio Conference's outcomes and expedites the implementation of its remaining goals. To this end, governments and international organizations commit to undertake concrete actions and measures to achieve the overarching objectives and essential requirements of sustainable development. One of these objectives is to protect and manage the natural resource base of economic and social development.²³⁷

To achieve this objective, the Plan requires the implementation of strategies that include targets adopted at the national and/or regional levels to protect ecosystems and to attain integrated management of land, water and living resources.²³⁸ Relating to the protection of the marine and coastal environment, the Plan requires effective coordination, cooperation and action at all levels to, *inter alia*, develop and facilitate the use of diverse approaches and tools including the development of representative networks of MPAs by 2012 and time/area closures.²³⁹

²³⁶ "Plan of Implementation of the World Summit on Sustainable Development" in *Report of the World Summit on Sustainable Development*, Johannesburg, South Africa, August 26-September 4, 2002, A/CONF.199/20 (New York: United Nations, 2002).

²³⁷ "Plan of Implementation of the World Summit on Sustainable Development", *ibid.* at 8.

²³⁸ "Plan of Implementation of the World Summit on Sustainable Development", *ibid.* at 20.

²³⁹ "Plan of Implementation of the World Summit on Sustainable Development", *ibid.* at 22.

3.2.1.4 United Nations Conference on Sustainable Development, 2012

The United Nations Conference on Sustainable Development (UNCSD) of 2012²⁴⁰ ended with the adoption of a political document, titled “The Future We Want”, which was endorsed by UNGA resolution 66/288 of the same year.²⁴¹ The document renews the commitments of governments to implement adopted declarations, plans and programs of action²⁴² and provides a framework for actions under different themes to secure renewed commitments and to address new challenges²⁴³.

Actions relating to MPAs and networks of MPAs are stipulated under two themes: oceans and seas and biodiversity. Under the theme of oceans and seas, States reaffirm the importance of area-based conservation measures, including MPAs, consistent with international law and based on the best available scientific information as a tool for the conservation of biological diversity and sustainable use of its components. Under the theme of biodiversity, they reiterate their commitment to achieve the three objectives of the CBD and call for urgent action to reduce, halt and reverse the loss of

²⁴⁰ The United Nations Conference on Sustainable Development (UNCSD) took place in Rio De Janeiro, Brazil, June 20-22, 2012 to secure renewed political commitment for sustainable development, assess the progress to date in the implementation of the outcomes of the major summits on sustainable development and address new and emerging challenges. Two themes were the focus for discussion at the Conference: a green economy in the context of sustainable development and poverty eradication and the institutional framework for sustainable development; see *Implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Outcomes of the World Summit on Sustainable Development*, GA Res.64/236, UNGA OR, Agenda item 53, UN Doc.A/RES/64/236 (2010) para 20 (a) and online: Rio+20 United Nations Conference on Sustainable Development <<http://www.uncsd2012.org/about.html>>, accessed October 24, 2012.

²⁴¹ *The Future We Want*, UNGA Res. 66/288, UNGA OR, Agenda item 19, UN Doc. A/RES/66/288 (2012) [The Future We Want]

²⁴² Such as the Rio Declaration, Agenda 21, the Programme for the Further Implementation of Agenda 21, the Johannesburg Declaration on Sustainable Development and the Johannesburg Plan.

²⁴³ For details, see *The Future We Want*, *supra* note 241, paras 104-251.

biodiversity. They also reaffirm the importance of the implementation of the Strategic Plan for Biodiversity 2011-2020 and achievement of the Aichi Biodiversity Targets.²⁴⁴

3.2.2 United Nations Millennium Development Goals

The United Nations Millennium Development Goals are a set of goals, targets and indicators developed under the framework of the United Nations Secretary-General since 2001 to report the progress of the implementation of the United Nations Millennium Declaration.²⁴⁵ The current United Nations Millennium Development Goals comprise eight goals, 21 targets and 36 indicators.²⁴⁶ One of the targets is to reduce biodiversity loss, to achieve by 2010, a significant reduction in the rate of loss and to monitor the progress towards the achievement of this target. One indicator is the proportion of terrestrial and marine areas protected.²⁴⁷

In 2010, different reports on the progress of achievement of the Millennium Development Goals concluded that the target to reduce biodiversity loss significantly by

²⁴⁴ The Future We Want, *supra* note 241, paras 177 and 197. For details relating to the CBD's Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, see above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

²⁴⁵ The United Nations Millennium Declaration was adopted by participating nations at the Millennium Summit of the United Nations organized in New York, United States in 2000. It contains commitments to some fundamental principles and values, such as freedom, equality, solidarity, respect of nature and shared responsibility. A process for the implementation of the Declaration was followed up by an UNGA Resolution that, among other things, asked the Secretary-General to prepare an annual report and a comprehensive report every five years on progress achieved by the United Nations system and Member States in its implementation; for more details, see *The Millennium Assembly of the United Nations*, UNGA OR, 53rd session, Agenda item 30, UN Doc. A/RES/53/202, February 12, 1999; *United Nations Millennium Declaration*, GA Res. 55/162, UNGAOR, 55th session, Agenda Item 60(b), UN Doc. A/RES/55/2 (2000) at 1 and *Follow-up to the Outcome of the Millennium Summit*, UNGA OR, 55th session, Agenda item 182, UN Doc. A/RES/55/162, December 18, 2000 at line 3.

²⁴⁶ *The Official List of MDG Indicators* (effective since January 15, 2008), online: The Official United Nations Site for the MDG Indicators <<http://millenniumindicators.un.org/unsd/mdg/Default.aspx>>, accessed April 5, 2011.

²⁴⁷ *Ibid.*

2010 was missed.²⁴⁸ As much as 17,000 plant and animal species were reported to be threatened with extinction by the IUCN. Major threats and drivers of biodiversity loss, such as over-consumption, habitat loss, invasive species, pollution and climate change are not being effectively tackled yet.

In this context, the UNGA decided to organize a High-level Plenary Meeting at its 66th session to “galvanize commitment, rally support and spur collective action in order to reach the Millennium Development Goals by 2015”.²⁴⁹ At the meeting, participating heads of State and government made various commitments to achieve the Millennium Development Goals by 2015. Relating to the goal of ensuring environmental sustainability, they committed to, *inter alia*, continue pursuing more efficient and coherent implementation of the three objectives of the CBD and addressing implementation gaps, including through the fulfillment of commitments significantly reducing the rate of biodiversity loss.²⁵⁰

3.2.3 United Nations General Assembly Resolutions on Oceans and the Law of the Sea and Sustainable Fisheries

The UNGA meets at least twice per year to discuss issues on oceans and the law of the sea and fisheries. At the end of these meetings, usually two resolutions are adopted. One, titled “Oceans and the Law of the Sea”, contains stipulations relating to issues such as the implementation of UNCLOS, the status of the Area, marine environment, maritime safety and marine scientific research. The other is called

²⁴⁸ *The Millennium Development Goals Report 2010* (New York: United Nations, 2010); *Keeping the Promise: a Forward-Looking Review to Promote an Agreed Action Agenda to Achieve the Millennium Development Goals by 2015*, UN Secretary-General Report, UNGA OR, Agenda Items 48 and 114, UN Doc. A/64/665 (2010).

²⁴⁹ *Organization of the High-level Plenary Meeting of the sixty-fifth session of the General Assembly*, GA Res. 64/184, UNGA OR, 64th session, Agenda item 48 and 104, UN Doc. A/RES/64/184 (2010).

²⁵⁰ *Keeping the Promise: United to Achieve the Millennium Development Goals*, GA Res. 65/1, UNGA OR, 65th session, Agenda item 13 and 115, UN Doc. A/RES/65/1 (2010), line 77 (e).

“Sustainable Fisheries”,²⁵¹ and deals with issues of conservation and management of fish stocks around the world. The following reviews MPA relevant stipulations in these resolutions.

3.2.3.1 Oceans and the Law of the Sea Resolutions

Relating to MPAs and networks of MPAs, relevant commitments under the CBD framework have been repeatedly recognized and supported in different Oceans and Law of the Sea resolutions. For instance, in the Oceans and Law of the Sea resolution adopted in 2012,²⁵² UNGA called upon States to strengthen the conservation and management of marine biodiversity and ecosystem and national policies relating to MPAs. It recalled the outcome of the United Nations Conference on Sustainable Development, 2012 and decision X/2 of the COP of the CBD in 2010, in particular its target of having 10 percent of the coastal and marine areas covered by systems of protected areas and other area-based conservation measures. It encouraged States to further progress towards the establishment of MPAs, including representative networks and called upon them to further consider options to identify and protect ecologically or biologically significant areas, consistent with international law and based on best the available scientific information. They must also continue and intensify their efforts to develop and facilitate the use of diverse approaches and tools for conserving and managing vulnerable marine

²⁵¹ Full title: “Sustainable Fisheries including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments”.

²⁵² *Ocean and the Law of the Sea*, GA Res.67/78, UNGA OR, 67th session, Agenda item 75 (a), A/RES/67/78 (2012) [Resolution 67/68].

ecosystems, including the possible establishment of MPAs and representative networks of MPAs consistent with international law.²⁵³

Relating to the ecosystem approach, the General Assembly, in its 2005 Oceans and Law of the Sea resolution, requested the 7th meeting of the Open-Ended Informal Consultative Meeting on Oceans and the Law of the Sea²⁵⁴ to focus its discussion on the topic of “Ecosystem Approaches and Oceans”.²⁵⁵ At the meeting, different elements of the ecosystem approach were discussed such as its definition, components, policy and legal frameworks and ways for its implementation.²⁵⁶ Following the meeting, the General Assembly issued resolution 61/222 (also called “the Oceans resolution”) in 2007, which took note of the work of the 7th Open-ended Informal Consultative Process on Oceans and the Law of the Sea. The resolution invited States to consider the agreed elements relating to the ecosystem approach and oceans, as suggested by the Consultative Process. It noted that ecosystem approaches to ocean management should be focused on managing human activities to maintain and where needed, to restore ecosystem health. Furthermore, the ecosystem approach also should have as purposes to sustain goods and environmental services, provide social and economic benefits for food

²⁵³ GA Resolution 67/68, *supra* note 252, paras 192, 193, 194, 195 and 178.

²⁵⁴ The United Nations Open-ended Informal Consultative Process on Ocean and the Law of the Sea was established in 2000 by the UNGA Resolution A/RES/54/33 to facilitate the review by the General Assembly of the development of ocean affairs and the law of the sea; see *Results of the Review by the Commission on Sustainable Development of the sectoral theme of “Oceans and seas”: international coordination and cooperation*, GA Res. 54/33, UNGA OR, 54th session, Agenda item 40, UN Doc. A/RES/54/33 (2000).

²⁵⁵ *Oceans and Law of the Sea*, GA Res. 60/30, UNGAOR, 60th session, Agenda item 75 (a), UN Doc. A/RES/60/30 (2005), line 103.

²⁵⁶ *Oceans and the Law of the Sea*, UN Secretary-General Report, UNGA OR, 61st session, Item 69 (a) of the preliminary list, UN Doc. A/61/63 (2006).

security, sustain livelihoods in support of international development goals and conserve marine biodiversity.²⁵⁷

3.2.3.2 Sustainable Fisheries Resolutions

The Sustainable Fisheries resolutions of UNGA may comprise stipulations that are relevant to MPAs and networks of MPAs. For instance, resolution 66/68,²⁵⁸ adopted in 2011 contains many stipulations relevant to the ecosystem approach to fisheries and MPAs.

Relating to the ecosystem approach to fisheries, the resolution recognizes the need to apply ecosystem approaches to the management of human activities in the oceans, in particular to the conservation and management of fisheries. It calls upon States to widely apply ecosystem approaches to the conservation, management and exploitation of fish stocks directly or through regional fisheries management organization and arrangements. It also encourages States to apply ecosystem approaches in adopting and implementing conservation and management measures addressing by-catch, pollution and overfishing and the protection of habitats of specific concern.²⁵⁹

The resolution also contains provisions which can serve directly and indirectly as framework for the establishment of MPAs for fisheries purposes. It encourages accelerated progress to establish criteria on the objectives and management of MPAs for fisheries purposes and welcomes the work of FAO to develop technical guidelines on the design, and implementation of testing of MPAs for such purposes.²⁶⁰ It urges States and relevant international organizations to reduce or eliminate by-catch, catch by lost or

²⁵⁷ *Oceans and law of the sea*, GA Res. 61/122, UNGA OR, 61st session, UN Doc.A/RES/61/222 (2007), para. 119.

²⁵⁸ *Sustainable fisheries*, GA Res. 66/68, UNGA OR, Agenda item 76 (b), UN Doc. A/RES/66/68 (2011).

²⁵⁹ *Ibid.*, paras 7 and 10.

²⁶⁰ *Ibid.*, para. 138. For details on these guidelines, see above 3.2.6.4 FAO Technical Guidelines.

abandoned gear, fish discards and post-harvest losses by considering the use of, among other tools, closed areas and zones reserved for selected fisheries. Furthermore, it encourages States to give due priority to the implementation of the Johannesburg Plan in relation to achieving sustainable fisheries, especially restoring depleted fisheries to levels that can provide maximum sustainable yield.²⁶¹

As well the resolution indirectly promotes the establishment of MPAs in the high seas. It calls upon States to ratify and effectively implement the United Nations Fish Stocks Agreement. It asks States to take action, individually and through regional fisheries management organizations and arrangements, consistent with the precautionary approach and ecosystem approach to implement the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas. In particular, it asks States and fisheries organizations to address the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, including by using closed areas.²⁶²

3.2.4 World Charter for Nature, 1982

Adopted by resolution 37/7 of the UNGA in 1982,²⁶³ the World Charter for Nature's purpose is to proclaim principles of conservation by which all human conduct affecting nature is to be guided and judged. A number of principles can be interpreted as implicitly promoting the development of networks of protected areas. For instance, the Charter states that unique areas, representative samples of all the different types of

²⁶¹ *Ibid.*, paras. 2 and 82.

²⁶² *Ibid.* note 258, paras 22, 23, 121 and 132; for details about the FAO International Guidelines for the management of Deep-sea Fisheries in the High Seas see above 3.2.6.4 FAO Technical Guidelines.

²⁶³ The Charter was developed by IUCN on the recommendation of General Mobutu Seso Seko, the then President of Zaire (now Democratic Republic of Congo) in his speech at its 12th General Assembly Meeting in 1972. He also brought it to the United Nations in 1980; for more details on the history of the World Charter for Nature, see Wolfgang E. Burhenne and Will A. Irwin, *World Charter for Nature: Legislative History and Commentary*, 2nd ed. (Berlin: Erich Schmidt, 1986) 14.

ecosystems and the habitats of rare or endangered species should receive special protection. The allocation of areas of the earth to different uses shall be planned with due consideration for physical constraints, biological productivity and the natural beauty of the areas concerned. It also requires all planning to include formulation of strategies to conserve nature, establish inventories of ecosystems and assess the effects on nature of proposed policies and activities.²⁶⁴

3.2.5 The World Network of Biosphere Reserves

The concept of biosphere reserve was developed under UNESCO's Man and Biosphere Programme (MAB) in 1974.²⁶⁵ The "biosphere" is defined as an area of terrestrial and marine/coastal ecosystems or a combination thereof, which is internationally recognised under the framework of the MAB. Such an area is intended to have three functions: preservation of genetic resources, species and ecosystems; contribution to sustainable economic and human development; and support for research and education.²⁶⁶

In order to be designated a "biosphere reserve", an area must meet various criteria: appropriate size, contribution to the protection of biological diversity and sustainable development and allowing multiple stakeholder participation. The area must be zoned in three sub-areas: a legally constituted core area devoted to long-term

²⁶⁴ *Ibid.*, paras 2, 9 and 16.

²⁶⁵ UNESCO, *Biosphere Reserves: the Seville Strategy for Biosphere Reserves and Statutory Framework of the World Network of Biosphere Reserves* (Paris: UNESCO, 1996) 5. The MAB was launched by UNESCO in 1970 to focus on the general study of the structure and functioning of the biosphere and its ecological regions, the systematic observation of the changes brought about by man in the biosphere and its resources, the study of the overall effects of these changes upon the human species itself. An International Co-ordinating Council was created within UNESCO for the implementation of the Programme; see Intergovernmental Programme on Man and Biosphere", General Conference Resolution 2.313 in UNESCO, *Records of the General Conference*, 16th session, Paris, October 12 to November 14, 1970, Vol.1 (Paris: UNESCO, 1971) 35.

²⁶⁶ "The Statutory Framework of the World Network of Biosphere Reserves" in *ibid.*, arts 1 and 3.

protection; a buffer zone where only activities compatible with conservation objectives are allowed; and an outer transition area where sustainable resource management are developed and promoted. Provisions should be made relating to: the management of human use activities in the buffer zone; development of a management policy or plan for the area; establishment of a designated authority or mechanism to implement the policy and plan; and programmes of research, monitoring, education and training. The status of each biosphere reserve should be subject to review every ten years.²⁶⁷

The plan to establish an international network of biosphere reserves had been discussed since the first meeting of the International Co-ordinating Council of the Man and Biosphere Programme in 1971.²⁶⁸ The objectives set for the network was to conserve the diversity and integrity of biotic communities of plants and animals within natural ecosystems and to safeguard the genetic diversity of species, to provide areas for ecological and environmental research and to provide facilities for education and learning.²⁶⁹ In 1976, the General Conference of UNESCO officially authorised the Director-General of UNESCO to give priority to the creation of a network of biosphere reserves in the implementation of the MAB.²⁷⁰

²⁶⁷ *Ibid.*, arts 4 and 9.

²⁶⁸ International Co-ordinating Council of the Programme on Man and Biosphere Programme, *Report of the 1st session*, Paris, France, November 9-19, 1971.

²⁶⁹ *Basis for a Plan to Implement MAB Project No.8*, International Co-ordinating Council of the Programme on Man and Biosphere Programme, 3rd session, September 17-19, 1974, Doc. MAB/ICC-3/INF.2 (1974).

²⁷⁰ "The Ecological Science", General Conference Resolution 2.15, in UNESCO, *Records of the General Conference*, 19th session, Paris, France, October 26-November 30, 1976, Vol.1 (Paris: UNESCO, 1977) 37.

In 1995, two important texts were adopted: the Statutory Framework of the World Network of Biosphere Reserves and the Seville Strategy.²⁷¹

The Statutory Framework of the World Network of Biosphere Reserves was formulated to enhance the effectiveness of individual biosphere reserves and to strengthen common understanding and communication at regional and international levels.²⁷² It contains stipulations relating to the definition, functions, criteria and procedure for the designation and the periodic review of biosphere reserves.²⁷³ The text states that biosphere reserves form a worldwide network, known as the World Network of Biosphere Reserves (or the Network) which constitutes a tool for the conservation of biological diversity and the sustainable use of its components, contributing to the objectives of the CBD and other relevant instruments. States participate in or facilitate cooperative activities of the Network, including scientific research and monitoring at the global, regional and subregional levels. States should encourage the constitution and cooperative operation of regional and/or thematic sub-networks of biosphere reserves and promote information exchange within the frameworks of these sub-networks.²⁷⁴

The Seville Strategy's purpose is the development of effective biosphere reserves and the appropriate functioning of the Network.²⁷⁵ It determines four key goals to be achieved, which are to use biosphere reserves for the conservation of natural and cultural

²⁷¹ These two texts were discussed at the 2nd World Congress in Biosphere Reserve in Seville, Spain and later adopted by the General Conference of UNESCO; see "Strengthening of the International Network of Biosphere Reserves", General Conference Resolution 2.3 in UNESCO, *Records of the General Conference*, 27th session, Paris, France, October 25-November 16, 1993, Vol.1 (Paris: UNESCO, 1993) and "The Seville Strategy on Biosphere Reserves and the Statutory Framework of the World Network of Biosphere Reserves", General Conference Resolution 2.4, in UNESCO, *Records of the General Conference*, 28th Session, Paris, France, October 25-November 16, 1995, Vol.1 (Paris: UNESCO, 1996).

²⁷² "The Statutory Framework of the World Network of Biosphere Reserves", introduction in UNESCO, *supra* note 266 at 16.

²⁷³ *Ibid.*, arts 1, 2, 4, 5, 6 and 9.

²⁷⁴ *Ibid.*, arts 2, 7.1 and 8.

²⁷⁵ "The Strategy" in UNESCO, *supra* note 265 at 6.

diversity; as models of land management and of approaches to sustainable development; for research monitoring, education and training; and for implementing the biosphere reserve concept. For each goal, various smaller objectives are defined along with recommendations to achieve these objectives at three different levels: at the individual biosphere reserve level, at the national level and at the international level.²⁷⁶

To achieve the first goal of the Seville Strategy, two objectives are established: to improve the coverage of natural and cultural biodiversity by means of the World Network of Biosphere Reserves and to integrate biosphere reserves into conservation planning. A number of recommendations at the international level are put forward to help achieve these objectives.²⁷⁷ The Strategy also includes recommended Implementation Indicators at international, national and individual biosphere reserve levels, which constitute a check-list of actions that will allow the monitoring and evaluation of the implementation of the Strategy.²⁷⁸

In 2008, the Madrid Action Plan for Biosphere Reserves was adopted²⁷⁹ to articulate actions, targets and success indicators, partnerships, other implementation strategies and an evaluation of the framework for the Network for the period 2008 to 2013.²⁸⁰ It defines four main action areas with 31 targets and 65 actions to be taken at local, national or international levels, which are important for achieving the mission of

²⁷⁶ *Ibid.*

²⁷⁷ Namely to promote biosphere reserves as a means of implementing the goals of the CBD; to promote a comprehensive approach to biogeographical classification in order to develop a system encompassing socio-ecological factors; and to encourage the establishment of transboundary biosphere reserves as a means of dealing with the conservation of organisms, ecosystems, and genetic resources that cross national boundaries, see *supra* note 275 at 7.

²⁷⁸ *Ibid.* at 13.

²⁷⁹ It was adopted by the 3rd Congress of Biosphere Reserves in Madrid, Spain; see *Report of the International Coordinating Council of the Man and Biosphere Programme on its Activities 2006-2007*, UNESCO General Conference, 34th session, Doc. 34 C/REP/9 (2007).

²⁸⁰ *Madrid Plan of Action for Biosphere Reserves (2008-2013)*, online: UNESCO <<http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/related-info/publications/biosphere-reserves/>>, accessed April 13, 2011 at 5.

the MAB. It also provides a scheduled implementation of these actions.²⁸¹ Among the actions to be undertaken under the Madrid Action Plan many relate to the establishment and management of regional networks of biosphere reserves and implementation of the ecosystem approach.²⁸²

So far, the World Network of Biosphere Reserves comprises more than 600 biosphere reserves designated in more than 100 countries, among which 12 are transboundary reserves and many are in coastal and marine areas. A number of these biosphere reserves are located in the coastal and marine areas of the SCS.²⁸³ Besides, nine regional networks of biosphere reserves have been set up.²⁸⁴

The biosphere reserves of UNESCO's MAB could be an effective tool for the establishment of MPAs. They could be used to protect any type of marine habitats or important areas. Its zoning system could enhance the effectiveness of the protection and allowance for human activities in the buffer zone could increase buy-in by marine

²⁸¹ *Ibid.*

²⁸² For instance, the Plan requests the regional networks to develop a structure, strategy and action plan for each regional network to meet their responsibilities within the MAB and regularly report to MAB National Committees and individual biosphere reserves. Individual biosphere reserves and MAB National Committees should use biosphere reserves to manage large biomes as a biosphere reserve system and for extensive terrestrial and marine areas as a series of units linking up relatively small protected core areas with significantly larger buffer zones and transition areas. Individual biosphere reserves should use appropriate tools such as the ecosystem approach, gap analysis, the concept of corridors, and ecological networks for a better connectivity of ecologically-important sites and elements in the landscape and a better inter-linkage of areas/zones and enhanced buffering and a better consistency in planning; see *ibid.* at 11.

²⁸³ Such as Cham island, Ca Mau peninsula, Kien Giang, Cat Ba island and Can Gio mangrove forest of Vietnam; Palawan islands of Philippines and Shakou mangrove swamp of China; see UNESCO-MAB Secretariat, *Biosphere Reserves Complete List*, online: UNESCO <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/sc_mab_BRList2010_EN.pdf>, accessed October 24, 2012 and *List of Transboundary Biosphere Reserves*, online: UNESCO <http://www.unesco.org/mab/doc/brs/TBR_list.pdf>, accessed October 24, 2012.

²⁸⁴ These are the African Network of Biosphere Reserves, the Ibero-America Man and the Biosphere Network, the EUROMAB Network, the East Asian Biosphere Reserve Network, the Pacific Man and the Biosphere Network, South and Central Asia Man and Biosphere Network, the Southeast Asian Biosphere Reserve Network, the ArabMAB Network and the REDBIOS Network; see *MAB Network*, online: UNESCO <<http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/man-and-biosphere-programme/networks/>>, accessed April 13, 2011.

resources users. Finally, the international network of biosphere reserves could contribute to the achievement of a worldwide network of MPAs.

3.2.6 United Nations Food and Agriculture Organization's Instruments relating to Responsible Fisheries

The Food and Agriculture Organization of the United Nations (FAO)²⁸⁵ adopted a number of important instruments to promote responsible fisheries. They include the FAO Code of Conduct for Responsible Fisheries, the FAO International Plans of Action and the Reykjavik Declaration. The FAO has also issued technical guidelines to provide guidance for their implementation. A discussion of these instruments follows with a focus on their potential to contribute to the development of MPAs and networks of MPAs.

3.2.6.1 The Code of Conduct for Responsible Fisheries

The Code of Conduct for Responsible Fisheries was adopted at the 28th FAO Conference²⁸⁶ in 1995 to provide principles and standards for responsible fisheries practices and to ensure effective development and management of living aquatic resources.²⁸⁷ The Code contains provisions which offer an indirect basis for the establishment of MPAs as they ask States to protect marine habitats and conserve fish

²⁸⁵ The Food and Agriculture Organization of the United Nations (FAO) deals with the collection, analysis and dissemination of information relating to nutrition, food and agriculture. Its scope of activities includes fisheries, marine products, and forestry and primary forest products. Relating to fisheries, the mission of FAO is to facilitate and secure the long-term sustainable development and utilization of the world's fisheries and aquaculture; see *FAO Department of Fisheries and Aquaculture*, online: FAO <www.fao.org>, accessed February 15 2010 and FAO, "Constitution", in *Basic Texts of the Food and Agriculture Organizations of the United Nations*, Vol. 1 (Rome: FAO, 2006) art. 1.

²⁸⁶ The supreme governing body of FAO which determines policies of the Organization, approves its Programme of Work and Budget and makes recommendations to Members and international organizations; see *ibid.* art. IV.

²⁸⁷ *Code of Conduct for Responsible Fisheries*, *supra* note 213, Introduction.

stocks.²⁸⁸ It also calls for the implementation of an ecosystem approach to fisheries, especially at the regional level.²⁸⁹

3.2.6.2 The International Plans of Action

The FAO's international plans of action (IPOA) are voluntary instruments developed under the framework of the Code of Conduct for Responsible Fisheries and adopted by the FAO Committee on Fisheries. So far, four international plans of action have been established: IPOA-Seabirds, IPOA-Sharks, IPOA-Capacity and IPOA-IUU.²⁹⁰

The IPOA-Seabirds provides measures that States must put in place to reduce the incidental catch of seabirds in longline fisheries. They include operational and technical

²⁸⁸ For instance, article 6.8 asks States to protect and rehabilitate, as far as possible, all critical fisheries habitats in marine and fresh water ecosystems, such as wetlands, mangroves, reefs, lagoons, nursery and spawning areas. Article 7.1.1 asks States and all those engaged in fisheries management, through appropriate policy, legal and institutional framework, to adopt measures for the long-term conservation and sustainable use of fisheries resources. Article 7.1.8 asks States to take measures to prevent or eliminate excess fishing capacity. Article 7.2.1 asks States and regional fisheries mechanisms to adopt appropriate measures to maintain and restore stocks at level capable of producing maximum sustainable yield. Article 7.2.2 specifies such measures should provide that, *inter alia*, the biodiversity of aquatic habitats and ecosystems be conserved, endangered species protected and depleted stocks allowed to recover, or actively restored. Article 7.6.3 stipulates that where excess fishing capacity exists, mechanisms should be established to reduce capacity to levels commensurate with the sustainable use of fisheries resources. Furthermore, article 8.7.1 asks States to introduce and enforce laws and regulations based on MARPOL 73/78, see *Code of Conduct on Responsible Fisheries*, *ibid.* note 213, arts 6.8, 7.1.1, 7.1.8, 7.2.1, 7.2.2, 7.6.3 and 8.7.1.

²⁸⁹ For instance, article 7.3.1 of the Code requests that fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account previously agreed management measures established and applied in the same region, all removal and the biological unity and other biological characteristics of the stock. As well, article 7.1.3 asks relevant States to cooperate to ensure effective conservation of transboundary, straddling, highly migratory and high seas fish stocks. Article 7.3.2 asks concerned States to adopt compatible measures for conservation and management of these stocks in accordance with their respective competences, see *Code of Conduct on Responsible Fisheries*, *ibid.* note 213, arts 7.1.3, 7.3.1 and 7.3.2.

²⁹⁰ Full names of the Plans of Action are: International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries, International Plan of Action for the Conservation and Management of Sharks, International Plan of Action for the Management of Fishing Capacity and International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing; see FAO, *International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries*, *International Plan of Action for the Conservation and Management of Sharks*, *International Plan of Action for the Management of Fishing Capacity*, (Rome: FAO, 1999) and FAO, *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (Rome: FAO, 2001).

measures.²⁹¹ The Plan lists area and seasonal closures as one of the optional operational measures. According to the Plan, area and seasonal closures can reduce the incidental catch of seabirds when concentrations of breeding or foraging seabirds can be avoided. This measure could be effective if displacement of fishing fleets to other seabird areas is avoided. The Plan also asks states to cooperate regionally to reduce incidental catch of seabirds in longline fisheries.²⁹²

The objective of IPOA-Sharks is to ensure the conservation and management of sharks and their long-term sustainable use. To achieve this objective, states should adopt a national plan of action for conservation and management of shark stocks if their vessels conduct directed fisheries of sharks, or regularly catch sharks in non-directed fisheries. According to the Action Plan, the national plan of action should aim to “protect critical habitats and implement harvesting strategies consistent with the principles of biological sustainability and rational long-term economic use”.²⁹³ Where transboundary, straddling, highly migratory and high sea stocks of sharks are fished by more than one state, relevant states should ensure effective conservation and management of the stocks. The Plan also asks States to cooperate regionally, including to develop regional or subregional shark plans to ensure the sustainability of shark stocks.²⁹⁴

The IPOA-Capacity aims to achieve worldwide, an efficient, equitable and transparent management of fishing capacity. Pursuant to the Action Plan, the management of fishing capacity should be based on the Code of Conduct for Responsible Fisheries and take into consideration a number of major principles and approaches,

²⁹¹ IPOA-Seabird, *supra* note 290 at 1.

²⁹² *Ibid.* note 291 at 4 (para 19) and 10.

²⁹³ IPOA-Sharks *supra* note 290 at 13 (para. 16)

²⁹⁴ IPOA-Sharks *supra* note 290, pp.13-15 (paras 18, 22, 25, and 26).

including the holistic approach to fisheries conservation. Accordingly, the management of fishing capacity should consider all factors affecting capacity in both national and international waters. The management plan should be designed to achieve the conservation and sustainable use of fish stocks and the protection of the marine environment consistent with, *inter alia*, the protection of marine biodiversity and the protection of habitats, particularly those of special concern. Finally, States should cooperate regionally to ensure effective management of fishing capacity.²⁹⁵

The objective of IPOA-IUU is to prevent, deter and eliminate illegal, unreported and unregulated fishing.²⁹⁶ The Action Plan makes provisions relating to the duty of all relevant competent States, that is flag States, coastal States and port States, to fight against illegal, unregulated and unreported fishing. As many MPAs contain regulations to close or restrict fishing, these stipulations can provide a framework to enforce those regulations. The Action Plan also requests States to coordinate their activities and cooperate directly in preventing, deterring and eliminating illegal, unreported and unregulated fishing.²⁹⁷

3.2.6.3 Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem

The Reykjavik Conference was organized jointly by Japan and Iceland in 2001 to assess means for including ecosystem considerations in fisheries management.²⁹⁸ Its

²⁹⁵ IPOA-Capacity, *supra* note 290 at 19(para 7), 20 (para 9 (iv)) and 22 (para.17).

²⁹⁶ For the definition of illegal, unreported and unregulated fishing, see IPOA-IUU, *supra* note 290, paras 3 (3.1), (3.2), and (3.3).

²⁹⁷ *Ibid.* note 296, para. 28.

²⁹⁸ *Report of the 24th session of FAO Committee on Fisheries*, Rome, Italy, February 26-March 2, 2001, online: FAO <<http://www.fao.org/DOCREP/MEETING/003/X9558E.HTM>>, accessed April 9, 2011.

aims were later endorsed by FAO.²⁹⁹ The outcome of the Conference was the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem.³⁰⁰

The Reykjavik Declaration contains stipulations relating to the implementation of an ecosystem approach to fisheries. It recognizes the importance of that approach³⁰¹ and expresses the commitment of the participants to “individually and collectively” work to incorporate ecosystem considerations into the management of fisheries. To this end, they pledge to, *inter alia*, continue the effective implementation of the Code of Conduct and relevant Plans of Action.³⁰²

In addition to providing framework political commitments, the FAO has also produced technical guidelines for the implementation of these commitments. Those technical guidelines are discussed as follows.

3.2.6.4 FAO Technical Guidelines

The FAO has produced a number of technical guidelines in order to provide guidance, tools, and advice on the implementation of commitments under its framework (in the particular the Code of Conduct for Responsible Fisheries) and also commitments

²⁹⁹ *Report of 24th session of FAO Committee on Fisheries, supra* note 298; *Report of the 120th session of FAO Council*, Rome, Italy, June 18-23, 2001, online: FAO <<http://www.fao.org/DOCREP/MEETING/003/Y1120F/Y1120F00.HTM>>, accessed April 9, 2011.

³⁰⁰ FAO, *Report of the Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem*, Reykjavik, Iceland, October 1-4, 2001, FAO Fisheries Report No. 658 (Rome: FAO, 2002) 105.

³⁰¹ For instance, it recognizes that the incorporation of ecosystem considerations to sustainable fisheries management entails taking into account impacts of fisheries on the marine ecosystem and *vice versa*. It confirms the objective of including ecosystem considerations in fisheries management is to contribute to long-term food security and to human development and to assure the effective conservation and sustainable use of the ecosystem and its resources. It affirms that incorporation of ecosystem considerations implies, among other things, more effective conservation of the ecosystem and entails an understanding of the impact of human activities on the ecosystem (including negative impacts), see *ibid.* note 300.

³⁰² *Ibid.* note 300.

made under other frameworks, such as UNGA resolutions.³⁰³ These guidelines have no formal legal status and are considered to be a supplement or an extension of the existing fisheries regime.³⁰⁴ They are very flexible and can be regularly revised to take into account new and existing practical experiences.³⁰⁵

Many of these documents relate to the ecosystem approach to fisheries³⁰⁶ or/and MPAs. They define the ecosystem approach to fisheries, recognize its importance to achieve sustainable development in a fisheries context and explain how to translate different economic, social and ecological policy goals into operational objectives, indicators and performance measures.³⁰⁷ As for MPAs, they are considered by these guidelines as a tool to implement the ecosystem approach to fisheries, rebuild fish stocks, conserve and manage sharks, and manage of deep-sea fisheries in the high

³⁰³ See for example, FAO Marine Resources Service, *Fisheries management. 1. Conservation and management of sharks*, FAO Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 1. (Rome: FAO, 2000) [Fisheries management. 1. Conservation and management of sharks]; FAO, *Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, FAO Technical Guidelines for Responsible Fisheries, No. 9 (Rome: FAO, 2002) [Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing]; FAO, *Fisheries Management. 2. The ecosystem approach to fisheries*, FAO Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 2 (Rome: FAO, 2003) [Fisheries Management. 2. The ecosystem approach to fisheries]; FAO, *International Guidelines for the Management of Deep-sea Fisheries in the High Sea* (FAO: Rome, 2007) [International Guidelines for the Management of Deep-sea Fisheries in the High Sea]; FAO, *Fisheries management. 2. The ecosystem approach to fisheries. 2.2 The Human dimension of the ecosystem approach to fisheries*, FAO Fisheries Technical Guidelines for Responsible Fisheries, No.4, Suppl.2, Add.1 (Rome: FAO. 2008) and FAO, *Fisheries Management. 4. Marine Protected Areas and Fisheries*, FAO Technical Guidelines for Responsible Fisheries No.4, Suppl. 4 (Rome: FAO, 2011) [Fisheries Management. 4. Marine Protected Areas and Fisheries].

³⁰⁴ FAO, *Fisheries management. 2. The ecosystem approach to fisheries. 2.2 The Human dimension of the ecosystem approach to fisheries*, *ibid.* note 303 and Fisheries Management. 2. The ecosystem approach to fisheries, *ibid.*

³⁰⁵ Fisheries Management. 2. The ecosystem approach to fisheries, *ibid.* and FAO, *Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, *supra* note 303.

³⁰⁶ See Fisheries Management. 2. The ecosystem approach to fisheries, *ibid.* at 14.

³⁰⁷ See Fisheries Management. 2. The ecosystem approach to fisheries, *ibid.*, Abstract. The ecosystem approach to fisheries is defined by the guidelines as “an ecosystem approach which strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries”

seas.³⁰⁸ As well, the guidelines for the Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing confirm that this Plan can provide a framework for states to adopt and enforce restrictive rules relating to closed areas.³⁰⁹

3.2.7 Particularly Sensitive Sea Areas

Developed from a resolution of the International Conference on Tanker Safety and Pollution Prevention in 1978³¹⁰ the regime of PSSA was defined in the IMO Assembly resolution A 720 (17) on “Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas”.³¹¹ Since then, it has been clarified, updated and revised a few times. The most recent guidelines relating to PSSAs are provided in resolution A 982 (24), 2005.³¹²

According to the resolution, a PSSA is an area that needs special protection through action by IMO because of its significance for ecological, socio-economic, or scientific attributes where such attributes may be vulnerable to damage by international shipping activities. At the time of the designation of a PSSA, an associative protective

³⁰⁸ Fisheries Management. 2. The ecosystem approach to fisheries, *ibid.*; Fisheries management. 1. Conservation and management of sharks, *supra* note 303; International Guidelines for the Management of Deep-sea Fisheries in the High Sea, *supra* note 303 and Fisheries Management. 4. Marine Protected Areas and Fisheries, *supra* note 303.

³⁰⁹ Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, *supra* note 303.

³¹⁰ Inter-Governmental Maritime Consultative Organization, *International Conference on Tanker Safety and Pollution Prevention, 1978* (London: IMCO, 1978), Resolution 9 at 79. The Resolution invites the IMO to take action relating to areas around the world in special need of protection from ships and dumping because of their sensitivity. The Marine Environment Protection Committee started to consider the implementation of the resolution in 1996. The discussion continued over the years until it was decided that the PSSA’s Guidelines, together with the guidelines for the designation of special areas under MARPOL submitted as part of a single draft solution to be considered by the IMO Assembly, see Agustín Blanco-Bazán, “The IMO Guidelines on Particular Sensitive Sea Areas (PSSAs). Their Possible Application to the Protection of Underwater Cultural Heritage” in (1996) 20:4 *Marine Policy* 343 at 344.

³¹¹ *Guidelines for the Designation of Special Areas and Identification of Particular Sensitive Areas*, IMO Assmby Res.A.720 (17), IMO OR, 17th Session, A 17/Res 720 (1992).

³¹² *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, IMO Assembly Resolution A.982(24), IMO OR, 24th Session, A 24/ Res 982 (2005).

measure must have been approved or adopted by IMO to prevent, reduce, or eliminate the threat or identified vulnerability. These associative protective measures include designation of an area as a special area or emission control area under MARPOL, adoption of ships' routing and reporting systems under SOLAS near or in the area or other legal measures aimed at protecting specific sea areas against environmental damage from ships. For the measure to be adopted, it has to have an identified legal basis, such as an IMO instrument or article 211 (6) of the UNCLOS. In some circumstances, a proposed PSSA can include within its borders a buffer zone if it can be justified that this zone contributes directly to the protection of the core area.³¹³

In order to be identified as a PSSA, the sea area must meet at least one of the three groups of criteria: ecological, socio-economic or scientific and educational.³¹⁴ Besides, the area should be at risk from international shipping activities.³¹⁵ A PSSA may be identified within a special area and *vice versa*. The criteria for the identification of PSSAs and those for the designation of special areas are not mutually exclusive.³¹⁶

Relating to the process for designating PSSAs, a Member Government which wishes to have IMO designate a PSSA should submit an application with the necessary information to the Marine Environment Protection Committee. Where more than one government have an interest in a particular area, they should formulate a coordinated proposal which contains integrated measures and procedures for cooperation between the

³¹³ *Ibid.*, sections 1.2, 6.1.1, 6.1.2, and 6.1.3.

³¹⁴ *Ibid.*, sections 4.4-4.5. The ecological criteria include the uniqueness or rarity of the area, area of high representativeness, the existence of critical habitat in the area, high dependency of the ecological process on biotically structured system in the area. The social, cultural and economic criteria include the economic and social importance of the area, area which supports traditional subsistence or food production activities or area with the presence of significant historical and archaeological sites. Scientific and educational criteria include the high scientific interest of the area, an area which provides baseline for monitoring studies or an area with exceptional opportunity for the demonstration of particular natural phenomena.

³¹⁵ *Ibid.*, section 5.1.

³¹⁶ *Ibid.*, section 4.5.

jurisdictions of the proposing Member Governments.³¹⁷ So far, 14 PSSAs have been designated.³¹⁸

Although considered as a measure within three of four levels of measures for the protection of the marine environment from vessel-source pollution³¹⁹ and an important tool to assist States to implement obligations under the CBD,³²⁰ the PSSA concept has been subject to a number of controversies. For instance, questions have been raised relating to the intrinsic value of the concept as all the associative protective measures can be applied without utilizing the procedure of the PSSA.³²¹ However, Julian Roberts *et al.* and Aldo Chircop argue that the designation of a PSSA has an intrinsic value in its own right, since it emphasizes the sensitivity of an area in which mariners should exercise greater caution.³²² Major shipping countries and industries have also protested the

³¹⁷ *ibid.*, sections 3.1, 3.2 and 7.5.

³¹⁸ These are the Great Barrier Reef, Australia (designated in 1990), Sabana-Camagüey Archipelago, Cuba (1997), Malpelo Island, Colombia (2002), sea area around the Florida Keys, United States (2002), The Wadden Sea, Denmark, Germany, Netherlands (2002), Paracas National Reserve, Peru (2003), Western European Waters (2004), Torres Strait, Australia and Papua New Guinea (2005), Canary Islands, Spain (2005), Galapagos Archipelago, Ecuador (2005), Baltic Sea area, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden (2005), Papahānaumokuākea Marine National Monument, United States (2007), the Strait of Bonifacio, France and Italy (2011) and Saga Banks, Netherlands (2012); see *List of Adopted PSSAs*, online: IMO <<http://www.imo.org/OurWork/Environment/PollutionPrevention/PSSAs/Pages/Default.aspx>>, accessed January 15, 2013.

³¹⁹ Aldo Chircop, “The Designation of Particularly Sensitive Sea Areas: A New Layer in the Regime for Marine Environmental Protection from International Shipping” in Aldo Chircop, Ted McDorman and Susan Rolston, *The Future of Ocean Regime-Building: Essays in Tribute to Douglas Johnston* (Leiden: Martinus Nijhoff Publishers, 2009) 573 at 575. According to Chircop, relevant levels are general global obligations for States to protect the marine environment from vessel-source pollution, in particular those set out by UNCLOS and MARPOL 73/78, vessel discharge standards in special areas at the regional level designated under MARPOL 73/78; article 211(6) UNCLOS and PSSA regime, national measures adopted under the International Convention relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 and UNCLOS.

³²⁰ Julian Roberts, Aldo Chircop and Siân Prior, “Area-based Management on the High Seas: Possible Application of the IMO’s Particularly Sensitive Sea Area Concept” (2010) 25 *The International Journal of Marine and Coastal Law* 483

³²¹ Julian Roberts *et al.*, “The Western European PSSA Proposal: A ‘Politically Sensitive Sea Area’ ” (2005) 29 *Marine Policy* 431 at 434.

³²² *Ibid.* note 321 at 433; Chircop, *supra* note 319 at 605.

flexibility of the criteria of designation, the potentially large size of a PSSA and the types of associative protective measures allowed for PSSAs.³²³

Disagreement also exists over whether PSSAs could be considered a category of MPAs. La Fayette, Agardy, Pernetta and Wells consider PSSAs a specialized MPA³²⁴ while Roberts, Chircop and Prior argue that PSSA, as a single sector designation, cannot be considered an MPA. In practice, the designation of a PSSA can be an additional tool of protection for an existing MPA as half of the designated PSSAs are actually existing MPAs.³²⁵

3.2.8 International Coral Reef Initiative

The International Coral Reef Initiative (ICRI) is a partnership of governments, international organizations and NGOs to build and sustain partnerships to improve national and regional capacities to achieve effective management and sustainable use of coral reefs and related environments.³²⁶ Under its framework, two important texts relating to the conservation of coral reefs have been adopted, namely the Call for

³²³ Chircop, *supra* note 319.

³²⁴ Tundi Spring Agardy, *Marine Protected Areas and Ocean Conservation* (Austin, TX : R.G. Landes, 1997) 100; Louise de la Fayette, “The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law” (2001) 16:2 *The International Journal of Marine and Coastal Law* 155 at 186 and John C. Pernetta and Susan M. Wells, *A Global Representative System of Marine Protected Areas, Vol. 1: Antarctic, Arctic, Mediterranean, Northwest Atlantic, Northeast Atlantic and Baltic* (Washington, D.C.: Great Barrier Reef Marine Park Authority, 1995) 3.

³²⁵ The Great Barrier Reef, the Malpelo Island, the Florida Keys, the Paracas National Reserve, the Galapagos Archipelago and the Papahānaumokuākea Marine National Monument.

³²⁶ ICRI, “Partnership Building and Framework Development” in *Report of 1st International Coral Reef Initiative General Meeting*, Silliman University, Dumaguete City, the Philippines, May 29-June 2, 1995, C1. Initiated by Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom and the United States of America, the ICRI was institutionalized in 1995 with a membership including 28 government agencies, 10 international organizations and nine NGOs. A General Meeting of ICRI is organized at least once yearly, see *Ibid.* note 326; *ICRI Members and Networks*, online: ICRI <<http://www.icriforum.org/about-icri/members-networks>>, accessed June 1, 2011 and ICRI, *Organization and management procedures for the International Coral Reef Initiative*, revised 23 April 2009 at the 23rd International Coral Reef Initiative General Meeting, Phuket, Thailand, April 20-23, 2009.

Action³²⁷ and Framework for Action.³²⁸ Both documents contain MPAs relevant provisions.

The Call for Action of the ICRI expresses the concern of participating governments about the serious decline of coral reef globally, lists the threats to corals and calls for action. It endorses measures to be implemented at global, regional and national levels in three areas: coastal management, capacity building, and research and monitoring. Relating to coastal management, the document asks governments to use an ecosystem-based and integrated approach to develop coral reef initiatives at all three levels.³²⁹

The Framework for Action of the ICRI aims to mobilize governments and other stakeholders to implement the Call for Action. It calls for international, regional and national actions relating to three components: management, capacity building, and research and monitoring.³³⁰ For the management component, the document calls for the promotion, establishment and effective management of coastal and marine protected areas for coral reefs and related ecosystems within the framework of customary international law as exemplified by the UNCLOS.³³¹

³²⁷ ICRI, *International Coral Reef Initiative Call to Action*, adopted June 2, 1995 at the 1st International Coral Reef Initiative General Meeting, Silliman University, Dumaguete City, Philippines, May 29-June 2, 1995.

³²⁸ ICRI, *International Coral Reef Initiative Framework for Action*, adopted at the 1st International Coral Reef Initiative General Meeting, Silliman University, Dumaguete City, Philippines, May 29-June 2, 1995 [International Coral Reef Initiative Framework for Action].

³²⁹ ICRI, *supra* note 327.

³³⁰ International Coral Reef Initiative Framework for Action, *supra* note 328.

³³¹ *Ibid.* at 4.

Measures for the implementation of these instruments are discussed, adopted and reviewed³³² under the General Meetings of the ICRI, which occurs twice per year.³³³ MPAs are an important subject of discussion under its auspices³³⁴ and various decisions have been adopted. For instance, General Meetings of ICRI have called for an increase in the use of MPAs to protect ecosystems,³³⁵ the development of representative networks of MPAs to protect coral reefs in small island States,³³⁶ and the promotion of the conservation and sustainable management of reef fish spawning aggregations.³³⁷

The discussion of the above international instruments, both treaties non-legally binding texts, seems to point to an emerging duty under the international law to establish MPAs and their networks. The next issue is to examine if this can be sustained as a customary norm of international law.

3.3 Existence of a Customary Rule Requiring the Establishment of Marine Protected Areas?

One question that can be asked is whether an international customary rule relating to the duty to establish MPAs has emerged. According to the International Court of

³³² For instance, two operating networks have been established to support the monitoring and conservation of coral reefs: the Global Coral Reef Monitoring Network (GCRMN) and The International Coral Reef Action Network (ICRAN). ICRAN's activities have been suspended since 2011; see *What We Do*, online: GCRMN <<http://www.gcrmn.org/about.aspx>>, accessed January 16, 2013; *The International Coral Reef Action Network*, online: ICRI <<http://www.icran.org/icran.html>>, accessed January 16, 2013 and *Resolution on the International Coral Reef Action Network*, adopted at the ICRI 26th General Meeting, La Réunion, France, December 12-15, 2011. ICRAN provided fund for a number of projects for reef conservation in the East Asian Seas region, see above 4.1.1 The Coordinating Body for the Seas of East Asia.

³³³ For the most recent meeting of the ICRI General Meeting, see *Minutes of the 27th ICRI General Meeting*, Cairns, Australia, July 15-19, 2012.

³³⁴ An Ad hoc Working Group on MPAs was established by the General Meeting in 1999 and remained operational until 2007; see *Report of the 8th Meeting of the ICRI CPC*, Guadeloupe, France, October 28 and 29, 1999 at 7 and *Summary Report of the 20th General Meeting of the ICRI*, Tokyo, Japan, April 23-24, 2007 at 2.

³³⁵ *Recommendation on Marine Protected Areas*, adopted during the ICRI Coordination and Planning Committee Meeting May25-26, 2000, Noumea, New-Caledonia.

³³⁶ *ICRI Resolution on Small Island Developing States and Coral Reefs*, adopted during the ICRI Coordination and Planning Committee Meeting, November 17-19, 2003, Turks and Caicos Islands.

³³⁷ *ICRI Statement on Coral Reef Fish Spawning Aggregations*, adopted at the 19th General Meeting of the ICRI, October 22-23, 2006, Cozumel, Mexico.

Justice, an international custom is established by the evidence of a general practice accepted as law.³³⁸ Two conditions are needed for any rule to be considered as an international rule of customary law: it must result from an actual general, repetitive and consistent practice of States (material condition) and this practice must be considered by relevant States as legally binding (psychological condition).³³⁹

Relating to the material condition, as examined earlier, the practice of establishing protected areas for various reasons traces back to ancient time.³⁴⁰ Most countries have now established protected areas in their territories. MPAs appear much later than terrestrial protected areas as the exploitation of the sea needs a certain level of technological development but the practice is basically the same in different geographical areas. As to the networking of protected areas and MPAs, it has appeared only since the 1970s³⁴¹ but has gained lots of momentum by virtue of its referencing in more and more national and international texts³⁴².

Thus, the adjunct question is whether there is a feeling among States that this practice should be legally binding. A complete and thorough answer to this question would require the examination of practices of all States relating to MPA creation, including relevant national legislations and policies, bilateral and multilateral treaties concluded as well as their statements and behaviour in different international *fora*. This “Herculean” exercise³⁴³ is beyond the scope of this dissertation. Besides, it is argued that the modern international custom is derived by “a deductive process that begins with

³³⁸ *Statutes of the International Court of Justice*, art. 38 al.1(b) online: International Court of Justice <<http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0>>, accessed April 20 2011.

³³⁹ Malcolm N. Shaw, *International Law*, 6th ed. (Cambridge: Cambridge University Press, 2008).

³⁴⁰ See above 2.1.2 From Marine Protected Areas to a Network of Marine Protected Areas.

³⁴¹ *Ibid.*

³⁴² See *ibid.* note 340 for examples.

³⁴³ Daniel Bodansky, “Customary (and Not so Customary) International Environmental Law” (1995) 3 *Indiana Journal of Global Legal Studies* 105 at 113.

general statements of rules rather particular instances of practice”.³⁴⁴ It means that rules of modern international custom may be looked for in multilateral treaties and declarations by international *fora* such as the General Assembly, rather than in States’ behaviour.³⁴⁵ Therefore, this section focuses on the evaluation of the international instruments discussed earlier, both treaties and non-legally binding texts. The purpose of the analysis is to see whether their stipulations could contribute to the generation or recognition of any international customary rule relating to the establishment of MPAs.

The International Court of Justice identified conditions which treaties and non-binding instruments, such as resolutions and declarations, should meet to contribute to the recognition of the existence or the emergence of an international customary rule. For treaties, the Court stated in the *North Sea Continental Shelf Case* that for a conventional rule to pass into the *corpus* of customary law, it must have, firstly, a “fundamental norm-creating character such as could be regarded as forming the basis of a general rule of law”.³⁴⁶ Furthermore, the convention in question needs to have a widespread and representative participation, in particular from states whose interests are specially affected. After signature to the convention, “[...] State practice, including that of states whose interests are specially affected, should have been both extensive and virtually uniform in the sense of the provision invoked; and should moreover have occurred in

³⁴⁴ Anthea Elizabeth Roberts, “Traditional and Modern Approaches to Customary International Law: A Reconciliation” (2001) 95 *American Journal of International Law* 757 at 758.

³⁴⁵ *Ibid.* Authors often cite the decision *Military and Paramilitary Activities in and Against Nicaragua*, 1986 of the International Court of Justice as an illustration of this modern approach to develop international customary law; see *Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)*, Merits, [1986] I.C.J. Rep.14, paras 186-207. See also Anthony A. D’Amato, “Trashing Customary International Law” (1987) 81 *American Journal of International Law* 101.

³⁴⁶ *North Sea Continental Shelf Case (Federal Republic of Germany/Netherlands)*, [1969] I.C.J. Rep. 4 at 43, para.72; for a more detailed analysis of this condition, see Anthony D’Amato, *International Law Sources* (Leiden: Martinus Nijhoff, 2004) 263 [the author calls it “the rule of manifest intent”].

such a way as to show a general recognition that a rule of law or legal obligation is involved”.³⁴⁷

Relating to UNGA resolutions, the International Court of Justice stated in the *Legality of the Threat or Use of Nuclear Weapons Case* that a UNGA resolution can “[...] in certain circumstances, provide evidence important for establishing the existence of a rule or the emergence of an *opinio juris*”.³⁴⁸ To establish whether an UNGA resolution fulfills this condition, the Court looked at its content and conditions of its adoption and whether an *opinio juris* exists as to its normative character. A series of resolutions may show the gradual evolution of the *opinio juris* required for the establishment of a new rule.³⁴⁹ Mark Villiger has explained further that national statements in the preparatory and plenary phases of a UNGA resolution, the absence of “reservations” by States, and voting records may constitute first instances of State practice.³⁵⁰ The same argument can also be applied to those declarations and plans of actions which are adopted under the framework of, or endorsed by the United Nations.³⁵¹ Finally, the Court also recognized that a resolution of an international conference can be declaratory of an existing customary rule.³⁵²

Thus, according to the International Court of Justice, the most common but also perhaps the most fundamental condition for a textual provision to be considered as

³⁴⁷ *Ibid.* note 346, paras 73 and 74.

³⁴⁸ *Legality of the Threat or Use of Nuclear Weapons Case*, Advisory Opinion, [1996] I.C.J Rep. 226 at 254, para.70

³⁴⁹ *Ibid.* note 348.

³⁵⁰ Mark E. Villiger, *Customary International Law and Treaties: A Manual on the Theory and Practices of the Interrelation of Sources*, 2nd ed. (The Hague: Kluwer International Law, 1997) 25.

³⁵¹ Such as the Stockholm Declaration and Action Plan, the Rio Declaration and Agenda 21 or the Johannesburg Declaration and Action Plan, the World Charter of Nature and the Millennium Declaration and Goals.

³⁵² *Fisheries Jurisdiction Case (United Kingdom v. Iceland)*, [1973] I.C.J Rep. 3 at 24, para 56; Mark E. Villier argued that the Court’s decision is also true for resolutions and declarations made by all international bodies or conferences: see Villiger, *supra* note 350 at 129 for details.

reflecting or establishing international customary law is its normative character. The provision must be clearly formulated as a rule, which requires States to take or not to take action. However, most of the provisions asking for the establishment of MPAs in the international instruments studied in this Chapter seem to lack this very normative character. Actually, they do not require States to establish MPAs but just consider them as a tool that States can use to protect and preserve the natural environment and resources.

The only two provisions that actually require States to establish protected areas are articles 8(a) of the CBD³⁵³ and regulation 31(7) of the Regulations for Prospecting and Exploration of Polymetallic Nodules of the International Seabed Authority³⁵⁴. However, the normative character of article 8 of the CBD is weakened as it requires States to develop a network of protected areas “as far as possible and as appropriate”³⁵⁵. Consequently, it might not fulfill the condition of “manifest intent”³⁵⁶ requested by the International Court of Justice.

Regulation 31(7) of the Regulations for Prospecting and Exploration of Polymetallic Nodules uses a relatively stronger formulation to require States to propose the establishment of MPAs while conducting exploitation activities in the Area. It states that “If the Contractor applies for exploitation rights, it shall propose areas to be set aside and used exclusively as impact reference zones and preservation reference zones”³⁵⁷. This strong formulation might, supported by other elements and future State practice, contribute to the emergence of an international customary rule. However, even it is the

³⁵³ CBD, *supra* note 8, art. 8.

³⁵⁴ See above 3.1.1 United Nations Convention on the Law of the Sea, 1982.

³⁵⁵ CBD, *supra* note 8, art.8.

³⁵⁶ *North Sea Continental Shelf Case (Federal Republic of Germany/Netherlands)*, *supra* note 346.

³⁵⁷ International Seabed Authority, *supra* note 42.

case, this rule would have only a very narrow scope of application which reference to the exploitation of the seabed.

Nevertheless, based on the language used in above-mentioned international instruments, it could be argued that the establishment of MPAs and networks of MPAs has become *lex ferenda* or the law as it should be for the protection of the marine environment. Despite the fact that only *lex lata* or the law as it is can legally contribute to the formation of international custom,³⁵⁸ the adoption of a stipulation *de lege ferenda* could help its authors to express their desire to see a change of the current law.³⁵⁹ Besides, when a *lex ferenda* is formulated in instruments such as international declarations and UNGA resolutions, it can influence strongly the development of a new law or the modification of the existing one.³⁶⁰

³⁵⁸ *North Sea Continental Shelf Case (Federal Republic of Germany/Netherlands)*, *supra* note 346, para.62. See also *Southwest Africa (Ethiopia v. South Africa, Liberia v. South Africa)*, 2nd phase [1966] I.C.J. Rep.6, paras 49-52.

³⁵⁹ M. Virally, 'A Propos de la "Lex Ferenda"' in D. Bardonnet et al.(eds), *Le droit international: unité et diversité. Mélanges offerts à Paul Reuter* (Paris: Pedone, 1981) 213 [in French].

³⁶⁰ *Ibid.* at 221.

Conclusion

This Chapter has reviewed different stipulations in international treaties and non-binding instruments applicable to the process of developing a network of MPAs in the SCS. They can be summarized as having one of the following stipulations relevant to the development of a network of MPAs in the SCS:

- Stipulations providing for a direct commitment to the establishment of MPAs and networks of MPAs: they include, for example, article 8 of the CBD which calls upon States to develop a network of protected areas in the implementation of *in-situ* conservation³⁶¹ and article 4(1) of the Ramsar Convention calling upon States to establish nature reserves on wetlands³⁶².
- Stipulations providing the basis for the establishment of MPAs: most of the time, these do not explicitly mention protected areas but set out a framework conducive to the establishment of MPAs. Examples of these provisions include article 192 of the UNCLOS which recognizes the general obligation of States to protect and preserve the marine environment and article 194 of the UNCLOS which asks States to protect and preserve rare or fragile ecosystems as well as the habitats of depleted, threatened or endangered species.
- Stipulations providing tools to facilitate the establishment and management of MPAs and networks of MPAs:³⁶³ such tools can be specific types of protected areas such as the status of World Heritage under the World Heritage Convention³⁶⁴ or other area-based management measures such as the special

³⁶¹ CBD, *supra* note 8, art.8.

³⁶² Ramsar Convention, *supra* note 96.

³⁶³ José Guerreiro *et al.*, "The Role of International Environmental Instruments in Enhancing Transboundary Marine Protected Areas: An Approach in East Africa" (2010) 35: 2 Marine Policy 95 at 98.

³⁶⁴ World Heritage Convention, *supra* note 9, art. 1.

area and air emission control under MARPOL 73/78³⁶⁵. There are also trade-related measures such as stipulations relating to trade in endangered species under CITES.³⁶⁶ It is noteworthy to observe that multisectoral area-based management tools, such as the world heritage, wetlands of international importance and biosphere reserve have been commonly used by SCS States but tools providing an area-based management of shipping such as special areas, PSSAs and routeing measures have been underused. So far, no special area and PSSA has been adopted in the SCS and routeing measures has been used only in areas with dense shipping traffic, namely in the Straits of Malacca and Singapore and near Hong Kong.³⁶⁷

- Stipulations providing guidelines on the process of establishing and managing MPAs and networks of MPAs: they are, for example, the provisions under the COP of the CBD on basic principles and guidelines relevant to the establishment and management of MPAs and networks of MPAs.³⁶⁸

The next Chapter discusses how different stipulations have been implemented at the regional level in the SCS.

³⁶⁵ MARPOL 73/78, *supra* note 14, Annex I regulation 1(10), Annex II regulation I (7), Annex V regulation I (3) and Annex VI regulation 2(11).

³⁶⁶ CITES, *supra* note 13, arts III, IV and V.

³⁶⁷ See above 3.1.8 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978; 3.1.9 International Convention on the Safety of Life at Sea, 1974 and 3.2.7 Particularly Sensitive Sea Areas.

³⁶⁸ See above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

Chapter IV. Regional Cooperation Relating to Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea

This Chapter reviews and evaluates the status of regional cooperation relating to MPAs and a network of MPAs in the SCS by assessing developments in a number of regional organizations and arrangements in terms of their potential role to promote the development of a network of MPAs in the SCS. Regional mechanisms studied are those that have mandates related to the protection of the marine environment and a territorial scope relevant to the SCS. They include:

- Institutions responsible for the protection of the marine environment in the East Asian Seas region, namely the Coordinating Body for the Seas of East Asia and the Partnerships in Environmental Management for the Seas of East Asia;
- Regional agreements concluded to implement the CMS, namely the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia and the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range;
- Organizations to promote regional cooperation in fisheries with a territorial relevance to SCS, namely the Southeast Asia Fisheries Development Center and the Asia-Pacific Fisheries Commission;
- Organizations to promote marine scientific research with a territorial relevance to the SCS namely the Intergovernmental Oceanographic Commission's Sub-Commission for the Western Pacific
- Mechanisms established to prevent conflicts and promote confidence-building measures and cooperative activities in the SCS, namely the Declaration on the

Conduct of Parties in the South China Sea and the Workshops in Managing Potential Conflicts in the South China Sea;

- Institutions which have a mandate for the protection of the marine environment, namely the Asia Pacific Economic Forum and the Association of Southeast Asian Nations; and
- Other relevant sub-regional and bilateral arrangements such as the Turtle Islands Heritage Protected Area, the Gulf of Tonkin Fisheries Agreement, the Cooperative Mechanism on the Safety of Navigation and Protection of the Marine Environment in the Straits of Malacca and Singapore and the Pan-Tonkin Gulf Economic Forum.

The priority of the analysis in this Chapter follows the perception of the author of the relevance of the mechanism with regards to developments of MPAs and a network of MPAs in the SCS. Thus, the most relevant mechanisms such as the Coordinating Body for the Seas of East Asia, Partnerships in Environmental Management for the Seas of East Asia, Association of Southeast Asian Nations and regional agreements concluded for the implementation of the CMS are discussed first and in greater detail. The discussion concerns commitments under these mechanisms that are relevant to MPAs, a network of MPAs and regional cooperation to protect the marine environment, whether they are expressed in agreements or plans and programs of action. In addition, concrete measures, projects and activities implemented by them which provide the basis or could facilitate the establishment of MPAs and development of a network of MPAs in the SCS are also reviewed. Other mechanisms and instruments, are also considered in regard to their potential contribution to the development of a network of MPAs in the SCS is discussed. Finally, a more focused analysis is given to the GEF/UNEP Project,

“Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”, developed and implemented under the framework of the Coordinating Body for the Seas of East Asia. This is the most important initiative in support of the development of a regional network of MPAs in the SCS so far.

4.1 Mechanisms for the Protection of the Marine Environment in the East Asian Seas

For two reasons, the Coordinating Body for the Seas of East Asia and the Partnerships in Environmental Management for the Seas of East Asia have the greatest potential to facilitate the coordination of regional efforts to develop a network of MPAs in the SCS. First, they have a specific mandate for the protection of the marine environment and second, their membership comprises all SCS States. Commitments towards the establishment of MPAs and networks of MPAs and relevant supportive measures under both mechanisms are elicited as follows.

4.1.1 The Coordinating Body for the Seas of East Asia

The Coordinating Body for the Seas of East Asia (or COBSEA) is established to be responsible for the implementation of one of UNEP’s 13 Regional Seas Programmes.¹ It is mandated to oversee the implementation of the Action Plan for the Protection and Sustainable Development of the Seas of East Asia.² The objective of the Action Plan is

¹ For more details about UNEP Regional Seas Programmes, see *Regional Sea Programmes*, online: UNEP <<http://www.unep.org/regionalseas/>>, accessed August 1, 2011.

² The Action Plan was adopted in 1981 by Indonesia, Malaysia, Philippines, Singapore and Thailand; see UNEP Regional Seas, *Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of The East Asian region*, UNEP Regional Seas Reports and Studies No.24 (Bangkok: UNEP, 1983). It was modified in 1994 to include the participation of Australia, China, Cambodia, Republic of Korea and Vietnam, see *About COBSEA*, online: COBSEA <<http://www.cobsea.org/aboutcobsea/background.html>>, accessed June 4, 2012.

to provide a comprehensive strategy to protect the environment and promote sustainable development in the East Asian Seas.³

Under the framework of COBSEA, commitments relating to MPAs are set out under the Action Plan for the Protection and Sustainable Development of East Asian Seas and activities relating to MPAs were implemented under its projects concerning coral reefs. The Action Plan states that a network of properly managed MPAs, including strictly protected reserves should be established. Critical habitats to form part of this network are to be selected on the basis of their productivity, uniqueness, or vulnerability. These steps are meant to advance the twin goals to conserve biodiversity and to maintain a suitable level of productivity of the area to meet human needs.⁴

Activities relating to MPAs are undertaken in various projects developed under COBSEA and the ones that the Coordinating Body coordinated or participated in the implementation, such as those on coral reefs and the “Reversing the environmental degradation trend in the South China Sea and Gulf of Thailand” project. The latter is discussed later.⁵ Other activities under the framework of projects on coral reef such as the ICRAN/UNEP Small Grants Fund Programme and the East Asian Seas Regional ICRAN project are discussed in this section.

The UNEP/ICRAN Small Grants Fund Programme was established in 2002 to provide funding to short-term projects on monitoring, management and protection of

³ UNEP Regional Seas, *Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian Region*, Annex IV, Doc. COBSEA (OCA)/EAS IG5/6 (1994) [Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian region].

⁴ Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian region, *ibid.* at 5.

⁵ See below 4.5 The GEF/UNEP Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”.

coral reefs from June 2002 to May 2003.⁶ The goals of the Programme include to strengthen the capacity of institutions managing MPAs and increase the involvement of stakeholders in MPAs management.⁷ The Programme funded the implementation of a total of nine projects focusing on capacity building in coral reef monitoring in the various locations in the region.⁸

COBSEA also participated in the implementation of the ICRAN project on Demonstration Sites-Target Sites in 2002. This project focused on selecting a number of sites which can be divided into two sets: demonstration sites where coral reef management had some successes that experiences could be transferred to less successful sites and target sites where urgent management action were needed to prevent further degradation of coral resources. Identified for comparative study were MPAs, community-based management and sustainable tourism.⁹ A total of eight sites, four demonstration sites and four target sites, were selected and paired up.¹⁰ A workshop was organized in 2002 to provide a forum for site partners to exchange experiences in management and to discuss which successful practices could be transferred to target sites.¹¹

⁶ See COBSEA, *Monitoring Coral Reefs for Better Management Schemes: UNEP EAS/RCU Small Grants Fund Programme 2002-2003* (Bangkok: UNEP, 2004) 1 and Karenne Tun, *Review of Projects on Coral Reef Management Implemented by COBSEA through the East Asian Seas Regional Coordinating Unit* (June 2006) online: COBSEA <<http://www.cobsea.org/publications.html>>, accessed August 1, 2011 at 3.

⁷ See Tun, *ibid.* at 4.

⁸ Such as Danjungan Island Marine Reserve and Sanctuaries (Philippines), Karimunjawa Marine National Park (Indonesia), Central Sulawesi (Indonesia) and the Sanya Reserve (China). For details about these projects see COBSEA and Tun, *ibid.* at 14.

⁹ COBSEA, *Report of The Meeting of the Regional Group of Experts on the International Coral Reef Action Network*, Phuket, Thailand, January 28-30, 2002.

¹⁰ The relevant pairs are Apo Island Marine Reserve (Philippines)-Ninh Thuan Province (Vietnam), Mu Koh Surin Marine Park (Thailand)-Sanya National Coral Reef Nature Reserve (China), Komodo National Park (Indonesia)-Koh Rong Province (Cambodia) and Bunaken National Park (Indonesia)-Gili Matra Marine Natural Recreation Park (Indonesia), see Tun, *supra* note 6 at 22.

¹¹ For more details about this project, see Tun, *supra* note 6 at 6.

COBSEA has been reported to have many weaknesses. No major text has been adopted after the Action Plan of 1994¹² which, by itself, is vague and does not contain any specific commitment. There are not enough pragmatic, temporally and spatially planned activities to manage the marine environment.¹³ The functioning of the Programme is essentially project-based, which has met with lots of difficulties due to lack of political and financial commitment from its participating countries.¹⁴ UNEP has also offered poor leadership and little interest in regional activities of the Programme.¹⁵ Obviously, these attitudes would affect the capacity of COBSEA to undertake any complicated endeavour such as coordinating the development of a regional network of MPAs.

4.1.2 The Partnerships in Environmental Management for the Seas of East Asia

Originally an initiative focused on developing integrated coastal management (ICM) and marine pollution management demonstration sites,¹⁶ the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) was established by the project “Building Partnerships for Environmental Protection and Management in the East Asian Seas”, 1999-2007. The project’s objectives include the adoption of a sustainable

¹² After the Action Plan of 1994, only two regional instruments have been adopted to date, namely the Regional Programme of Action for the Protection of the Marine Environment of the East Asian Seas from Effects of Land-based Activities, in 2000 and the COBSEA Regional Action Plan on Marine Litter, in 2008.

¹³ Hugh Kirkman, “The East Asian Seas UNEP Regional Seas Programme” (2006) 6 *International Environment Agreements* 305 at 312.

¹⁴ See *ibid.* at 308.

¹⁵ *Ibid.* at 312.

¹⁶ The origin of PEMSEA can be traced back to 1993 under the Regional Programme on Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS), also called the Pilot Project. This Project was implemented by the International Maritime Organisation and the United Nations Development Programme for five years (1993-1998) with funding from the GEF Trust Fund. Its objectives were to develop integrated coastal management and marine pollution management demonstration sites and to establish regional monitoring and information networks. For details, see *Presentation about the Regional Programme for the Prevention and Management of Marine Pollution in East Asian Sea Project*, online: GEF online <<http://gefonline.org/projectDetailsSQL.cfm?projID=396>>, accessed June 29, 2009.

regional mechanism to augment national and regional commitments to protection and management of the coastal and marine environment of the Seas of East Asia.¹⁷ One of its most important achievements is the institutionalization of PEMSEA with the adoption of three texts:

- The Putrajaya Declaration: Adopted by the 12 participating States¹⁸ on December 12, 2003, the Declaration formally adopted the Sustainable Development Strategy for the East Asian Seas (or SDS-EAS) which contains a package of applicable principles, objectives and implementation approaches for achieving sustainable development of the seas of East Asia.¹⁹
- The Haikou Partnership Agreement: Adopted in 2006 to define priority targets, coordinating arrangements and follow-up actions to implement the SDS-EAS, it expressed the will of participating countries to transform PEMSEA from a project-based arrangement to a self-sustained and effective collaborative regional mechanism.²⁰
- The Partnership Operating Arrangements for the Implementation of the Sustainable Development Strategy for the Seas of East Asia: Adopted in 2006, it defines the status, membership and structure of the Partnership. Pursuant to the Operating

¹⁷ *PEMSEA's Project Details*, online: GEF online

<<http://www.gefonline.org/projectDetailsSQL.cfm?projID=597>>, accessed June 29, 2009.

¹⁸ Brunei, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Thailand and Vietnam. Later on, two other countries, which are Laos and Timor-Leste joined the Programme, while Brunei and Malaysia left.

¹⁹ *Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia*, East Asian Seas Congress 2003, Putrajaya, Malaysia, December 12, 2003, online: PEMSEA <www.peamsea.org>, accessed April 9, 2010 [Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia].

²⁰ *Haikou Partnership Agreement on the Implementation of sustainable development strategy for the seas of East Asia*, Ministerial Forum, East Asian Seas Congress, 15 December 2006, Haikou, Hainan, RPC, online: PEMSEA <<http://beta.pemsea.org/publications/partnership-operating-arrangements-implementation-sustainable-development-strategy-seas>>, accessed April, 9 2010 [Haikou Partnership Agreement on the Implementation of sustainable development strategy for the seas of East Asia].

Agreement, the stakeholders (Partners) that could participate in the implementation of SDS-EAS are not only relevant countries but also communities, NGOs, research institutions and the private sector.²¹

Four structures were established to operate PEMSEA: the East Asian Seas Congress, the East Asian Seas Partnership Council, the PEMSEA Resource Facility and the Regional Partnership Fund.²² At the 3rd East Asian Sea Congress in 2009, an Agreement was signed to recognize the international legal personality of PEMSEA and confer to it necessary capacities for the exercise of its function.²³

This sub-section reviews the commitments of PEMSEA relevant to MPAs; activities under its framework which can facilitate the development of a network of MPAs in SCS and provides an update on the current status of implementing these commitments.

4.1.2.1 Relevant Commitments under the Framework of PEMSEA

Commitments to establish MPAs were provided under the original SDS-EAS, 2003 and the Manila Declaration on Strengthening the Implementation of ICM for Sustainable Development and Climate Change Adaptation in the Seas of East Asia

²¹ *Partnership Operating Arrangements for the Implementation of the Sustainable Development Strategy for the Seas of East Asia*, Ministerial Forum, East Asian Seas Congress, 15 December 2006, Haikou, Hainan, RPC, online: PEMSEA <<http://beta.pemsea.org/publications/partnership-operating-arrangements-implementation-sustainable-development-strategy-seas>>, accessed April 9, 2010.

²² *Ibid.* note 21 and *Operating Mechanism*, online: PEMSEA <<http://beta.pemsea.org/about-pemsea/operating-mechanisms>>, accessed June 30, 2009. The East Asian Seas Congress is held every 3 years to provide policy direction, commitments to implement the SDS-EAS and facilitate, monitor and evaluate its implementation. The East Asian Seas Partnership Council is a regular body composed of all Partners to formulate program and operational policy in support of the implementation of the SDS-EAS. The PEMSEA Resource Facility was established to provide Secretariat and Technical Services for the implementation of the SDS-EAS. Finally, the Regional Partnership Fund was created to receive voluntary contributions from countries, international organisations and other donors for the implementation of the SDS-EAS.

²³ PEMSEA, *Agreement Recognizing the International Legal Personality of the Partnerships in Environmental Management for the Seas of East Asia*, 26 November 2009, online: PEMSEA <http://pemsea.org/pdf-documents/pemsea_legal_personality.pdf>, accessed February 2, 2012, art.1.

Region, 2009. Other commitments relate to the implementation of ICM, regional cooperation to protect the marine environment and regarding the monitoring indicators for the implementation of the SDS-EAS which can be used to measure progress in the establishment of MPAs. These commitments are reviewed below.

The SDS-EAS

As stated above, the SDS-EAS contains a package of principles, objectives and action programmes to achieve the sustainable development in the Seas of East Asia. Six categories of actions are identified, namely Sustain, Preserve, Protect, Develop, Implement and Communicate.²⁴ Various action programmes relating to the establishment of MPAs and regional cooperation are outlined. For instance, under Sustain, East Asian Seas States committed to craft an agreed approach to determining coastal and marine areas of significant biological diversity and natural value and identifying the allowable limits of their use.²⁵ The most relevant category of action was Preserve, under which action programs were agreed for, *inter alia*, the establishment of a common management system for MPAs of transboundary importance and the conservation of transborder areas of social, cultural, historical and geological significance.²⁶

²⁴ Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia, *supra* note 19 at 49.

²⁵ *Ibid.* at 53.

²⁶ Program of activities to achieve these objectives include to select and prioritize coastal and marine protected areas of transboundary importance, to establish appropriate management regimes for marine protected areas and particularly sensitive sea areas of transboundary significance, to protect cultural and natural properties deemed to be of outstanding regional value, and to manage transborder cultural heritage and natural heritage sites. Concrete activities to be implemented are, for example, to agree on selection criteria for identifying coastal and marine areas for the protection of endangered species, species of biological importance for the region, fish stock and migratory species; to classify protected areas on the basis of types and uses, taking into account guidelines, criteria and standards for protected areas and PSSAs under international instruments and to prioritize MPAs that are “regional hotspots” serving critical transboundary ecological and/or economic functions; for more details, see *ibid.* at 56.

The Manila Declaration of 2009

The Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaptation in the Seas of East Asia Region was adopted at the East Asian Seas Congress in 2009 by Ministers from 11 participating countries. Its main objective is to affirm the engagement of relevant participants to strengthen and accelerate ICM for sustainable development and climate change adaptation. A number of priorities for action were identified by this Declaration. One of them was to carry out:

[H]abitat restoration and management programmes, including coral reefs, seagrass beds, coastal wetlands and mangroves, and establishing MPAs, as appropriate, based on scientifically sound information, in order to improve the natural defense of coastal and marine ecosystem to the impacts of climate change and to enhance carbon sequestration capacities of relevant habitats²⁷

The Declaration also provided that participating States will report on the progress of ICM programmes every three years.²⁸

Commitments to Implement ICM

As the establishment of MPAs is considered a priority of ICM under the Manila Declaration of 2009, a comprehensive view of the commitment to establish MPAs in East Asian Seas region requires a discussion of the commitments to implement ICM under PEMSEA. Those commitments are made in the SDS-EAS of 2003, the Haikou Partnership Agreement of 2006 and the Manila Declaration of 2009.

Under SDS-EAS, the idea is to “Develop” ICM as an “effective management framework to achieve the sustainable development of coastal and marine areas”. Action

²⁷ “Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaptation in the Seas of East Asia Region”, *The Third Ministerial Forum East Asian Seas Congress 2009*, Manila, Philippines, 26 November 2009, para.9 (h) [Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaptation in the Seas of East Asia Region].

²⁸ *Ibid.* para.10.

programmes defined to achieve this objective focused on supporting, formulating and implementing ICM programmes at the local level.²⁹ Under the Haikou Partnership Agreement, participants pledged to implement ICM programmes in at least 20 percent of the region's coast by 2015, to achieve the sustainable development of coastal lands and waters and to promote intra- and inter- regional partnership in ICM capacity building.³⁰ This commitment was reaffirmed in the Manila Declaration in 2009.³¹

Commitments towards Regional Cooperation to Protect the Marine Environment

The SDS-EAS also contains provisions supporting regional cooperation among East Asian Seas States to protect the marine environment. The first objective of this commitment comes under actions titled “Subregional mechanisms to combat transboundary environmental threats in regional seas, including LMEs and subregional sea areas”. One action program to achieve this objective is to strengthen and extend intergovernmental cooperation in environmental management of the regional seas. Activities to be implemented include assessing and applying the lessons learned from ongoing “international waters” projects in the region and incorporating intergovernmental initiatives in environmental management of river basins, subregional sea areas and LMEs into a management framework for regional seas.³²

²⁹ Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia, *supra* note 19 at 76.

³⁰ Haikou Partnership Agreement on the Implementation of sustainable development strategy for the seas of East Asia, *supra* note 20, para.7(b)(c).

³¹ Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaptation in the Seas of East Asia Region, *supra* note 27, para.9(h).

³² Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia, *supra* note 19 at 64.

Monitoring Indicators of SDS-EAS Implementation

A series of targets, actions, and indicators to assess progress across the region regarding the implementation of SDS-SEA were provided in the SDS-EAS Implementation Plan 2012-2016, adopted in July 2012.³³ Relating to MPAs, one of the actions to be implemented under PEMSEA is to integrate sustainable use of coastal and marine ecosystem services into ICM programs in biodiversity and fisheries hotspots to contribute to the achievement of relevant Aichi Biodiversity Targets,³⁴ including the percentage of MPA's coverage.³⁵ The indicator of progress under this action includes the delineation of coastal and marine areas of significant biological diversity and natural value locally, nationally and sub-regionally. On-the-ground targets with well-defined numbers and deadlines were also determined, such as the development and initiation of habitat restoration and management plans in at least 10 ICM sites and one coastal sea/LME aimed at the rehabilitation of altered critical habitats and improving the resilience of coastal and marine ecosystems to climate change (for the period 2012-2014).³⁶

4.1.2.2 Activities implemented under PEMSEA that Could Facilitate the Establishment of MPAs

Many activities under the framework of PEMSEA can facilitate the establishment of MPAs in the region. These activities include (a) the demonstration and scaling-up of ICM and (b) risk management of pollution hotspots and subregional seas.

³³ *SDS-EAS Implementation Plan, 2012-2016*, adopted at the 4th Ministerial Forum on the Sustainable Development Strategy for the Seas of East Asia, Changwon City, Republic of Korea, 12 July 2012.

³⁴ *Ibid.* at 30.

³⁵ See above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD..

³⁶ *SDS-EAS Implementation Plan, 2012-2016*, *supra* note 33 at 31.

Demonstration and Scaling-Up of ICM

One of the earliest projects implemented under the framework of PEMSEA was the establishment of demonstration sites for ICM. The objective of these projects was to promote the application of ICM at the local level.³⁷

Originally, two cities in the region were designated for ICM demonstration for marine pollution prevention under the MPP-EAS, Xiamen (China) and Batangas (Philippines). Over the life of the project, the two cities were able to establish and operationalize interagency and multisectoral co-ordinating mechanisms which included all relevant government agencies. Each site also developed a prioritized agenda, undertook capacity building to strengthen their planning and management capability, developed quality monitoring programs, established mechanisms to ensure the sustainability of the programs and promulgated needed local laws to legitimate institutional arrangements and permits systems.³⁸

Under the project “Building Partnership for Environmental Protection and Management in the East Asian Seas”, six new national demonstration sites³⁹ were developed. Outputs of the project included the training of staff in ICM principles and practices, development of an environmental profile of the site, analysis of public perception on sustainable use of marine resources, environmental stress and their

³⁷ GEF/UNDP/IMO Regional Project for Marine Pollution Prevention and Management in East Asian Seas, *Terminal Report 1999: Sharing Lessons and Experiences in Marine Pollution Management* (October 1999), Doc. MPP-EAS/Info/99/209 at 4.

³⁸ *Building Partnership for Environmental Protection and Management of the East Asian Seas, Project Appraisal Document (for CEO endorsement)*(1999), online: GEF <<http://www.gefonline.org/projectDetailsSQL.cfm?projID=597>>, accessed June 29, 2009 at 25 and GEF/UNDP/IMO Regional Project for Marine Pollution Prevention and Management in East Asian Seas, *ibid.* at 37.

³⁹ These are Sihanoukville (Cambodia), Nampo (DPR Korea), Bali (Indonesia), Klang Area (Malaysia), Chonburi (Thailand) and Da Nang City (Vietnam).

solution and assessment of environmental risks.⁴⁰ Besides, efforts were made to extend and replicate the ICM practice to parallel sites in other locations where local governments were willing to use their own human and financial resources to implement ICM programs. A total of 18 parallel sites were established.⁴¹

One of the components of the GEF project “Implementation of the Sustainable Development Strategy for the Seas of East Asia”, adopted in 2007 to support steps towards full implementation of the SDS-EAS,⁴² is to scale up ICM as an on-the-ground national framework for achieving sustainable development of coastal lands and waters. The objectives of this component include the adoption and implementation of two voluntary codes: an ICM code by governments as a standard for certification/recognition of ICM sites and a Port Safety, Health and Environmental Management (PSHEM) Code by port authorities and companies operating in a port as a standard for certification/recognition of a Port Safety, Health and Environmental Management System.⁴³ To achieve these objectives, activities to be implemented include setting in place a systematic process for monitoring, evaluating and reporting the effectiveness of national and local ICM programs, augmenting existing ICM sites that can be used as

⁴⁰ For the complete list, see PEMSEA, *Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia*, Terminal Evaluation Report, PEMSEA Information Series, (Quezon City: GEF/UNDP/IMO PEMSEA, 2006) [Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia].

⁴¹ These include 10 sites in China, three in Bali (Indonesia) and five in Bataan and Cavite (Philippines), Quang Nam (Vietnam), Shihwa (RO Korea) and Sukabumi (Indonesia), see Jihyun Lee, “Replicating and Networking Local ICM Practices: PEMSEA’s Experience” (2004) 11:2 *Tropical Coast: Coast to Coast* 4; GEF online, *supra* note 38 at 37; and Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia, *ibid.* at 5.

⁴² *Implementation of SDS-SEA Project’s Appraisal Document (for CEO endorsement)*, 2007, online: GEF online <<http://www.gefonline.org/projectDetailsSQL.cfm?projID=2700>>, accessed June 29, 2009 [Implementation of SDS-SEA Project’s Appraisal Document (for CEO endorsement)] and *Implementation of SDS-SEA Project Details*, online: GEF online <<http://www.gefonline.org/projectDetailsSQL.cfm?projID=2700>>, accessed June 29, 2009.

⁴³ *Implementation of SDS-SEA Project’s Appraisal Document (for CEO endorsement)*, *ibid.* at 28.

working models in support of their respective national ICM scaling up programs and setting up ICM learning networks and ICM training programs.⁴⁴

Development of Risk Management in Pollution Hotspots and Subregional Seas

The objective of these activities is to apply environmental risk assessment and risk management processes to address transboundary issues in subregional areas under stress. Demonstration projects have been implemented in four sub-regions: the Malacca Strait under the MPP-EAS project;⁴⁵ the Bohai Sea, Manila Bay and Gulf of Thailand under the “Building Partnership for Environmental Protection and Management in the East Asian Seas” project.⁴⁶

Many important results have been achieved. For instance, a systematic process for assessing and managing transboundary marine pollution in the Strait of Malacca was developed and verified. An environmental database containing temporally and spatially referenced data on coastal and marine resources and land and sea-based activities within and along the Straits was established. The total economic value of the area has been calculated, including services rendered directly and indirectly to various users and beneficiaries.⁴⁷ For the two other demonstration sites, the risk assessment process provided a technical basis for more complex planning processes and contributed to the development of appropriate institutional mechanisms for long-term coordination for

⁴⁴ *Ibid.*

⁴⁵ See Chua Thia-Eng and S. Adrian Ross, *Biannual Report 1994-1995*, The Regional Project for Marine Pollution Prevention and Management in East Asian Seas (GEF Project RAS/92/G34), Doc. MPP-EAS/95/01 (1995) at 5 and GEF online, *supra* note 38 at 42.

⁴⁶ Implementation of SDS-SEA Project’s Appraisal Document (for CEO endorsement), *supra* note 42 at 38 and Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia, *supra* note 40 at 8.

⁴⁷ GEF online, *supra* note 38 at 42.

environmental management in these areas.⁴⁸ As MPAs must be established based on the best available information, these data can be very useful to determine whether there is a need for MPAs in those areas.

4.1.2.3 Current Status of the SDS-EAS Implementation

As of July 2012, about 11 percent of the 234,000-km coastline of the region was covered by ICM programs.⁴⁹ Most of the time, it means that an ICM coastal strategy or similar sustainable development strategy has been developed and is being implemented at the local level.⁵⁰ Up to 2011, nine PEMSEA countries had formulated or were in the process of adopting or implementing their respective national ICM or sustainable coastal development policies and strategies.⁵¹ However, there is no information about how effectively adopted strategies and policies have been implemented.

Though established later than COBSEA, so far PEMSEA has achieved more success than the former. Many results under PEMSEA have received positive assessment.⁵² This may have been due to the fact that PEMSEA has been able to receive substantial financial and other support not only from the GEF but also from participating governments and other donors such as international agencies, private sectors and NGOs. However, most of PEMSEA efforts so far have been focused on integrated coastal management and not on the protection of biodiversity (which is more relevant to the establishment of MPAs). Besides,

⁴⁸ Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia, *supra* note 40 at 10.

⁴⁹ *Changwon Declaration toward an Ocean-Based Blue Economy: Moving Ahead with the Sustainable Development Strategy for the Seas of East Asia*, adopted at the 4th Ministerial Forum on the Sustainable Development Strategy for the Seas of East Asia, Changwon City, Republic of Korea, 12 July 2012.

⁵⁰ *Integrated Coastal Management*, online: PEMSEA <<http://beta.pemsea.org/integrated-coastal-management>>, accessed June 5, 2012.

⁵¹ Namely Cambodia, China, Indonesia, Japan, Philippines, RO Korea, Singapore, Thailand, and Vietnam. In the case of Laos, a National Water Resources Strategy and Action Plan were under government review, see *SDS-EAS Implementation Plan, 2012-2016*, *supra* note 33 at 13.

⁵² For details, see *Performance Evaluation Building Partnership in Environment Management for the Seas of East Asia*, *supra* note 40.

PEMSEA does not seem to be particularly interested in coordinating activities at the SCS-level.

There is an overlap between COBSEA and PEMSEA. Both mechanisms' mandate is to protect the marine environment in the East Asian Seas. This might lead to a waste of human and financial resources and a decrease in effectiveness.

4.2 Measures under the Association of Southeast Asian Nations

There are two reasons to include the Association of Southeast Asian Nations (ASEAN)⁵³ in this section though China is not a member. First, apart from China, all other coastal States of the SCS are members of ASEAN. Second, though China is not a member of ASEAN, it maintains close cooperation with the organization, in particular in the area of environmental cooperation and in the avoidance of conflict in the SCS.

This sub-section focuses on measures relating to MPAs adopted under the ASEAN framework in the two areas of environmental protection and fisheries cooperation. Thirdly, the cooperation between ASEAN and China in environmental protection is also reviewed.

4.2.1 ASEAN Heritage Parks and other Commitments Relating to Protected Areas

Regarding cooperation in the protection of the environment, ASEAN committed to work towards achieving sustainable development and promoting a clean and green environment by protecting the natural resource base for economic and social

⁵³ ASEAN is a regional organization in Southeast Asia established in 1967 by the Bangkok Declaration. Its purpose is to build comprehensive regional cooperation between countries in the Southeast Asian region to achieve peace, stability and development. ASEAN currently comprises 10 Members: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam; see ASEAN Declaration, 8 August 1967, online: ASEAN <<http://www.aseansec.org/1629.htm>>, accessed December 30, 2011.

development.⁵⁴ Under this framework, ASEAN created a regional category of protected areas, the ASEAN Heritage Park to add greater recognition and protection to the protected areas of ASEAN Members which are unique and have diversity and outstanding values. This section reviews the regime of ASEAN Heritage Park and other commitments relating to the establishment and management of national protected areas.

4.2.1.1 Regime of ASEAN Heritage Parks

The idea of having a separate category of ASEAN protected areas was first proposed by the ASEAN Experts on Environment in 1978⁵⁵ and then adopted by the ASEAN Declaration on Heritage Parks and Reserves in 1983.⁵⁶ The latter was replaced in 2003 by the ASEAN Declaration on Heritage Parks which provides the framework for the current regime of ASEAN Heritage Parks.⁵⁷

ASEAN Heritage Parks are defined as “protected areas of high conservation importance, preserving in total a complete spectrum of representative ecosystems of the ASEAN region”. Objectives of this recognition are to enhance the awareness, management and conservation of ASEAN natural heritage through a regional network of representative protected areas and generate greater collaboration between ASEAN members in preserving their shared natural heritage. Major categories of ASEAN Heritage Parks are natural park, natural reserve, cultural site, prehistoric site and peace park.⁵⁸

⁵⁴ *Blueprint for the ASEAN Socio-Economic Community (2009-2015)*, adopted at the 14th ASEAN Summit, Cha'am, Thailand, February 26-March 1, 2009, para.30.

⁵⁵ ASEAN Center for Biodiversity, *The ASEAN Heritage Parks: A Journey to the Natural Wonders of Southeast Asia* (Laguna: ASEAN Center for Biodiversity, 2010) 1.

⁵⁶ *Joint Press Statement of the 2nd ASEAN Ministerial Meeting on Environment*, Bangkok, Thailand, November 29- 30, 1984.

⁵⁷ *ASEAN Declaration on Heritage Parks*, 18 December 2003, online: ASEAN Secretariat <<http://www.aseansec.org/15524.htm>>, accessed August 10, 2010.

⁵⁸ ASEAN Center for Biodiversity, *supra* note 55.

For a protected area to be qualified as an ASEAN Heritage Park, it must meet the criteria of ecological completeness, representativeness, naturalness, high conservation importance, being a legally gazetted conservation area and having an approved management plan. The site must also be transboundary, unique and of high ethno-biological significance and importance for endangered or precious biodiversity.⁵⁹

To nominate a site to the list of ASEAN Heritage Parks, an ASEAN Member has to submit complete information on the nominated national protected area to the ASEAN Center for Biodiversity.⁶⁰ The ASEAN Center for Biodiversity compiles all the information and documents and submits them to the ASEAN Working Group on Nature Conservation and Biodiversity for terrestrial parks or to the ASEAN Working Group on Coastal and Marine Environment for marine parks. These Working Groups would then make their recommendations for consideration by the ASEAN Senior Officers on the Environment and the ASEAN Secretariat. The ASEAN Senior Officers consider the recommendations and seek the listing approval of the ASEAN Environment Ministers.⁶¹

For the management of ASEAN Heritage Parks, the ASEAN Working Group on Nature Conservation and Biodiversity provides guidance and promotes regional

⁵⁹ *Ibid.* at 3.

⁶⁰ The ASEAN Center for Biodiversity was established in 2004 with financial help from the European Community to facilitate cooperation and coordination both inside ASEAN and between ASEAN and other actors for the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising from the use of such biodiversity in the ASEAN region, see: *Agreement on the Establishment of the ASEAN Center for Biodiversity*, April 2005, online: ASEAN Center for Biodiversity <http://www.aseanbiodiversity.org/index.php?option=com_phocadownload&view=category&id=10&Itemid=80¤t=1>, accessed December 30, 2011. See also *The ASEAN Centre for Biodiversity: A Regional Response to the Need to Conserve Biodiversity*, online: ASEAN Center for Biodiversity <http://www.aseanbiodiversity.org/index.php?option=com_content&view=article&id=69&Itemid=79¤t=1>, accessed December 31, 2011.

⁶¹ ASEAN Center for Biodiversity, *supra* note 55 at 4. The nomination shall contain information on each of the elements of the main criteria, additional criteria as appropriate and other information relating to the site such as the legal gazette, size, location, natural vegetation, physical and cultural characteristics, human use levels, current management facilities, summary of the management plan and independent evidence of high conservation importance of the site.

coordination in the implementation of conventions and activities relating to biodiversity conservation. It may develop and implement regional action plans to support national efforts to implement conservation in these parks, promote partnerships with relevant organizations to enhance the conservation and management of the parks and develop and maintain an information database relating to them. For the implementation of its activities, the Working Group can request assistance or utilize the expertise of relevant ASEAN centers or international organizations.⁶²

So far, a total of 30 protected areas have been included in the list of ASEAN Heritage Parks, few of which are located in coastal and marine areas.⁶³

4.2.1.2 Other Commitments Relating to Protected Areas under ASEAN

Commitments relating to protected areas also appear in other instruments under ASEAN. For instance, in the ASEAN Agreement on the Conservation of Nature and Natural Resources, signed in Kuala Lumpur in 1985, article 13 contains various obligations of the parties relating to the establishment and management of protected

⁶² *Ibid.*

⁶³ Such as the Lorentz National Park (Indonesia), Lampi Marine National Park (Myanmar), Tarutao National Park (Thailand) and Sugei Buloh Wetland Reserve (Singapore), see *ASEAN Heritage Park*, online: ASEAN Center for Biodiversity <http://chm.aseanbiodiversity.org/index.php?option=com_wrapper&view=wrapper&Itemid=110¤t=110>, accessed October 27, 2012.

areas.⁶⁴ Unfortunately, this Agreement has not entered into force due to lack of ratification by a number of Signatories.⁶⁵

4.2.2 Measures Relating to Marine Protected Areas under ASEAN Fisheries Cooperation

Fishery is a sector within ASEAN cooperation in agriculture and forestry.⁶⁶ ASEAN commitments and activities in the fisheries sector that may be relevant to MPAs are those made and implemented for the management, sustainable utilization and conservation of natural resources and became one of the strategic thrusts under ASEAN cooperation in agriculture and forestry.⁶⁷ For instance, ASEAN Members signed the Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection in 1997 to promote the protection, conservation, replenishing and recovery of sea turtles

⁶⁴ Pursuant to this article, the contracting parties shall establish protected areas in areas under their jurisdiction to safeguard ecological and biological processes essential to the functioning of the ecosystem, representative samples of all types of ecosystems, satisfactory population levels for the largest possible number of species belonging to those ecosystems and areas of particular importance because of their scientific, educational, aesthetic or cultural interests. Obligations were also stipulated for the contracting parties relating to the management and conservation of protected areas such as preparing a management plan, establishing buffer zones; and prohibition of the introduction of exotic species, prohibition of the release of toxic substances, and prohibition or control of outside activities likely to cause damage to the protected area's ecosystem. It also required of contracting parties to cooperate in the development of principles, objectives, criteria and guidelines for the selection, establishment and management of protected areas in the ASEAN region with a view to establishing a co-ordinated network of protected areas throughout the region, giving particular attention to those of regional importance; see *Agreement on the Conservation of Nature and Natural Resources*, 9 July 1985, online: ASEAN <<http://www.aseansec.org/1490.htm>>, accessed August 10, 2010, art.13.

⁶⁵ Only three countries have ratified the Agreement so far, namely Indonesia, the Philippines and Thailand, see Kheng-Lian Koh, "ASEAN Agreement on the Conservation of Nature and Natural Resources, 1985: A Study in Environmental Governance", presented at *World Park Congress 2003, September 8-17, 2003, Durban, South Africa*.

⁶⁶ Basic objectives of ASEAN in this area are to formulate and implement regional cooperation activities to enhance the international competitiveness of ASEAN's food, agriculture and forestry products as well as further strengthen the food security arrangement in the region and to have joint positions in international fora. Specific activities relating to fisheries implemented by ASEAN include the establishment of regional networks, harmonization of measures and development of manuals, guides and guidelines in fisheries and aquaculture; see *Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry*, adopted at the 26th Meeting of ASEAN Ministers on Agriculture and Forestry, Yangon, Myanmar, October 7, 2004 and *ASEAN Ministerial Meeting on Agriculture and Forestry Overview*, online: ASEAN <<http://www.asean.org/19587.htm>>, accessed December 30, 2011 [Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry]

⁶⁷ See *Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry, ibid.*

and their habitats.⁶⁸ It set up a regional mechanism to harmonize existing national laws and regulations and to enact new laws on sea turtle conservation and protection. This ASEAN program and work plan on sea turtle conservation and protection⁶⁹ was endorsed by ASEAN Ministers on Agriculture and Forestry at their 20th meeting in 1998.⁷⁰ Besides, a good number of actions under this strategic thrust are in collaboration with SEAFDEC⁷¹ and many of them are relevant to MPAs. They include management of fisheries and utilization of sharks, conservation and management of sea turtles and in particular the adoption of the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region towards 2020⁷² (Food Security and Sustainable Fisheries Plan 2020).

In the Food Security and Sustainable Fisheries Plan 2020, which was adopted in 2011, Ministers of SEAFDEC and ASEAN countries made clear commitments on the ecosystem approach to fisheries and MPAs. In the resolution, they committed to effectively manage fisheries through an ecosystem approach that integrates habitats and fishery resources with the aim to increase the social and economic benefits to all stakeholders.⁷³ In the Plan of Action, they committed to, *inter alia*, establish and implement comprehensive policies on this approach to ensure the inclusion of fisheries

⁶⁸ *Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection*, adopted at the 19th Meeting of the ASEAN Ministers on Agriculture and Forestry, Bangkok, Thailand, September 12, 1997, art. II.

⁶⁹ *Ibid.* arts IV and V.

⁷⁰ *Joint Press Statement of the 20th Meeting of the ASEAN Ministers on Agriculture and Forestry*, Ha Noi, Viet Nam, September 17-18, 1998.

⁷¹ See below 4.4.1.1 .

⁷² *Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region towards 2020*, adopted June 16, 2011 at the ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security towards 2020 Fish for the People 2020: Adaptation to a Changing Environment, June 13-17, 2011, Bangkok, Thailand [Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region towards 2020].

⁷³ *Ibid.* para.7.

objectives in the management plans of future MPAs and to promote the adoption and use of the *refugia* concept.⁷⁴

4.2.3 ASEAN-China Cooperation in Environmental Protection and Conflicts Prevention in the South China Sea

“Bilateral” cooperation between ASEAN and China in environmental protection started in 2004 under the China-ASEAN Dialogue on Environmental Policies organized in Sanya, China.⁷⁵ Since then, environmental protection has become a component of the Plans of Action to Implement the Joint Declaration on ASEAN-China Strategic Partnership for Peace and Prosperity.⁷⁶ In the most recent Plan of Action for the period 2011-2015 adopted in 2010, the two sides committed to establish an ASEAN-China Environmental Ministerial Meeting mechanism at an appropriate time.⁷⁷

The first instrument between China and ASEAN specifically relating to environmental protection cooperation is the China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015, jointly developed and adopted by ASEAN and China

⁷⁴ *Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region towards 2020*, see Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region towards 2020, *supra* note 72, paras 10, 11, 25 and 28.

⁷⁵ See *China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015*, joint developed by Ministry of Environmental Protection of China and ASEAN Member States in 2009, online: China-ASEAN Environmental Cooperation Center <<http://www.chinaaseanenv.org/english/events/271416.shtml>>, accessed April 5, 2012. Before that date, there was the ASEAN plus Three (China, Japan and Republic of Korea) Environment Ministers’ Meetings hosted by ASEAN since 2002.

⁷⁶ See *Plan of Action to Implement the Joint Declaration on ASEAN-China Strategic Partnership for Peace and Prosperity (2005-2010)* adopted at 10th ASEAN Summit, Vientiane, Laos, November 29-30, 2004, online: ASEAN <<http://www.aseansec.org/16805.htm>>, accessed April 5, 2012 and *Plan of Action to Implement the Joint Declaration on ASEAN-China Strategic Partnership for Peace and Prosperity (2011-2015)* adopted at 17th ASEAN Summit, Hanoi, Vietnam, October 28-30, 2010. For the Joint Declaration on ASEAN-China Strategic Partnership for Peace and Prosperity, see *Joint Declarations of the Heads of State/Government of the Association of Southeast Asian Nations and the People’s Republic of China on Strategic Partnership for Peace and Prosperity*, 8 October 2003, adopted at 9th ASEAN Summit, Bali, Indonesia, October 7-8, 2003.

⁷⁷ See *Plan of Action to Implement the Joint Declaration on ASEAN-China Strategic Partnership for Peace and Prosperity (2011-2015)* *ibid.* note 76, para 3.7.9.

in 2009.⁷⁸ The Strategy identified seven areas of cooperation in environmental protection to be developed between ASEAN and China, including the area of biodiversity conservation. The objective of cooperation in this area is to carry out collaborative projects and scientific research on biodiversity conservation, taking into account the similar ecological environment of Southwest China and the ASEAN region. Activities planned include conducting collaborative research on monitoring biodiversity, sharing experience in facilitating the protection of endangered species and facilitating the establishment of transboundary natural reserves and bio-corridors to protect the normal migration of species.⁷⁹ Those activities would be carried out mainly in the forms of workshops, training, exhibitions and demonstration projects.⁸⁰

An ASEAN-China Environmental Cooperation Action Plan (2011-2013) to implement the China-ASEAN Strategy on Environmental Protection Cooperation was adopted at the 14th ASEAN-China Summit in Bali, Indonesia in 2011.⁸¹ The Action Plan listed concrete cooperative measures to be implemented in the short term. For instance, cooperative measures to be implemented during the period 2011-2013 include the development and launching of the ASEAN-China Green Envoys Program, establishment of an ASEAN-China Environmental Industry Cooperation Network, and the development and publication of a Report on ASEAN-China Environmental Outlook.⁸²

⁷⁸ *China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015* (2009), online: China-ASEAN Environmental Cooperation Center <<http://www.chinaaseanenv.org/english/events/271416.shtml>>, accessed April 5, 2012.

⁷⁹ *Ibid.*, para.5.3.1.

⁸⁰ *Ibid.*, para.6.4.

⁸¹ *ASEAN-China Environmental Cooperation Action Plan (2011-2013) to Implement the China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015*, adopted at 14th ASEAN-China Summit, Bali, Indonesia, November 17-19, 2011, online: China-ASEAN Environmental Cooperation Center <<http://www.chinaaseanenv.org/english/events/271416.shtml>>, accessed April 5, 2012 [ASEAN-China Environmental Cooperation Action Plan (2011-2013) to Implement the China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015].

⁸² *Ibid.* note 81, paras 2-4.

The implementation of the Action Plan is taken up by the China-ASEAN Environmental Cooperation Center⁸³ under China's Ministry of Environmental Protection and the Environment Division of the ASEAN Secretariat.⁸⁴ As part of the implementation of the Plan, a China-ASEAN Youth Seminar on Green Development was held in Beijing, China in May, 2012.⁸⁵

With regards to conflicts prevention in the SCS, cooperation between ASEAN and China started with negotiations for a Code of Conduct in the SCS from the 2000s.⁸⁶ To date, the two sides have been able to adopt the DOC in 2002, and the Guidelines for the Implementation of the DOC in 2011 and plan to negotiate and adopt the Code of Conduct as the next step.⁸⁷ Currently, both sides are working to develop the Code of Conduct.⁸⁸ It seems that ASEAN leaders decided to agree on the content of the Code among ASEAN members first before talking to China.⁸⁹ A "zero draft" of the Code was circulated by Indonesia during an Informal ASEAN Meeting in September 2012.⁹⁰

⁸³ Set up in 2011, see *ASEAN and China Officially Launch the Establishment of China-ASEAN Environmental Cooperation Center* (May 24, 2011) online: ASEAN <http://www.aseansec.org/26324.htm>, accessed April 5, 2012.

⁸⁴ *ASEAN-China Environmental Cooperation Action Plan (2011-2013) to implement the China-ASEAN Strategy on Environmental Protection Cooperation 2009-2015*, *supra* note 81, III.

⁸⁵ *China-ASEAN Youth Seminar on Green Development Held in Beijing* (May 22, 2012) online: China-ASEAN Environmental Cooperation Centre <<http://chinaaseanenv.org/english/news/>>, accessed January 16, 2013.

⁸⁶ Nguyen Hong Thao, "The Declaration on the Conduct of Parties in the South China Sea: A Vietnamese Perspective, 2002-2007" in Sam Bateman and Ralf Emmers (eds), *Security and International Politics in the South China Sea: Towards a Co-operative Management Regime* (London: Taylor and Francis, 2009) 207 at 209.

⁸⁷ See below 4.4.3 Mechanisms to Prevent Conflicts in the South China Sea.

⁸⁸ "China, ASEAN agree to develop code of conduct in South China Sea" (03/04/2013) online: Xinhua <http://news.xinhuanet.com/english/china/2013-04/03/c_132280325.htm>

⁸⁹ "ASEAN Wants Code of Conduct on South China Sea before Talks" (April 4, 2012) online: VOA News <<http://www.voanews.com/khmer-english/news/Asean-Wants-Code-of-Conduct-on-South-China-Sea-Before-Talks-146142315.html>>, accessed April 6, 2012.

⁹⁰ Gusti Agung Wesaka Puja, *Briefing of Director General of ASEAN Cooperation Ministry of Foreign Affairs of the Republic of Indonesia on Recent Developments in South China Sea*, Workshop on Managing Potential Conflicts in the South China Sea, Bandung, November 23, 2012. For an analysis of the content of the draft, see Mark J. Valencia, "Navigating Differences: What the "Zero Draft" Code of Conduct for the South China Sea Says (and Doesn't Say)" (March 2013) 8:1 Global Asia 72

Among all the regional mechanisms discussed in this Section, ASEAN seems to have achieved the furthest progress with the establishment of the List of ASEAN Heritage Parks. However, in addition to the fact that China, a major player in the SCS, is not a Member of this organization, the regime of ASEAN Heritage Parks itself has many limits. First, as long as the ASEAN Agreement on the Conservation of Nature and Natural Resources is still not entered into force, there is no regionally agreed definition of protected area or what measures an ASEAN Member could apply to manage and protect its protected areas. Second, many elements for the management of ASEAN Heritage Parks are still missing, such as a disqualification procedure for those parks which do not fulfill the conditions to remain on the List, a regional monitoring system and regional measures to support the conservation of these parks.

4.3 Regional Agreements under the Convention on Migratory Species Relevant to the South China Sea

As stated in the previous Chapter, the CMS encourages the conclusion of regional agreements for the protection of species.⁹¹ Two regional agreements which have been concluded under the framework of the CMS are relevant to the SCS territorially. They are the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia (IOSEA-Marine Turtles MOU) and the Memorandum of Understanding on the Conservation and Management of Dugongs and Their Habitats throughout Their Range (Dugong MOU). This section reviews stipulations and developments relating to MPAs under these two instruments.

⁹¹ See above 3.1.4 Convention on Migratory Species of Wild Animals, 1979.

4.3.1 Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia

The IOSEA-Marine Turtles MOU was concluded under the auspices of the CMS, and entered into force in 2001.⁹² Its objective is to protect, conserve, replenish and recover marine turtles and their habitats. This MOU covers the waters and coastal States of the Indian Ocean, Southeast Asia and adjacent seas, extending eastwards to the Torres Strait.⁹³ Currently, 33 States have signed the IOSEA-Marine Turtles MOU.⁹⁴ Of these, six are SCS coastal States, namely Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam.

Commitments relating to MPAs are set out in the Conservation and Management Plan of the IOSEA-Marine Turtles, annexed to the MOU and the currently developing initiative to develop an IOSEA Network of Sites of Importance for Marine Turtles. These two elements are now discussed in detail.

4.3.1.1 The Conservation and Management Plan of the IOSEA-Marine Turtles

The Conservation and Management Plan of the IOSEA-Marine Turtles lists specific activities to achieve a number of objectives relating to marine turtles protection.⁹⁵ One of the objectives of the Conservation and Management Plan of the

⁹² *Marine Turtles-IOSEA Introduction*, online: Convention for the Protection of Migratory Species and Wild Animals <http://www.cms.int/species/iosea/IOSEAturtle_bkgd.htm>, accessed January 1, 2012 and *Introduction*, online: Indian Ocean-South-East Asian Marine Turtle Memorandum of Understanding <<http://www.ioseaturtles.org/introduction.php>>, accessed January 1, 2012.

⁹³ *The Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their Habitats of the Indian Ocean and Southeast Asia*, 23 June 2001, online: The Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their Habitats of the Indian Ocean and Southeast Asia <<http://www.ioseaturtles.org/>>, accessed April 21, 2010 [IOSEA-Marine Turtles]. The specific species protected under this MOU are Loggerhead turtle, Olive ridley turtle, Green turtle, Hawksbill turtle, Leatherback turtle, Flatback turtle.

⁹⁴ *Map of Signatory States*, online: IOSEA-Marine Turtles <http://www.ioseaturtles.org/org_map.php>, accessed January 24, 2013.

⁹⁵ Such as the reduction mortality, protection of habitats, improvement of scientific research, increase of public awareness, enhancement of cooperation and promotion of the MOU's implementation; see *Conservation and Management Plan*, annexed to the IOSEA-Marine Turtles, see IOSEA-Marine Turtles, *supra* note 93, Annex.

IOSEA-Marine Turtles MOU is to protect, conserve and rehabilitate marine turtle habitats. Activities planned to achieve this objective, which are relevant to MPAs, include identifying areas of critical habitat such as migratory corridors, nesting beaches, inter-nesting and feeding areas; designating and managing protected/conservation areas, sanctuaries or temporary exclusion zones in areas of critical habitats; and taking measures to remove threats to such areas. The Plan also asks for the enhancement of recovery of degraded coral reefs, mangroves and seagrass habitats.⁹⁶

4.3.1.2 The IOSEA Network of Sites of Importance for Marine Turtles

Proposed at the 2nd meeting of the Signatory States of the IOSEA-Marine Turtles MOU in 2004, the IOSEA Network of Sites of Importance for Marine Turtles was adopted by a resolution of the Signatory States at its 6th meeting in Bangkok, Thailand in January 2012.⁹⁷ The overall goal of the network is to “promote the long-term conservation of sites of regional value for benefit of marine turtles and their habitat”.⁹⁸ Its objectives are to provide a regional mechanism to enhance the conservation of sites of importance to marine turtles, derive ecological and governance benefits from the networking based management, contribute to more effective maintenance of ecosystem services and give opportunities to participatory resource management and community development.⁹⁹

To nominate a site to become part of the Network, the IOSEA Focal Point of Signatory States in whose jurisdiction the site is located must submit potential sites to the

⁹⁶ *Conservation and Management Plan*, *supra* note 93, Annex.

⁹⁷ *Resolution to Establish the IOSEA Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, adopted by the IOSEA-Marine Turtles Signatory States at their 6th Meeting January 23-January 27, 2012 Bangkok, Thailand.

⁹⁸ *Guidance for the Establishment of a Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, adopted by the IOSEA-Marine Turtles Signatory States at their 6th Meeting January 23-January 27, 2012 Bangkok, Thailand at 2.

⁹⁹ *Ibid.* at 3.

Secretariat at least six months before the Meeting of Signatory States. The nominated sites will then be reviewed by the IOSEA Advisory Committee which would make recommendations to the Meeting of Signatory States for inclusion or rejection. Each Meeting of the Signatory States will have on its agenda the consideration of any new candidate sites.¹⁰⁰

The possibility to include an individual site as part of the network will be evaluated against a suite of criteria. At the 6th Meeting of Signatory States, a list of 19 provisional criteria for evaluation was provided and divided into four groups: network-wide, ecology and biology, governance, and socio-economic and politics.¹⁰¹ These criteria will be reviewed by the Advisory Committee and validated by experiences gained through the nomination of sites in practice.¹⁰²

As to the activities to implement the network, the principle is that the network should not impose new binding financial commitments nor new legal obligations on Signatory States. Three scenarios were envisaged regarding the availability of future funding: limited or no new funding, moderate new funding and substantial new funding. For each scenario, a different list of activities to be implemented is provided to support the network. Even in the absence of funding, ties can be developed among network sites

¹⁰⁰ *Ibid.* at 4.

¹⁰¹ For details of these provisional criteria, see *Provisional Criteria for the Evaluation of Sites Nominated for Inclusion in the Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, Working Paper #2 (22 September 2011), the 6th Meeting of IOSEA-Marine Turtles Signatory States January 23-January 27, 2012 Bangkok, Thailand.

¹⁰² See *Guidance for the Establishment of a Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, *supra* note 98 at 11 and *Resolution to Establish the IOSEA Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, *supra* note 97 at para. 2.

to coordinate their human, technical and financial resources for collaborative activities.¹⁰³

A network of MPAs promises to emerge under the framework of the IOSEA-Marine Turtles MOU. However, this network would not be a comprehensive one for two reasons. First, it would be a “single-species” network, aiming only at the protection of marine turtles. Second, though it might lead to the establishment of MPAs in the SCS, this marine region would not be its specific ecological unit for protection.

The other regional agreement adopted under the framework of the CMS which has a territorial scope relevant to the SCS is the Dugong MOU. This MOU is discussed next.

4.3.2 Memorandum of Understanding on the Conservation and Management of Dugongs and Their Habitats throughout Their Range

The Memorandum of Understanding on the Conservation and Management of Dugongs (Dugong MOU)¹⁰⁴ and their Habitats throughout their Range and an associated Conservation and Management Plan were concluded in 2007 in Abu Dhabi, United Arab Emirates.¹⁰⁵ Both instruments have content comparable to the IOSEA-Marine Turtles

¹⁰³ It can be done for example by pairing pairs or more “sister sites”. These sister sites can coordinate their human, technical and financial resources to conduct collaborative staff training, outreach, monitoring, and management activities; see *Guidance for the Establishment of a Network of Sites of Importance for Marine Turtles in the Indian Ocean-South-East Asia Region*, *supra* note 98 at 5.

¹⁰⁴ The Dugong, commonly known as the sea cow, is an herbivorous marine mammal in tropical and subtropical coastal waters. It has a large range that spans 42 countries including the coastal and island waters from East Africa to Vanuatu, between about latitudes 27° North and South of Equator. It is listed as vulnerable to extinction at a global scale by the IUCN; see Helene Marsh *et al.*, *Dugong: Status Reports and Action Plan for Countries and Territories* (1992) Doc. UNEP/DEWA/RS.02, online: UNEP <www.unep.org/NairobiConvention/docs/dugong.pdf>, accessed January 2, 2012 and Marsh H. “Dugong, Dugong” in IUCN, IUCN Red List of Threatened Species, Version 2011.2, online: IUCN Red List of Threatened Species <<http://www.iucnredlist.org/apps/redlist/details/6909/0>>, accessed January 2, 2012. See also *Dugong MOU-Introduction*, online: Convention for the Protection of Migratory Species and Wild Animals <<http://www.cms.int/species/dugong/index.htm>>, accessed January 2, 2012.

¹⁰⁵ *Report of the Technical Workshops and Meeting to Sign the Memorandum of Understanding Concerning Conservation and Management of Dugongs (dugong dugong) and Their Habitats throughout their Range*, Abu Dhabi, UAE, October 28-31, 2007.

MOU and its Conservation and Management Plan. Concretely, the Dugong MOU defines a number of commitments for signatory States to protect dugongs.¹⁰⁶ The Dugong Conservation and Management Plan sets out activities to be implemented to achieve concrete objectives for the protection of Dugong¹⁰⁷ calibrated at priority levels and targets to be met to achieve the objectives.¹⁰⁸

MPAs-relevant commitments are contained in actions planned in the Conservation and Management Plan to protect, conserve and manage habitats of dugong. Signatory States commit to identify and map areas of important dugong habitats; establish necessary measures to protect and conserve dugong habitats; assess the risk of, and develop measures to mitigate against the degradation of dugong habitats; and identify and where appropriate, rehabilitate degraded dugong habitats. Most of these actions were qualified as having a high priority level.¹⁰⁹

So far, 21 States have signed the Dugong MOU,¹¹⁰ two of which are coastal States of the SCS (Philippines and Thailand). Two meetings of the Signatory States of the Dugong MOU have been held with the latest one in February 2013.¹¹¹ At the 2nd

¹⁰⁶ *The Memorandum of Understanding on the Conservation and Management of Dugongs and Their Habitats throughout Their Range* (31 October 2007), adopted at the 3rd Meeting on Dugong Conservation and Management, Abu Dhabi, UAE, October 28-31, 2007, online: CMS <<http://www.cms.int/>>, accessed April 22, 2010.

¹⁰⁷ They include reduction of direct and indirect causes of dugong mortality; improvement of understanding of dugong through research and monitoring; protection, conservation and management of dugongs' habitat; raising awareness of dugong conservation; enhancement of national, regional and international cooperation; promotion of implementation of the MOU; improvement of legal protection of dugongs and their habitats; and enhancement of national, regional and international cooperation on capacity building.

¹⁰⁸ *Conservation and Management Plan*, associated to the Dugong MOU, adopted at the Third Meeting on Dugong Conservation and Management, Abu Dhabi, UAE, October 28-31, 2007, online: CMS <<http://www.cms.int/>>, accessed April 22, 2010 [Dugong Conservation and Management Plan].

¹⁰⁹ See Dugong Conservation and Management Plan, *ibid*.

¹¹⁰ *Dugong MOU Agreement Summary Sheet*, online: CMS <http://www.cms.int/species/dugong/dugong_mou.htm>, accessed January 23, 2013.

¹¹¹ *Report of the 2nd Signatory State Meeting of the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range*, Manila, Philippines, February 19-20, 2013.

meeting, a set of Rules of Procedures for meetings of the Signatory States of the Dugong MOU were adopted.¹¹²

As the Dugong MOU is a relatively newly adopted instrument, no concrete measure for its implementation has been developed yet and so far, not many SCS States have become Members. However, nothing stops them from joining the MOU and nothing stops its signatory States in future meetings to adopt measures similar to those adopted under the IOSEA-Marine Turtles MOU to enhance Dugong protection.

4.4 Other Relevant Mechanisms

Beyond instruments discussed so far as capable of facilitating the establishment of MPAs in the SCS, there are others that could also play tangential but useful roles to the same end. This section discusses a number of these regional mechanisms.

4.4.1 Regional Fisheries Cooperation Mechanisms

Two regional organizations in charge of fisheries cooperation in the region could support the development of a network of MPAs in the SCS. These are the Southeast Asian Fisheries Development Center (SEAFDEC) and Asia-Pacific Fishery Commission (APFIC). Each organization is discussed in turn.

4.4.1.1 Southeast Asian Fisheries Development Center

The SEAFDEC is a regional organization established by treaty in 1967 to promote fisheries development in Southeast Asia.¹¹³ It is empowered to facilitate training for fisheries technicians, the study of fisheries techniques, development of fishing grounds, conduct of investigation of fisheries resources and research into fisheries

¹¹² *Ibid.* at 2. For details about these rules of procedures, see *Rules of Procedure, adopted at the 2nd Signatory State Meeting of the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range*, Manila, Philippines, 19-20 February 2013.

¹¹³ See *Agreement Establishing the Southeast Asian Fisheries Development Center*, 30 January 1968, 651 U.N.T.S. 20.

oceanography, and collection and analysis of information related to the fisheries.¹¹⁴ Members of the Center are Myanmar, Cambodia, Indonesia, Japan, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam.¹¹⁵ As the area of competence of SEAFDEC is marine and inland fisheries and all SCS States, except China, are Members, its territorial competence includes, *a fortiori*, part of the SCS.

Research carried out under and information disseminated by SEAFDEC relating to marine species and habitats in the region could provide scientific support for the establishment of MPAs and a network of MPAs in the SCS. For instance, SEAFDEC has completed studies relating to aquatic species of international concern such as sea turtles, sharks, sea cucumber and cetaceans.¹¹⁶ Guidelines developed by the Center were also used as reference material in the framework of the South China Sea Project.¹¹⁷

4.4.1.2 Asia-Pacific Fishery Commission

APFIC is a FAO Constitution's Article XIV¹¹⁸ Regional Fishery Body established in 1948¹¹⁹ by the APFIC Agreement.¹²⁰ The geographical area of competence of APFIC is defined in the Agreement as the Asia-Pacific.¹²¹ In practice, it covers FAO

¹¹⁴ *Ibid.*, art. 2.

¹¹⁵ *About SEAFDEC*, online: SEAFDEC

<http://www.seafdec.org/cms/index.php?option=com_content&view=section&layout=blog&id=5&Itemid=53>, accessed November 24, 2011.

¹¹⁶ See for example, SEAFDEC, *Annual Report 2010* (Bangkok: SEAFDEC, 2011) 24.

¹¹⁷ SEAFDEC, *Supplementary Guidelines on Co-management Using Group User Rights, Fishery Statistics, Indicators and Fisheries Refugia* (Bangkok: SEAFDEC, 2006).

¹¹⁸ Art. XIV of FAO Constitution states that the FAO Council may, by a vote concurred in by at least two thirds of its members, approve and submit to Member Nations agreements relating to food and agriculture which are of particular interest to Member Nations in geographical area specified in such agreements and designed to apply only to such areas, see FAO, *Basic Texts of the Food and Agriculture Organization of the United Nations*, Vols I and II (Rome: FAO, 2010) 7.

¹¹⁹ At the time, its name was Indo-Pacific Fishery Council.

¹²⁰ *APFIC Agreement*, 9 November 1948, online: APFIC

<<http://www.apfic.org/modules/wiwimod/index.php?page=agreement&back=About+APFIC>>, accessed August 5, 2009. The Agreement was last modified in 1996.

¹²¹ *Ibid.*, art. VI.

Statistical Area 04¹²² for inland and aquaculture, the Yellow Sea and its adjacent waters, the SCS and its adjacent waters and the Bay of Bengal for marine fisheries.¹²³ The current membership of APFIC is 21 members, including SCS States like Cambodia, China, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.¹²⁴

APFIC does not have a regulatory function but acts mainly as a regional consultative forum that works in partnership with other regional organizations and arrangements. It provides advice, coordinates activities and acts as an information broker to increase knowledge of fisheries and aquaculture in the Asia-Pacific region to underpin decision-making.¹²⁵ As such, it can play a supportive role in the establishment of MPAs and networks of MPAs in the region by disseminating scientific knowledge and information about MPAs and enhance the awareness of countries in the region about the utilization of MPAs as a conservation tool. Besides, as a Regional Consultative Forum, it can facilitate discussions among its Members about the possibility, as well as necessary steps towards the development of networks of MPAs in the region or any sub-region under its geographical competence.

4.4.2 The Intergovernmental Oceanographic Commission's Sub-Commission for the Western Pacific

The Intergovernmental Oceanographic Commission's Sub-Commission for the Western Pacific (IOC-WESTPAC) was established by the International Oceanographic

¹²² "Fishing Areas for Statistical Purpose" in FAO, *CWP Handbook for Statistical Standards* (Rome: FAO, 2002), Section H.

¹²³ Deb Mensasveta, *APFIC: Its Changing Role* (Bangkok: FAO Regional Office for Asia and the Pacific, 2000) 7.

¹²⁴ *About APFIC*, online: APFIC

<<http://www.apfic.org/modules/wiwimod/index.php?page=About+APFIC&back=WiviHome>>, accessed August 5, 2009.

¹²⁵ *Ibid.*

Commission of UNESCO¹²⁶ in 1989¹²⁷ to be in charge of international oceanographic research programs, training and technical assistance and sharing of information and knowledge.¹²⁸ Its territorial scope covers approximately the North Western part of the Pacific Ocean with 20 Member States including those bordering the SCS (China, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam).¹²⁹ Currently, its activities focus on three main areas: ocean observation, research relating to marine ecosystem and capacity building.¹³⁰ Research undertaken under IOC-WESTPAC auspices could provide useful scientific information and knowledge to support the establishment of MPAs and networks of MPAs in the region.

4.4.3 Mechanisms to Prevent Conflicts in the South China Sea

So far, two mechanisms, both involving China and ASEAN States have been developed to help avoid conflicts and promote cooperation in the SCS. These are the

¹²⁶ The Intergovernmental Oceanographic Commission is a body with functional autonomy within UNESCO to promote international cooperation and coordinate program in marine research, services, observation systems, hazards mitigation, and capacity development in order to understand and effectively manage the resources of the ocean and coastal areas. See UNESCO, *Statutes of the Intergovernmental Oceanic Commission*, adopted by the Resolution 22 of the 30th General Conference of UNESCO on November 16, 1999. See also *About IOC*, online: UNESCO <<http://www.unesco.org/new/en/natural-sciences/ioc-oceans/about-us/>>, accessed January 3, 2012.

¹²⁷ IOC-WESTPAC, *8th Intergovernmental Session of the IOC Sub-Commission for the Western Pacific*, Bali, Indonesia; May 10-13, 2010. In fact, before this date the Sub-Commission existed under the form of an IOC Regional Committee without permanent secretariat, see *Report of the 1st Session of the IOC Regional Committee for the Western Pacific*, Tokyo, Japan, February 21-24, 1979.

¹²⁸ *WESTPAC Terms of Reference*, adopted at the 1st Intergovernmental Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, China, February 5-9, 1990, Annex IV.

¹²⁹ For the limits of IOC-WESTPAC's territorial scope, see *Report of the 1st Session of the IOC Regional Committee for the Western Pacific*, Tokyo, Japan, February 21-24, 1979 at 7.

¹³⁰ See IOC-WESTPAC, *Ocean Observations and Services*, online: UNESCO Bangkok Office <<http://www.unescobkk.org/westpac/about-us/ioc-westpac/ioc-westpac/programmes-and-projects/ocean-observations-and-services/>>, accessed January 4, 2012; IOC-WESTPAC, *Marine Science and Applications*, online: UNESCO Bangkok Office <<http://www.unescobkk.org/westpac/about-us/ioc-westpac/ioc-westpac/programmes-and-projects/marine-science-and-applications/>>, accessed January 4, 2012 and IOC-WESTPAC, *Building Capacity and Interdisciplinary Platform*, online: UNESCO Bangkok Office <<http://www.unescobkk.org/westpac/about-us/about-westpac/programmes-and-projects/capacity-development/>>, accessed January 4, 2012.

Declaration on the Conduct of Parties in the South China Sea (or DOC)¹³¹ and as a “track-two” mechanism, the Workshops to Manage Potential Conflicts in the South China Sea (or South China Sea Workshops).¹³² Both mechanisms consider marine environmental protection an important confidence-building measure and cooperative activity that relevant States can implement while waiting to resolve territorial disputes in the SCS.

Pursuant to the DOC, the Parties commit to peaceful resolution of disputes, adoption of a self-restraint policy, implementation of confidence building measures and cooperative activities.¹³³ Among the areas that Parties can explore and undertake cooperative activities in, marine environmental protection is given first place.¹³⁴ Six

¹³¹ The Declaration on the Conduct of Parties in the South China Sea was signed between China and ASEAN countries on the 4 November 2002 in Phnom Penh, Cambodia after a decade of difficult diplomatic negotiations. The Declaration was considered an important step towards the establishment of a regional code to promote of peace and stability in the South China Sea; see Nguyen Hong Thao, “The 2002 Declaration on the Conduct of Parties in the South China Sea: A Note” (2003) 34 *Ocean Development & International Law* 279 and Thi Hien Luong Dinh, *Conflict Management Process in the Eastern Sea and the Code of Conduct* (Penang, Malaysia: Southeast Asian Conflict Studies Network, 2003).

¹³² The Workshops on Managing Potential Conflicts in the South China Sea are a series of informal workshops organized by Indonesia since 1990 with the participation of all the five claimants in the Paracels and Spratlys islands dispute and other ASEAN countries. The purpose of the workshops is to develop confidence-building measures in the SCS and to promote cooperation activities between the littoral States. The participants to the meetings include government and military officials, academics and scientists from the region. Compared to the DOC process, the Workshop is considered to have an unofficial nature and constitute a “track-two” initiative. It means that the participants attend the Workshops in their personal capacity and their statements do not represent government perspectives and outcomes should not be used to justify claims or policies. Besides, all the Statements that the Workshops have adopted have been pursuant to the rule of consensus; see Yann-Huei Song, “Managing the Potential Conflicts in South China Sea: Taiwan’s Perspectives”, *East Asian Institute Paper N.14* (Singapore: World Scientific Publishing and Singapore University Press, 1999) at 20 and Sulan Chen, “Instrumental and Induced Cooperation: Environmental Politics in the South China Sea” (PhD Thesis, University of Maryland, 2005) [unpublished] at 218.

¹³³ *Declaration on the Conduct of Parties on the South China Sea*, Phnom Penh, 4 November 2002, Online: ASEAN <<http://www.aseansec.org/20185.htm>>, accessed November 16, 2009. China’s position is that the DOC is an instrument signed between China with each ASEAN members and not between China and ASEAN as a bloc, see *Foreign Ministry Spokesperson Hong Lei's Regular Press Conference on April 5, 2012*, online: Ministry of Foreign Affairs of the People’s Republic of China <<http://www.fmprc.gov.cn/eng/xwfw/s2510/2511/t921455.htm>>, April 12, 2012.

¹³⁴ *Ibid.*, line 6 (a).

cooperative projects¹³⁵ and a set of guidelines for their implementation were agreed in 2011.¹³⁶ To date, a number of workshops and *symposia* have been held as part of the implementation of DOC.¹³⁷

Under the South China Sea Workshops, a wide range of issues have been discussed at its different meetings which also covers resource management, environment, ecology and marine scientific research.¹³⁸ A number of cooperative activities were also proposed and/or implemented, including the organization in 2002 of an expedition for biodiversity studies in the Anambas and Natunas islands of Indonesia (Anambas expedition).¹³⁹ Currently, three cooperative projects are being implemented.¹⁴⁰

The DOC and South China Sea Workshops could provide a framework for SCS States to implement cooperative and confidence-building activities to support and

¹³⁵ Namely Joint ASEAN-China Table Top Maritime Search and Rescue Exercise, Workshop on Marine Ecosystem and Biodiversity, Workshop on Regional Oceanographic and Climate Change Exchanges in the South China Sea, Workshop on Disaster Reduction and Prevention; Training Programme on Ecosystem Monitoring and Monitoring Technology; and Regional Oceanographic Exchange around the South China Sea; see Nguyen, *supra* note 86 at 215.

¹³⁶ *Guidelines for the Implementation of the DOC*, 21 July 2011, online: Ministry of Foreign Affairs of the People's Republic of China <<http://www.mfa.gov.cn/chn/pds/ziliao/zt/dnzt/yjcdm2/t844329.htm>>, accessed August 4, 2011.

¹³⁷ Such as the Workshop on Marine Hazard Prevention and Mitigation in the South China Sea, July 17-18, 2012, Kunming, China; the Workshop on Marine Ecosystems and Biodiversity, July 31-August 4, 2012, Singapore; the Symposium on Marine Ecological Environment and Monitoring Techniques, October 16-17, 2012, Xiamen, China and the Joint Workshop in Commemoration of the 10th Anniversary of the DOC on November 1-3, 2012 in Phnom Penh, see *ASEAN-China Dialogue Relations* (December 19, 2012) online: ASEAN <<http://www.asean.org/asean/external-relations/china/item/asean-china-dialogue-relations>>, accessed June 13, 2012 and "ASEAN, China Eye more Cooperation in Search, Rescue in South China Sea" (June 19, 2013) *Xinhua*.

¹³⁸ For a list of issues discussed under the South China Sea Workshops, see Hasjim Djalal, "The South China Sea: The Long Road towards Peace and Cooperation" in Bateman and Emmers (eds), *supra* note 86 at 183.

¹³⁹ During this expedition, a total of 60 sites were explored, 3000 specimens collected among which some were unknown previously, see N. Nivasothi, *Progress Report for EX ANAMBAS 2002, an initiative of the Workshop on Managing Potential Conflicts in the South China Sea*, 13th Workshop on Management of Potential Conflicts in the South China Sea, September 17-18, 2003, Medan, Indonesia.

¹⁴⁰ Namely "The Study of Tides and Sea Level Change and their Impact on Coastal Environment in the South China Sea affected by Climate Change" (coordinated by Indonesia), "Regional Cooperation on the Field of Marine Science and Information Network in the South China Sea including Database Information Exchange and Networking" (coordinated by China) and "South-East Asia Network for Education and Training" (coordinated jointly by China and Taiwan), see *Statement* of the 22nd Workshop on Managing Potential Conflicts in the South China Sea, Bandung, Indonesia, November 23-24, 2012.

facilitate the establishment of MPAs in the SCS. These activities may be workshops, joint marine scientific explorations, training and demonstration projects.¹⁴¹

4.4.4 Asia-Pacific Economic Forum

Although established with a primary mandate in economic development, the Asia Pacific Economic Forum (APEC)¹⁴² also has an ocean-related agenda to deal with the issues of conservation of marine resources and fisheries. A Working Group on Marine Resources Conservation was established to promote initiatives to facilitate adoption of regional and national policies and programs to lead to the sustainable use of marine and coastal environments.¹⁴³ Another Working Group on Fisheries was established to support and promote regional and domestic implementation of sustainable fisheries and aquaculture practices and trade liberalization and facilitation in fish and fisheries

¹⁴¹ It was reported that the idea of cooperating in establishing MPAs was mentioned in the Workshops at least once. For instance, the 2nd meeting of the Technical Working Group on Resources Assessment and Ways of Development in the South China Sea under the South China Sea Workshops in 1993 recommended that the feasibility of establishing “marine reserve or marine park in an area to be defined within the multiple claim areas” to be investigated. However, the recommendation was not followed; see Noel Ludwig, “Sword into Timeshares: An International Marine Park in the Spratly Islands?” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook 15* (Leiden: Martinus Nijhoff Publishers, 2001) 23.

¹⁴² APEC is an intergovernmental forum established in 1989 to promote economic development between 21 economies (Australia, Brunei Darussalam, Canada, Chile, People’s Republic of China, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei/Taiwan, Thailand, United States and Vietnam) in the Asia-Pacific region, see *Statement of the 1989 APEC Ministerial Meeting and Chairman Summary Statement of the 1989 APEC Ministerial Meeting*, Canberra, Australia, November 6-7, 1989 and *About APEC*, online: APEC <http://www.apec.org/apec/about_apec.html>, accessed December 31, 2009.

¹⁴³ *Statement of the 1990 APEC Ministerial Meeting*, July 29-31, 1990, Singapore and *Summary Report of the APEC Expert Workshop Meeting on Marine Resource Conservation*, Vancouver, British Columbia, Canada, November 20-21, 1990; see also *Marine Resources Conservation Working Group*, online: APEC <http://www.apec.org/apec/apec_groups/som_committee_on_economic/working_groups/marine_resource_conservation.html>, accessed July 2, 2009.

products.¹⁴⁴ Three Ocean-Related Ministerial Meetings have also been organized, in Seoul, Korea in 2002;¹⁴⁵ Bali, Indonesia in 2005¹⁴⁶ and in Paracas, Peru, in 2010.¹⁴⁷

It is under the ocean-related agenda that APEC economies have made commitments and taken action relevant to MPAs. For instance, in the Seoul Declaration in 2002,¹⁴⁸ they pledged to develop and promote, in accordance with international law, the use of a range of tools for sustainable ocean management, including establishment of MPAs within their national jurisdictions. They would also improve the conservation and sustainable management of important and critical coastal and marine habitats and related ecosystems at both national and regional levels.¹⁴⁹ In the Bali Plan of Action in 2005,¹⁵⁰ commitments relating to MPAs appeared as part of actions to be undertaken in the areas of ecosystem-based management, coral reefs and other vulnerable areas and sustainable

¹⁴⁴ *Summary Report of the 1st APEC Fisheries Working Group Meeting*, Wellington, New Zealand, June 24-26, 1991. See also *Ocean and Fisheries Working Group*, online: APEC <<http://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Ocean-and-Fisheries.aspx>>, accessed December 9, 2012. In 2011, the two Working Groups merged together to form the Ocean and Fisheries Working Group; see *Summary Report of the 24th APEC Marine Resource Conservation Working Group Meeting*, Bali, Indonesia, June 7, 2011, para. 12 and *Summary Report of the 22nd APEC Fisheries Working Group Meeting*, Bali, Indonesia, June 7, 2011, para. 14.

¹⁴⁵ *Seoul Oceans Declaration*, The 1st APEC Ocean-related Ministerial Meeting, Seoul, Korea, April 22-26, 2002 [Seoul Oceans Declaration] and *Ocean and Fisheries Working Group*, online: APEC <<http://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Ocean-and-Fisheries.aspx>>, accessed December 9, 2011.

¹⁴⁶ *Statement of the 2005 Ocean-related APEC Ministerial Meeting*, Bali, Indonesia, September 16, September 2005.

¹⁴⁷ *Statement of the 2010 Ocean-related APEC Ministerial Meeting*, Paracas, Peru, October 11-12, 2010.

¹⁴⁸ *Seoul Oceans Declaration*, The 1st APEC Ocean-related Ministerial Meeting, Seoul, Korea, April 22-26, 2002.

¹⁴⁹ *Seoul Oceans Declaration*, *ibid*, paras 3 & 6.

¹⁵⁰ *Bali Plan of Action: Towards Healthy Oceans and Coasts for the Sustainable Growth and Prosperity of the Asia-Pacific Community*, 2nd APEC Ocean-Related Ministerial Meeting, Bali, September 16-17, 2005.

fisheries and aquaculture management.¹⁵¹ In the Paracas Action Agenda of 2010,¹⁵² the Ministers recognized that MPAs and networks of MPAs could help in promoting the sustainability of fisheries and other marine resources. They also expressed support for the Programme of Work on Marine and Coastal Biodiversity of the CBD¹⁵³ and encouraged partnerships with other regional *fora* in the Pacific to promote coordinated and effective protection of the marine environment of the APEC region.¹⁵⁴

In addition, APEC members have also implemented a number of projects which could provide support for the establishment of MPAs and networks of MPAs in the region. For instance, the Project “Marine Ecosystem Identification and Mapping in the Asia-Pacific Region”, which ended in 2008, aimed to provide agreed science-based criteria to be used in the identification of marine ecosystems, a set of variables to monitor and assess changes and the creation of maps of marine ecosystems in the APEC region.¹⁵⁵ The project “Fish and Biodiversity Across Boundaries: Enabling Collaborative Capacity Building to Improve the Protection of Marine Resources and Strengthen Future Economic Security and Ocean Wealth in the Asia-Pacific Region”, which ended in 2010, sought to explore opportunities for connecting the region through cooperation and multi-

¹⁵¹ Concretely, the Ministers committed to initiate the identification of ecologically and biologically significant areas and to apply area-based measures, such as MPAs, consistent with international law and based on best available scientific information, to manage and conserve these areas. They would improve the conservation of vulnerable areas by managing activities having a destructive impact on these areas and associated species, based on the best available scientific information, increase monitoring and research; and enhance local management. They would advocate the application of an ecosystem approach to fisheries management and improve the protection of critical sites for the replenishment of fisheries such as spawning and aggregation sites, see *Bali Plan of Action: Towards Healthy Oceans and Coasts for the Sustainable Growth and Prosperity of the Asia-Pacific Community*, *supra* note 150, I.b.(i), I.b.(xiv) and I.c.(iv&xiii).

¹⁵² *Paracas Action Agenda*, 3rd Ocean-Related APEC Ministerial Meeting, Paracas, Peru, October 11-12, 2010.

¹⁵³ See above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

¹⁵⁴ *Paracas Action Agenda*, *supra* note 152, para.1.2.

¹⁵⁵ *Marine Ecosystem Identification and Mapping in the Asia-Pacific Region*, Project No. MRCWG 03/2007, online: APEC

<<http://aimp.apec.org/layouts/aq/forms/pdb/ViewProjectProposal.aspx?ID=1394&Source=>>, accessed December 11, 2011.

jurisdictional approaches to marine spatial management via sectoral closure, sanctuaries, locally managed marine areas, protected areas and multiple-use areas.¹⁵⁶ A third project “Implementing an Ecosystem Approach to Fisheries in the Context of Broader Marine Ecosystem-Based Management”, ended in 2009. Under it, the state of implementing the ecosystem approach to fisheries and ecosystem based management in APEC economies was assessed with the aim to help APEC Members better understand these concepts and to outline the range of tools available to implement both approaches.¹⁵⁷

The primary objective of APEC is economic cooperation and its territorial scope is the Asia-Pacific region. As such, it is difficult to imagine that the forum would play a major role in establishing MPAs and a network of MPAs in the SCS sub-region. However, it is a framework under which APEC economies (which also include SCS States) can commit to the establishment of MPAs and networks of MPAs. Besides, just like under the DOC and South China Sea Workshops, its projects and activities can facilitate the designation of MPAs and regional cooperation for the protection of the marine environment and living resources, including in the SCS.

4.4.5 Sub-Regional and Bilateral Mechanisms

A number of sub-regional and bilateral arrangements concluded between SCS coastal States also have implications for the protection of the marine environment and living resources of this region. These arrangements have led to and could provide

¹⁵⁶ ‘Fish and biodiversity cross boundaries’: *Enabling collaborative capacity building to improve the protection of marine resources and strengthen future economic security and ocean wealth in the Asia-Pacific region*, Project No. MRCWG 01/2009A, online: APEC <<http://aimp.apec.org/layouts/aq/forms/pdb/ViewProjectProposal.aspx?ID=1770&Source=>>, accessed December 10, 2011.

¹⁵⁷ *Implementing an Ecosystem Approach to Fisheries in the Context of Broader Marine Ecosystem-based Management*, Project No. FWG 01/2009, online: APEC <<http://aimp.apec.org/layouts/aq/forms/pdb/ViewProjectProposal.aspx?ID=1620&Source=>>, accessed December 10, 2011.

support for the creation of sub-regional networks of MPAs here. They include the Turtle Island Heritage Protected Area MOU, the Gulf of Tonkin Fisheries Agreement, Cooperative Mechanism on the Safety of Navigation and Protection of the Marine Environment in the Straits of Malacca and Singapore, the Joint Oceanographic Marine Scientific Research Expedition in the South China Sea (JOMSRE-SCS) and the Pan-Tonkin Economic Cooperation Forum. A brief discussion of these arrangements follows.

The Turtle Island Heritage Protected Area was established by the Memorandum of Agreement between the Government of the Republic of the Philippines and the Government of Malaysia on the Establishment of the Turtle Islands Heritage Protected Area (MOA) in 1996.¹⁵⁸ It covers nine islands located in the Sulu-Sulawesi region in the border areas between the province of Tawi-Tawi, Philippines and Sabah, Malaysia.¹⁵⁹ Three of the islands are on the Malaysian side of the border (Palau Selingan, Palau Gulisaan, and Palau Bakkungan Kechil) and six are on the Philippine side (Boaan, Langaan, Great Bakkungan, Lihiman, Taganak, and Baguan).¹⁶⁰ The area is the largest remaining nesting site for green turtles in Southeast Asia.¹⁶¹

¹⁵⁸ “Memorandum of Agreement between the Government of the Republic of the Philippines and the Government of Malaysia on the Establishment of the Turtle Islands Heritage Protected Area, May 19th 1996” (2002) 1:2 *Journal of International Wildlife Law & Policy* 157.

¹⁵⁹ Catarina Grilo, “The Impact of Maritime Boundaries on Cooperation in the Creation of Transboundary Marine Protected Areas: Insights from Three Cases” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook 24* (Leiden: Martinus Nijhoff Publishers, 2010) 115. It should be noted that Sabah is an area of overlapping territorial claims between Philippines and Malaysia, for details, see below 7.1.2.3 Areas under Overlapping Claims but the Disputed Status is Contested by at Least One Claimant.

¹⁶⁰ Memorandum of Agreement between the Government of the Republic of the Philippines and the Government of Malaysia on the Establishment of the Turtle Islands Heritage Protected Area, *supra* note 158, Art.1.

¹⁶¹ WWF-Philippines, *Turtle Islands: Resources and Livelihoods under Threats* (Quenzon City: WWF-Philippines, 2005) 5.

The Gulf of Tonkin Fisheries Agreement was signed between Vietnam and China in 2000.¹⁶² The most important objective of the Agreement is to establish a Common Fishing Zone between Vietnam and China in the middle of the Gulf of Tonkin, in which the two countries agreed to jointly take measures in relation to preservation, management and sustainable utilization of the living resources.¹⁶³ The validity of the Agreement was fixed at 15 years.¹⁶⁴ It is unknown whether after the expiration of the Agreement, Vietnam and China will negotiate a new one. The two countries could consider negotiating and concluding a more comprehensive agreement for the protection of the marine environment and living resources in this area, including potentially the development of a bilateral network of MPAs.

The Cooperative Mechanism on the Safety of Navigation and Protection of the Marine Environment in the Straits of Malacca and Singapore was established by Indonesia, Malaysia and Singapore in 2007 to provide a framework for voluntary cooperation between user States and littoral States to enhance safety, security and

¹⁶² *Agreement between the People's Republic of China and the Socialist Republic of Vietnam on Cooperation in Fisheries in the Gulf of Tonkin*, 25 December 2000, online: National Boundary Committee-Ministry of Foreign Affairs of Vietnam <<http://biengioilanhtho.gov.vn/vie/hiepdinhhoptacngheca-nd-e6a9f6ac.aspx>>, accessed April 6, 2010 [Gulf of Tonkin Fisheries Agreement]. For an English version of the Agreement, see Nguyen Hong Thao, "Maritime Delimitation and Fishery Cooperation in the Gulf of Tonkin" (2005) 36 *Ocean Development & International Law* 25, Annex A. Before this Agreement, the two countries concluded agreements to establish time-limited joint fishing zones in the Gulf of Tonkin in 1957, 1961 and 1963 successively, see National Boundary Committee-Ministry of Foreign Affairs of Vietnam, *Introducing Some Basic Issues relating to the Law of the Sea in Vietnam* (Hanoi: National Politics Publishers, 2004) 100.

¹⁶³ *Ibid.*, arts 3 and 5. A licensing system for fishing activities is applied in which fishing vessels must obtain fishing permits from their national authorities to fish in this area. The quantity of fishing vessels allowed in the Common Fishing Zone for each party is determined jointly on an annual basis according to the allowable catch determined by joint surveys of fishery resources, the impact on respective fishing activities of both parties, and the need for sustainable development of the fisheries. The enforcement of relevant regulations is implemented by the competent authorities of each country within their respective maritime jurisdiction with regards to fishing vessels of nationals both nationals; see Gulf of Tonkin Fisheries Agreement, *ibid.* arts 6-9.

¹⁶⁴ Gulf of Tonkin Fisheries Agreement, *supra* note 162, art.22 (2). As the Agreement entered into force in 2004, it will expire in 2019.

environmental protection.¹⁶⁵ Seven projects have been developed and implemented under the framework of the Cooperative Mechanism. They include capacity building on hazardous and noxious substance preparedness and response and the setting up of a tide, current and wind measurement system.¹⁶⁶ So far, the works relating to the protection of the Cooperative Mechanism are more focused on the prevention of marine pollution but nothing prevents the carrying out of activities for the protection of marine biodiversity.

The JOMSRE-SCS was agreed between Vietnam and Philippines in 1994 to enhance friendship between the two countries through cooperation in marine scientific research and improvement in the knowledge of processes of the marine environment and resources in the SCS, in particular the Spratlys areas.¹⁶⁷ The Program lasted from 1996 to 2007. A total of four expeditions were carried out under it in different areas of the SCS with a focus on the Spratlys region. Much data was collected and analysed, contributing to further understanding of the oceanographic, biological and geological characteristics

¹⁶⁵ Sam Bateman, "Regime Building in the Malacca and Singapore Straits: Two Steps Forwards, One Step Back" (2009) 4: 2 *The Economics of Peace and Security Journal* 45 and *Establishment*, online: Cooperative Mechanism on Safety of Navigation and Environment Protection in the Straits of Malacca and Singapore <http://www.cooperativemechanism.org.my/index.php?option=com_content&view=article&id=34&Itemid=31>, accessed November 27, 2012.

¹⁶⁶ Projects, online: Cooperative Mechanism on Safety of Navigation and Environment Protection in the Straits of Malacca and Singapore <http://www.cooperativemechanism.org.my/index.php?option=com_content&view=article&id=29&Itemid=19>, accessed November 26, 2012.

¹⁶⁷ *Joint Oceanographic Marine Scientific Research Expedition in the South China Sea (JOMSRE-SCS), 1996-2007* (15 October 2012), online: Vietnam Institute of Oceanography <<http://www.vnio.org.vn/Trangch%E1%BB%A7/H%E1%BB%A3pt%C3%A1cQu%E1%BB%91ct%E1%BA%BF/tabid/60/ctl/Details/mid/389/ItemID/575/language/vi-VN/Default.aspx>>, accessed November 29, 2012 [in Vietnamese].

of the SCS and its biodiversity.¹⁶⁸ In 2007, Vietnam and Philippines decided to end the 1st phase of the Program and committed to resume it in the future.¹⁶⁹

The Pan-Tonkin Gulf Economic Forum is a yearly meeting organized by China, beginning in 2006¹⁷⁰ between China and several ASEAN countries bordering the SCS.¹⁷¹ The main purpose of the Forum is to promote economic cooperation between China's western region and relevant countries.¹⁷² Despite its economic focus, the long-term targets of the Forum (2016-2026) include also an environmental objective, which is to build a pro-ecologic region in which maritime resources and ecological environment are efficiently protected.¹⁷³ This could provide a framework for undertaking cooperative activities to protect the marine environment and resources, including the development of a network of MPAs in the SCS.

¹⁶⁸ Nguyen Khoa Son *et al.*, *Proceedings of the Results of the Joint Marine Scientific Research Expeditions in the South China Sea*, March 26-29, 2008, Ha Long, Vietnam (Hanoi: Natural Sciences and Technologies Publishers, 2009) and Hoesslin, Karsten von. "A View of the South China Sea-From Within: Report on the Joint Oceanographic Marine Scientific Research Expedition (III) in the South China Sea" (2005) 7: 1 Culture Mandala 1.

¹⁶⁹ Henry S. Bensusanto Jr., "Cooperation in the South China Sea: Views on the Philippines – Vietnam Cooperation on Maritime and Ocean Concerns," paper presented at the 2nd International Workshop "South China Sea: Cooperation for Regional Security and Development", November 11-12, 2010, Ho Chi Minh City, Vietnam and Nguyen Khoa Son *et al.*, *ibid.*

¹⁷⁰ The basis for the Forum is the Joint Declaration of the Heads of State/Government of the Association of Southeast Asian Nations and the People's Republic of China on Strategic Partnership for Peace and Prosperity of 2003, which states that ASEAN and China agree to support each other's endeavour for economic growth and development and in particular "ASEAN is prepared to participate to China's western region development"; see *Joint Declaration of the Heads of State/government of the Association of Southeast Asian Nations and the People's Republic of China on Strategic Partnership for Peace and Prosperity*, 8 October 2003, adopted at 9th ASEAN Summit, Bali, Indonesia, October 7-8, 2003, section 6 (1)(d). For background of the Forum, see "Background of the Pan-Beibu Gulf Economic Cooperation" (July 6, 2007), online: Guangxi Beibu Gulf Economic Zone

<<http://www.bbww.gov.cn/zt/bdl/article.php?id=33640>>, accessed August 24, 2011 and Li Mingjian, "Pan-Tonkin Gulf Cooperation: De-Securitising the South China Sea?" (January 10, 2008) *RSIS Commentaries*.

¹⁷¹ Namely Vietnam, Philippines, Malaysia, Brunei, Singapore and Indonesia. Up to 2012, seven meetings have been organized, see "7th Pan-Beibu Gulf Economic Cooperation Forum Kicks Off" (July 12, 2012) online: Xinhua <http://news.xinhuanet.com/english/china/2012-07/12/c_131711085.htm>, accessed January 11, 2013.

¹⁷² Daisoke Hosokawa, "Pan-Beibu Gulf Economic Cooperation: China's New Initiative in Cooperation with ASEAN" (July 2009) 60:2 *Osaka Kaidai Sonku* 67 and "2007 Pan-Beibu Gulf Economic Cooperation Forum A Comprehensive Report" (July 10, 2010) online: Guangxi Beibu Gulf Economic Zone <http://www.bbww.gov.cn/zt/2011fanbeibbs_en/article.php?id=44777>, accessed August 24, 2011.

¹⁷³ Hosokawa, *supra* note 172 at 71.

Up to this point, Chapter IV has discussed different regional mechanisms and their potential contribution to the development of a network of MPAs in the SCS. Mechanisms such as COBSEA, PEMSEA, ASEAN, IOSEA-Marine Turtles MOU and Dugong MOU could play an important role in initiating and coordinating regional cooperation for the establishment of MPAs and a network of MPAs in this region. Meanwhile, other mechanisms could play a supportive role to facilitate this cooperation.

Among efforts undertaken under these regional mechanisms to protect the marine environment of the SCS, the Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand” has been the most ambitious initiative. This Project has a number of important outputs on the establishment of MPAs and a network of MPAs in this region. The Project and its MPA-related outputs are discussed in the next section.

4.5 The GEF/UNEP Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”

The “Reversing the Environmental Degradation trend in the South China Sea and Gulf of Thailand” or SCS Project, was funded by the Global Environment Facility (GEF)¹⁷⁴ and implemented by UNEP. The Project was developed under the framework of COBSEA. It involved seven countries bordering the SCS (China, Philippines, Indonesia, Malaysia, Thailand, Cambodia and Vietnam). The main objective of the SCS Project was to create a regional environment in which all stakeholders, at all levels,

¹⁷⁴ Global Environment Facility is a public funding agency to support projects in improving the global environment, see *What is the GEF*, online: GEF <<http://www.thegef.org/gef/whatisgef>>, accessed January 23, 2013.

could cooperate to address environmental issues of the SCS.¹⁷⁵ The project was carried out within six years and terminated in 2008.

The most important output of the Project was the adoption of a Strategic Action Programme for the SCS (SAP), which proposed future cooperative activities to address the priority concerns and issues identified in the SCS.¹⁷⁶ Six areas of action were proposed: mangroves, coral reefs, seagrass, coastal wetlands,¹⁷⁷ management of fish habitat and fish stocks, management of land-based pollution loadings.¹⁷⁸ An institutional framework was also envisioned for the implementation of the Strategic Action Programme with at the head a Ministerial Memorandum of Understanding and at the lower level: Regional Strategic Action Programme, bilateral and sub-regional Agreements and national-action plans.¹⁷⁹

In addition to the SAP, the SCS Project also produced a number of specific outputs relating to MPAs and networks of MPAs. This section reviews the outputs of the SCS Project relating to MPAs and networks of MPAs and initiatives undertaken towards the implementation of the SAP.

¹⁷⁵ *South China Sea Project UNEP Final Project* (December 14, 2001) online: GEF online <<http://gefonline.org/projectDetailsSQL.cfm?projID=885>>, accessed June 29th 2009. The document published on the GEF online website was a draft version, paras 17 and 18.

¹⁷⁶ *Ibid.*, para. 7. For other outputs of the Project, see John Pernetta, *Terminal Report February 2002 to December 2008 of the Project Director to the United Nations Environment Programme, the Global Environment Facility and the Project Steering Committee for The UNEP/GEF Project entitled: "Reversing Environmental Degradation Trends in the South China Sea and Gulf Of Thailand"*, Project No GF/2730-02-4340 (25 February 2009) [Pernetta, Terminal Report].

¹⁷⁷ It should be noted that, under the South China Sea Project, activities in the wetland sub-component are focused on five specific types of wetlands: intertidal flats, estuaries, lagoons, peat swamps and non-peat swamp, see UNEP, *Coastal Wetlands in the South China Sea*, UNEP/GEF/SCS Technical Publications No.4 (Bangkok: UNEP, 2004) 2.

¹⁷⁸ UNEP, *Strategic Action Programme for the South China Sea*, UNEP/GEF/SCS Technical Publication No.16, (Bangkok: UNEP, 2008) [UNEP, SAP].

¹⁷⁹ *Ibid.* at 64.

4.5.1 Specific Marine Protected Area-Related Outputs of the South China Sea Project

Specific MPA-related outputs of the SCS Project include the establishment of regionally prioritized lists of sites of management intervention, the establishment of a network of demonstration sites, the determination of targets for management and conservation of habitats and the development of first steps towards a regional network of *refugia*. Details on these outputs are provided hereafter.

4.5.1.1 Establishment of Regionally Prioritized Lists of Sites for Management Intervention

Under the Project, regional coral reef, mangrove, seagrass and wetland sites for prioritized management intervention were determined based on defined criteria¹⁸⁰ and a defined procedure for ranking.¹⁸¹ The result of the activity was the listing of 26 mangrove, 43 coral reef, 26 seagrass and 40 wetland sites for prioritized management intervention.¹⁸² For each site, analyses must be done to review its environmental threats, management intervention that can be initiated to address the issue as well as the cost-benefit of each potential intervention.¹⁸³

This listing of habitat sites for prioritized management intervention in the SCS could be very useful for any potential exercise to establish MPAs and a network of MPAs

¹⁸⁰ They included indicators for biodiversity, transboundary significance, regional/global significance, extent of threats, issues of scale, national significance/priority, existing management framework, level of co-financing and long-term sustainability; see *Report of 1st Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project*, Pattaya, Thailand, March 14-16, 2002, UNEP/GEF/SCS/RSTC.1/3 at 5 and Annex 4.

¹⁸¹ *Report of the 2nd Meeting of the Project Steering Committee for the UNEP/GEF South China Sea Project*, Hanoi, Viet Nam, December 16-18, 2002, Doc. UNEP/GEF/SCS/PSC.2/3 at 12.

¹⁸² Pernetta, Terminal Report, *supra* note 176 at 19; *Report of 3rd Meeting of the Project Steering Committee for the UNEP/GEF South China Sea Project*, Manila, Philippines, February 25-27, 2004, Doc. UNEP/GEF/SCS/PSC.3/3, Annex 9 and *Report of 4th Meeting of the Project Steering Committee for the UNEP/GEF South China Sea Project*, Guilin, China, December 13-15, 2004, Doc. UNEP/GEF/SCS/PSC.4/3 at 8.

¹⁸³ *Report of 2nd Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project*, Nha Trang, Vietnam, December 11-13, 2002, Doc. UNEP/GEF/SCS/RSTC.2/3.

in this region. It could not only constitute the basis for determining in which areas MPAs need to be established but also points out, in case of a network of MPAs, which areas should be designated in priority as MPAs.

4.5.1.2 Establishment of a Network of Demonstration Sites

Another activity was to establish demonstration sites for monitoring, restoration and public awareness. A total of 22 demonstration sites were chosen from the above-mentioned prioritized list, among which the most highly ranked ones would receive funding from the GEF to implement demonstration activities.¹⁸⁴ Key achievements of this activity were, *inter alia*, the establishment of an effective mechanism for local coordination of planning and management of environment and resources, capacity building for long-term management of coastal resources and environment and encouragement of transboundary management of resources and environment.¹⁸⁵

Besides, a very important success was the establishment and operation of a regional social network to ensure information and experience exchange in the region. This was achieved through the organization of a number of meetings between people who have vested interests in the Project. Specifically, three Regional Scientific Conferences were held involving members from all parts of the Project and representatives from partner organizations (such as UNESCO, FAO and IOC) and four

¹⁸⁴ *Report of 3rd Meeting of the Project Steering Committee for the UNEP/GEF South China Sea Project*, *supra* note 182, Annex 4 and *Report of 7th Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project*, Siem Reap, Cambodia, November 14-17, 2006 at 19.

Demonstration activities included the creation of inter-sectoral management boards, preparation of management and business plans, economic valuation of resources, enhancement of public awareness, close liaison and involvement of local communities and stakeholders in interventions, see *Report of 8th Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project*, Trat Province, Thailand, December 11-14, 2007 at 17.

¹⁸⁵ Two pairs of demonstration sites have been approved for transboundary management between two countries, namely Phu Quoc (Vietnam)/Kampot (Cambodia) and Peam Krasop (Cambodia)/Trat(Thailand), see Pernetta, Terminal Report, *supra* note 176 at 29.

Mayor Round Tables held between Mayors or Provincial Governors or demonstration sites together with the managers of those sites. Those meetings provided people engaged in demonstration sites and in other project activities an opportunity to share experiences and learn from each other.¹⁸⁶

The establishment of a network of demonstration sites could be helpful for the establishment of MPAs in the SCS in the way that it provides a management framework and useful experiences for dealing with conservation.

4.5.1.3 Determination of Targets for the Management and Conservation of Habitats

A number of targets proposed by the SAP for the management of mangroves, coral reefs, seagrasses and wetlands in the SCS were a direct commitment relating to MPAs or could lead to the establishment of MPAs. Concretely, one of the targets set for future mangrove management was to have 4.49 percent of the total mangrove area transferred to National Park and Protected Areas status. The specific target for coral reef management was, by 2015, at least 70 percent of the existing area of coral reefs in the 82 target coral sites to be put under an appropriate form of sustainable management. Specific targets for management and conservation of seagrasses were, by 2012, to bring 21 managed areas of seagrass under sustainable management, to amend management plans of seven existing MPAs with significant areas of seagrass habitat and to adopt seven new MPAs focussing on seagrass habitats identified in the prioritized listings. As for wetlands, the specific targets for management were, by 2012, to set up or update management plans in a number of specific wetland sites and to increase protection in, at least seven wetland areas.¹⁸⁷

¹⁸⁶ Pernetta, Terminal Report, *supra* note 176 at 12 and 28.

¹⁸⁷ UNEP, SAP, *supra* note 178.

As no arrangement has been adopted for the monitoring of the implementation of the SAP, there is no way to know whether these targets have been reached or not.

4.5.1.4 Developments of First Steps toward a Regional System of Fisheries *Refugia*

The development of a system of fisheries *refugia*¹⁸⁸ was considered as the primary activity under the fisheries component of the SCS Project.¹⁸⁹ Many outputs of the Project which could facilitate the establishment of a regional system of *refugia* in the SCS have been achieved. For instance, intergovernmental guidelines for the establishment of fisheries *refugia* were approved, which have become part of the ASEAN-SEAFDEC Regional Guidelines for Responsible Fisheries in Southeast Asian.¹⁹⁰ Two lists of species were established, namely a regionally agreed ranked list of the occurrence and transboundary significance of a number of pelagic and demersal fish species, celaphods and crustaceans and a regionally agreed list of threatened and near threatened species. A set of resource and institutional indicators for use in assessing the

¹⁸⁸ Fisheries *refugia* was defined in the context of the Project as “spatially and geographically defined, coastal or marine areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their life cycle, for their sustainable use”, see UNEP, SAP, *supra* note 178, Information Box 1. The Working Group on Fisheries of the South China Sea Project also noted the difference between the concept of fisheries *refugia* and MPAs. According to the Group, the criteria of selection of MPAs typically relate to the achievement of objectives of biodiversity conservation or political gain and MPAs are widely understood by stakeholders as no-take areas. Meanwhile, *refugia* are selected based on the critical linkage between the sites and the life-cycle of fishes and promote sustainable exploitation rather than prohibition of fishing. However, it recognized MPAs can be used for the protection of fisheries and consequently qualified as *refugia* if they are selected based on the critical linkage between areas and species and are not no-take zones, see Christopher Paterson and John Pernetta, *Marine Protected Areas and the Concept of Fisheries Refugia Developed by the Regional Working Group on Fisheries*, on behalf of the Regional Working Group on Fisheries (May 21, 2006), online: South China Sea Project <http://www.unepscs.org/index.php?option=com_remository&Itemid=132&func=fileinfo&id=519>, accessed November 20, 2011. See also Christopher Paterson *et al.*, “The South China Sea Project: Establishing a Regional System of Fisheries Refugia” in (2007) 4:1 *Fish for People* 22 at 25.

¹⁸⁹ Helen T. Yap and Josh Brann, *Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand: Terminal Evaluation* (May 22, 2009), online: GEF <<http://www.gefonline.org/projectDetailsSQL.cfm?projID=885>>, accessed August 19, 2011 at 24.

¹⁹⁰ SEAFDEC, *Supplementary Guidelines on Co-management Using Group User Rights, Fishery Statistics, Indicators and Fisheries Refugia* (Bangkok: SEAFDEC, 2006).

effectiveness of fisheries habitat management measures was also agreed.¹⁹¹ Besides, a total of 52 known spawning and nursery areas were identified, of which a number are under development or potential development as *refugia*.¹⁹²

In the SAP, two specific targets were set to be achieved for the fisheries component by 2012: to develop a regional system of a minimum of 20 fisheries *refugia* for the management of priority transboundary fish stocks and endangered species and to prepare and implement fisheries management systems in the identified *refugia* based on, and consistent with the ASEAN-SEAFDEC Guidelines for Responsible Fisheries in South East Asia.¹⁹³

4.5.2 Initiatives for the Implementation of the Strategic Action Programme

A number of mechanisms for the implementation of the SAP have been developed, two of which could open the window for future cooperation to protect the marine environment and resources in the region, namely a SAP Implementation Project and a Fisheries *Refugia* Project.

A SAP Implementation Project: a “Zero Order Draft of the Main Text of the UNEP/GEF Project to Implement the Strategic Action Programme for the South China Sea” was agreed within the framework of the South China Sea Project in 2008.¹⁹⁴ The text proposed that the COBSEA Secretariat would serve as the GEF Regional Executing

¹⁹¹ For a preliminary set of these indicators, see UNEP, SAP, *supra* note 178, Tables 19 and 20.

¹⁹² Pernetta, Terminal Report, *supra* note 176 at 22. See also *Report of 8th Meeting of the Project Steering Committee for the UNEP/GEF South China Sea Project*, Hanoi, Viet Nam, August 25-26, 2008, Doc. UNEP/GEF/SCS/PSC.8/3 at 14.

¹⁹³ UNEP, SAP, *supra* note 178 at 39. Aside the above-mentioned Supplementary Guidelines on Co-management Using Group User Rights, Fishery Statistics, Indicators and Fisheries *Refugia* (*supra* note 190), there are another four Regional Guidelines for Responsible Fisheries in Southeast Asia, see their content online at SEAFDEC: <http://news.seafdec.or.th/index.php/seafdec-download/cat_view/42-regional-guideline-for-responsible-fisheries>, accessed November 20, 2011.

¹⁹⁴ *Report of 10th Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project*, Pattaya, Thailand, December 17-19, 2008, Doc. UNEP/GEF/SCS/RSTC.10/3, Annex 5.

Agency within which a South China Sea Strategic Action Programme Implementation Unit would be established to oversee the implementation of the SAP and the day-to-day management of activities under the project.¹⁹⁵ At the latest report of the COBSEA meeting in 2009, Ha Long City, Vietnam, it was informed that the COBSEA Secretariat had developed a Project Identification Form relating to the Strategic Action Programme Implementation and sent it to members for comment. There was a strong general consensus to further develop the Project Identification Form through a process of consultation and negotiations with Member States and the GEF.¹⁹⁶ The last consultative meeting to do this was organized in December 2012 in Bangkok, Thailand.¹⁹⁷

The Fisheries Refugia Project: It was decided that the fisheries component would be elaborated in a separate GEF project proposal.¹⁹⁸ A Project Identification Form for a GEF project, entitled “Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand” was developed in 2008 to operate and expand a network of fisheries *refugia* in the region for the improved management of fisheries and critical habitat linkages.¹⁹⁹ The Project Identification Form was reviewed by the UNEP Division of the GEF. To date, a number of countries have sent their endorsement letters and financial commitment to support the effort. It was anticipated

¹⁹⁵ *Ibid.*, Annex 5.

¹⁹⁶ *Report of the 20th Intergovernmental Meeting of the Coordinating Body on the Seas of East Asia*, November 2-5, 2009, Ha Long City, Vietnam, Doc. UNEP/DEPI/COBSEA IGM 20/15 (2009), Agenda Item 4.

¹⁹⁷ See *What's New*, online: COBSEA <<http://www.cobsea.org/index.html>>, accessed January 16, 2013. The conclusion of this meeting was not available.

¹⁹⁸ Pernetta, Terminal Report, *supra* note 176, para. 12.2.

¹⁹⁹ Report of the 8th Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF South China Sea Project, *supra* note 184, para.12.2 at 25. For more details about the Project Identification Form, see “Status of the Proposed GEF Project entitled “Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand”, Doc. UNEP/GEF/SCS/RSTC.9/17, online: SCS Project <<http://www.unepscs.org/remository/startdown/2219.html>>, accessed January 31, 2013 at Annex 2.

that the SEAFDEC would act as the regional executing agency with UNEP as the implementation Agency of the project.²⁰⁰

The SCS Project, although being time-limited, has made many important contributions to the development of a network of MPAs in the SCS. The Project was able to establish a list of regionally prioritized SCS habitat sites that need management intervention. This list could serve as a basis to determine components of a potential network of MPAs in the SCS in the future. Demonstration activities, such as the creation of inter-sectoral management boards, preparation of management and business plans and economic valuation of the resources implemented in those sites, could also provide experiences in managing MPAs in participating States. Many activities supporting the development of a regional network of fisheries *refugia* were also implemented. Most importantly, the Project was able to serve as a basis for further cooperation for the protection of the marine environment and of sustainable fisheries in the SCS.

²⁰⁰ Pernetta, Terminal Report, *supra* note 176, para. 12.2.

Conclusion

This Chapter has reviewed measures relating to MPAs and networks of MPAs, including both commitments and activities and projects, adopted under the framework of regional organizations and arrangements which have a mandate relevant to the protection of the marine environment of the SCS both territorially and functionally. In light of the review, following observations can be made.

MPAs and networks of MPAs have been and could be the basis for cooperation under various regional mechanisms having competence concerning the SCS. Not only regional mechanisms that have the mandate in the protection of the marine environment and resources are relevant in this matter. As well, those having a mandate in other issue-areas such as conflict prevention and economic development could also facilitate the process. It means that marine environmental protection in general and the establishment of MPAs in particular could potentially be important areas for cooperation in the SCS.

No treaty relating to MPAs has been concluded under the framework of any regional mechanism reviewed. Instead, provisions on MPAs and networks of MPAs are found mostly in soft-law instruments, including agreements, declarations, MOUs, resolutions as well as plans and programmes of action. Even though these instruments have significant political value, as discussed earlier, they do not carry the same weight as a legally binding treaty.²⁰¹ This practice of using soft-law instruments seems to be in line with the traditional “ASEAN way” to build multilateral regional regimes.²⁰²

The content of the commitments relevant to the establishment of MPAs and development of networks of MPAs in the relevant regional mechanisms vary. They

²⁰¹ See above 3.2 International Non-Legally Binding Instruments and Processes.

²⁰² Hai Dang Vu, “Towards a Regional MPA Network in the South China Sea: General Perspectives and Specific Challenges” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook 26* (Leiden: Martinus Nijhoff Publishers, 2012) 291 at 314.

range from very general ones such as conservation of habitats, sustainable use of marine resources and regional cooperation for the protection of the marine environment; to directly calling for the establishment of MPAs, fisheries *refugia*, transboundary MPAs and networks of MPAs. Some demand very specific measures such as identification of important areas, agreement on selection criteria and setting in place nomination procedures. Furthermore, commitments under different regional mechanisms seem to complement each other in enhancing prospects for the establishment of MPAs and networks of MPAs.

Most of the measures adopted relating to MPAs implemented under the implementation schemes of the mechanisms discussed have been *ad hoc* and fragmented activities with limited objectives such as capacity building, demonstrations, exchange of information and expertise, and training. These activities contribute to the improvement in the awareness and capacity of regional States but have not yet succeeded in advancing the cooperation for the establishment of MPAs to a highly integrated level.

As well, it could be an obstacle to the development of a network of MPAs in the SCS that not all mechanisms discussed include every SCS State in their membership. The only two mechanisms that gather all SCS States are the South China Sea Workshops and APEC, both of which only play supportive roles in the development of a network of MPAs in this marine region. But this drawback could be mitigated by the fact that States that have the biggest stakes in the SCS (China, Philippines and Vietnam)²⁰³ are all parties to the most important mechanisms relating to the protection of the marine environment and resources in the region: COBSEA, PEMSEA, APFIC and the SCS Project. Even so, for a comprehensive network of MPAs in the SCS to be developed,

²⁰³ See below Chapter V. Marine Protected Areas in the National Laws of China, Philippines and Vietnam.

efforts should be made to secure the participation of all SCS States in regional arrangements, projects and activities that relates to the establishment of MPAs and development of networks of MPAs.

The next Chapter examines the establishment of MPAs and networks of MPAs in the national laws of SCS States by the mean of a case study of the very three States that have the largest stakes in this marine region.

Chapter V. Marine Protected Areas in the National Laws of China, Philippines and Vietnam

Because a network of MPAs covering a regional sea would include areas located in waters under national jurisdiction, having comparable national legal regimes¹ of MPAs, in particular stipulations relating to the definition, designation and management of MPAs, is important for the network to work properly. Besides, as diversity could prevent cooperation,² comparability might also facilitate the development of a relevant regional arrangement between regional coastal States. Finally, another objective of the case study is to examine the extent to which national legal regimes of MPAs in the SCS States reflect the international stipulations and guidelines relating to MPAs discussed in earlier Chapters.

This Chapter reviews the legal regime of MPAs, in particular stipulations on the definition, classification, designation and management of MPAs, under the national law of three coastal States in the SCS: China, Philippines and Vietnam. The reason for the choice of China, Philippines and Vietnam for the case study is because these States have the biggest stakes in the SCS's ecosystem. First, pursuant to the UNCLOS, marine areas in the SCS that these three States could claim under their national jurisdictions are the largest among all SCS States. Second, some of the most important biodiversity hotspots in the SCS such as the Spratlys and the Paracels³ are under their territorial claims and

¹ The term "legal regime" in this context is understood as a set of principles and rules created by the law to govern an issue; see for example Fath Rahman Abdalla El Sheikh, *The Legal Regime of Foreign Investment in Sudan and Saudi Arabia* (Cambridge: Cambridge University Press, 2003) and Keith Akers, *The Australian Legal Regime on Animal Based-Medical Research* (Melbourne, Victoria: Deakin University, 2007).

² See above 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea.

³ See John McManus, "The Spratly Islands: A Marine Park" (1994) 23 *Ambio* 3.

administration. Thus, a network of MPAs in the SCS could not be considered as sufficiently comprehensive without the participation of any of these three States.

Specifically, for each State, three categories of information are reviewed:

- A background on the position of the SCS with regards the State's geography as well as its territorial claim in this marine region;
- The definition, establishment and management of MPAs in the national law as well as the development of MPAs in each State; and
- An overview of other area-based conservation measures which could be used for the protection of the marine environment and resources in their national law.

The review of this information for each State in turn follows in the three sections of this chapter.

A. China⁴

5.1 China and the SCS

The SCS is one of the three marginal seas that surround the territory of mainland China (the Yellow Sea and the East China Sea are the other two). The SCS borders three Southern mainland provinces of China,⁵ Guangxi, Guangdong and Fujian comprising a total of about 3,400 km of coastline and 196 million inhabitants.⁶ Apart from the special

⁴ The author would like to acknowledge the great help of Professor Li Rong, Ms. Lu Ying and Professor Wan Hanling in searching for and understanding Chinese legal texts for the completion of this section.

⁵ The name of the South China Sea in Chinese is 南海 or *Nánhǎi*, which means the South Sea.

⁶ See *Guangxi* (November 16, 2003), online: China Central Television <<http://www.cctv.com/program/RediscoveringChina/20030325/100634.shtml>>, accessed February 2, 2012;

Guangdong in Brief (August 17, 2006), online: Guangdong Foreign Affairs Office <<http://www.gdfao.gov.cn/english/brief/200609150057.htm>>, accessed February 2, 2012 and *Fujian* (2005), online: China Internet Information Center

<<http://www.china.org.cn/english/features/ProvinceView/164868.htm>>, accessed February 2, 2012. It should be noted that part of Fujian also borders the East China Sea.

administrative regions⁷ of Macao and Hong Kong, the SCS also hosts Hainan, considered by the Chinese government as “China’s second largest island after Taiwan”, which is about 35.4 thousand km² in size, has 1,528 km of coastline and a population of 8.67 million inhabitants.⁸

China has the most extensive maritime claim among all coastal States in the SCS. Besides its general claim for a territorial sea, contiguous zone, exclusive economic zone and continental shelf,⁹ the country also claims sovereignty over four groups of islands, namely Paracel Islands (also claimed by Vietnam), Spratly Islands (also claimed totally by Vietnam and partly by Philippines, Malaysia and Brunei), Pratas Islands (currently occupied by Taiwan) and Macclesfield Bank and the waters around them (partly

⁷ A provincial-level administrative division of China prescribed by the Constitution of the People’s Republic of China with a certain degree of autonomy vis-à-vis the central government, for details see *Constitution of the People’s Republic of China*, adopted at the 5th Session of the 5th National People’s Congress and promulgated for implementation by the Proclamation of the National People’s Congress on December 4, 1982, online: Chinese Government Official Web Portal <http://english.gov.cn/2005-08/05/content_20813.htm>, accessed February 3, 2012, art. 31; *The Basic Law of the Hong Kong Special Administrative Region of the People’s Republic of China*, adopted on April 4, 1990 by the Seventh National People’s Congress of the People’s Republic of China, online: The Basic Law Library <<http://www.basiclaw.gov.hk/en/index.html>>, accessed February 3, 2012, arts 12-23 and *Basic Law of the Macao Special Administrative Region of the People’s Republic of China*, adopted by the Eighth National People’s Congress at its First Session on March 31, 1993, online: Macao Government Printing Bureau <http://bo.io.gov.mo/bo/i/1999/leibasica/index_uk.asp#c2>, accessed February 3, 2012, arts 12-23.

⁸ *About HaiNan*, online: Hainan Government <http://en.hainan.gov.cn/englishgov/AboutHaiNan/200909/t20090910_7125.html>, accessed February 2, 2012.

⁹ For details see *Law of the Territorial Sea and Contiguous Zone of the People’s Republic of China*, adopted at the 24th meeting of the Standing Committee of the National People’s Congress on February 25, 1992 and *Law on the Exclusive Economic Zone and the Continental Shelf of the People’s Republic of China*, adopted at the 3rd Meeting of the Standing Committee of the 9th National People’s Congress on June 26, 1998, online: United Nations-Department of Ocean Affairs and the Law of the Sea <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/CHN.htm>>, accessed February 2, 2012.

overlapped with the Scarborough claim of Philippines).¹⁰ In addition to these claims, China also declares about 80 percent of the SCS under its jurisdiction based on a nine-dotted-line map,¹¹ without however identifying neither its coordinates nor the exact legal status of the waters inside these lines.¹² For a graphic illustration of China's territorial and jurisdictional claims in the SCS, see Figure 4 below.

¹⁰ See, for example, article 2 of the Law of the Territorial Sea and Contiguous Zone of the People's Republic of China states that its territorial land includes "[...] Dongsha Islands (Pratas), Xisha Islands (Paracels) and Nansha Islands (Spratlys) and other islands that belong to the People's Republic of China", *ibid.* *Law of the Territorial Sea and Contiguous Zone of the People's Republic of China* and the "Administration Office for Xisha Islands, Zhongsha Islands (Macclesfields Bank) and Nansha Islands" placed under the administrative management of the Government of Hainan Islands, see: Administrative Division, online: Hainan Government <http://en.hainan.gov.cn/englishgov/AboutHaiNan/200904/t20090419_1366.html>, accessed February 4, 2012. See also Ji Guoxing, *China versus South China Sea Security* (1998) 29:1 Security Dialogue 101 at 102 and Li Guoqiang, "Claim over Islands Legitimate" (July 22, 2011) online: *China Daily* <http://usa.chinadaily.com.cn/opinion/2011-07/22/content_12957473.htm>, accessed February 4, 2012.

¹¹ This claim has been presented officially for the first time before the United Nations in 2009, in protest against the joint submission of outer continental shelf claims by Vietnam and Malaysia, see CML/18/2009, New York, Note of the Permanent Mission of the People's Republic of China to the Secretary General of the United Nations on May 7th, 2009 [CML/18/2009].

¹² Chinese authors have been debating for a long time whether it is a claim for historic waters, the ownership of the SCS islands and their surrounding waters or some sort of "historic rights with tempered sovereignty", see Gao Zhiguo, "The South China Sea: From Conflict to Cooperation" (1994) 25:3 *Ocean Development and International Law* 346; Pan Shiyong, *The Petropolitics of the Nansha Islands-China's Indisputable Legal Case* (Hong Kong: Economic Information Agency, 1996) and Zou Keyuan, "Historic Rights in International Law and in China's Practice" (2001) 32 *Ocean Development and International Law* 149. See also Yann-huei Song, "China's Historic Waters in the South China Sea: An Analysis from Taiwan, R.O.C" (Winter 1994) 12:4 *American Asian Review* 83. The most recent view suggests that these lines represent both the ownership of the islands and Chinese claim to historic rights of, *inter alia*, fishing, mineral resources and navigation in adjacent waters, see for example Zhiguo Gao and Jia Bing Bing, "The Nine-Dash Line in the South China Sea: History, Status, and Implications" (2013) 107:95 *American Journal of International Law* 98.



Figure 4 Territorial and Jurisdictional Claims of China in the South China Sea

(Created by the author using ArcGIS, May 2012).

5.2 Marine Protected Areas in Chinese Law

Though mentioned in the most important law relating to the protection of the marine environment, namely the Marine Environmental Protection Law of the People's

Republic of China,¹³ core elements of the legal regime of MPAs in China are stipulated in a number of texts adopted at different levels such as regulations, measures and principles.¹⁴ This section provides an overview of the regime of MPAs in Chinese law through an analysis of the content of relevant documents. There are two main types of MPAs in China: marine nature reserves and special marine reserves.

5.2.1 Marine Nature Reserves

Marine nature reserves follow the general legal regime of nature reserves determined by the Regulations on Nature Reserves of 1994¹⁵ with specific rules adopted by the State Oceanic Administration and other relevant agencies.

¹³ *The Marine Environmental Protection Law of the People's Republic of China*, adopted at the 24th Session of the Standing Committee of the Fifth National People's Congress on August 23, 1982 and effective as of March 1, 1983, and revised at the 13th Session of the Standing Committee of the Ninth National People's Congress on December 25, 1999. An English translation can be found online at Ministry of Land and Resources of the People's Republic of China <http://www.mlr.gov.cn/mlrenglish/laws/200710/t20071012_656329.htm>, accessed February 7, 2012. Articles 20, 21 and 22 encourage central and local governments of China to establish MPAs to protect marine sites with important ecological and important cultural value.

¹⁴ According to the Legislation Law of the People's Republic of China, the Chinese legislative system comprises, hierarchically, of laws adopted by the National People's Congress (法律 or *fǎlǜ*); regulations adopted by the State Council (行政法规 or *xíngzhèng fǎguī*); regulations adopted by local congresses (地方法规 or *dìfāng fǎguī*), rules adopted by ministerial-level agencies (部门规章 or *bùmén guīzhāng*) and rules adopted by local governments (地方规章 or *dìfāng guīzhāng*). The local and department rules can have different denominations, such as measures, guides or principles. See *Legislation Law of the People's Republic of China*, adopted at the 15th Meeting of the Standing Committee of the Ninth National People's Congress of the People's Republic of China on April 29, 2000. An English version of the text can be found online at the Chinese Government's Official Web Portal <http://english.gov.cn/laws/2005-08/20/content_29724.htm>, accessed February 14, 2012. See also Peter Howard Corne, "Creation and Application of Law in the PRC" (2002) 50:2 *The American Journal of Comparative Law* 369 at 372.

¹⁵ *Regulations of the People's Republic of China on Nature Reserves*, adopted at the 24th Executive Meeting of the State Council on September 2, 1994, promulgated by Decree No.167 of the State Council of the People's Republic of China on October 9, 1994, and effective as of December 1, 1994. An English translation of the text can be found online at Asian Legal Information Institute <<http://www.asianlii.org/cn/legis/cen/laws/ronr333/>>, accessed February 7, 2012 [Regulations on Nature Reserves, 1994].

5.2.1.1 Regulations on Nature Reserves, 1994

The Regulations on Nature Reserves of 1994 provide general stipulations for the establishment and management of nature reserves in China, whether they are located on land, inland waters or sea areas.¹⁶

Nature reserve is defined by the Regulations as an area:

[...] on land, inland water bodies, or marine districts, which represent various types of natural ecological systems, or with a natural concentrated distribution of rare and endangered wild animal or plant species, or where natural traces or other protected objects being of special significance are situated, and so delimited out for special protection and administration according to relevant laws¹⁷

One of the following criteria must be met for the designation of an area as a nature reserve:

- Typical natural geographical area, or area representing natural ecosystems, or an area of natural ecosystems which needs protection after damage;
- Area of concentration of precious and endangered wild fauna and flora;
- Sea area, coastal belt, island, wetland, inland water, forest, grassland or wilderness of special protection values;
- Natural relics such as unique geological structures, famous caves, fossil locations, glacier, volcanoes, hot springs of great scientific and cultural values;
- Other natural areas which need special protection subject to the approval of the State Council or a provincial government.¹⁸

There are national and local nature reserves. National nature reserves are areas of special significance in the country and have major international influence in science, or with special value for scientific research. Local nature reserves are areas which are

¹⁶ Zou Keyuan, *China's Marine Legal System and the Law of the Sea* (Leiden: Martinus Nijhoff Publishers, 2005) 246.

¹⁷ Regulations on Nature Reserves, 1994, *supra* note 15, art.2.

¹⁸ *Ibid.* note 17, art.10.

representative and significant for research but do not rise to national importance. The establishment of national nature reserves needs State Council¹⁹ approval while the establishment of local ones needs the approval of the government at the provincial level.²⁰

According to the Regulations, a nature reserve is divided into three zones: core zone, buffer zone and experimental zone. In the core zone, public entry is prohibited and scientific research is strictly controlled. In the buffer zone, only scientific and observatory activities are permitted and in the experimental zone, research, education, tourism, and some resource extraction may be permitted under licence. An additional protection belt may be established outside the experimental zone if necessary. Production installations can only be built in the experimental zone but they should not pollute the environment or damage natural resources. In the absence of zoning, the whole area must be managed according to the provisions for the core and buffer zones.²¹ Entry of foreigners into the nature reserve must be approved beforehand.²² Any violation of the Regulations is subject to administrative fines from 100 to 10,000 Reminbi yuan²³ or criminal liability if the violation leads to serious consequences.²⁴

The management of nature reserves is divided among different authorities at both national and local levels. National authorities are competent to formulate national technical regulations and standards for the management of nature reserves.²⁵ Relevant authorities at the provincial level are responsible for the management of national nature

¹⁹ The denomination for the Central Government of China.

²⁰ Regulations on Nature Reserves, *supra* note 17, arts 11& 12.

²¹ *Ibid.*, arts. 18, 27, 28, 29 and 30.

²² *Ibid.*, art. 31.

²³ One Reminbi yuan is equivalent to 0.16 Canadian dollars.

²⁴ Regulations on Nature Reserves, *supra* note 15, art. 34 – 41.

²⁵ *Ibid.*, art.19.

reserves while relevant authorities at or above the county level are responsible for the management of local nature reserves within their administrative area.²⁶ The supervision and inspection of nature reserves are done by relevant authorities at or above the county level.²⁷ Funding for the management of nature reserves is arranged by the government at or above the county level of the place where the nature reserve is located. The central government provides subsidies for the management of national nature reserves.²⁸

Special organs must be established for the management of nature reserves. They have the following responsibilities:

- Implement laws, regulations and policies relating to nature reserves;
- Work out various management measures to unify the management of nature reserves;
- Investigate and catalog natural resources, to organize environmental monitoring and to protect the natural environment and natural resources in the nature reserves;
- Organize or assist in scientific research on nature reserves carried out by relevant departments;
- Provide education about nature reserves; and
- Foster activities such as tourism provided that these activities do not adversely impact the natural environment and natural resources in the nature reserves.²⁹

²⁶ Regulations on Nature Reserve, *supra* note 15, art.21. China has four levels of local governments, namely Province (省 or *Shěng*), Prefecture (地区 or *Dìqū*), County (县 or *Xiàn*) and Township (乡 or *Xiāng*), see ESCAP, IUALA-ASPAC and KLAFIR, *Local Government in Asia and the Pacific-A Comparative Analysis of Fifteen Countries* (1999), online: ESCAP <<http://www.unescap.org/huset/lgstudy/index.htm>>, accessed February 6, 2012, China.

²⁷ Regulations on Nature Reserves, *supra* note 15, art.20

²⁸ *Ibid.*, art. 23.

²⁹ *Ibid.*, arts 21 and 22.

5.2.1.2 Measures on the Management of Marine Nature Reserves, 1995

The 1995 Measures on the Management of Marine Nature Reserves,³⁰ adopted by the State Oceanic Administration for the implementation of the Regulations of 1994,³¹ is considered the most important legal document relating to the management of marine nature reserves.³²

Many stipulations in the Measures on the Management of Marine Nature Reserves are consistent with the Regulations of 1994. For instance, it requires that following areas should be designated as marine nature reserves: the locality of typical marine ecosystems; sites with abundant marine biodiversity or precious and endangered marine species; places of marine natural relics with significant scientific and cultural value; sea areas, coastal belt, islands, or wetlands of special protective value; or other areas which need protection. Like the 1994 Regulation, it also provides for national and local marine nature reserves which could equally be divided into core zone, buffer zone and experimental zone.³³

Competence for the management of marine nature reserves is shared between the State Oceanic Administration and departments in charge of ocean management in governments at the provincial level. The State Oceanic Administration is the competent authority responsible for the overall management of marine nature reserves. It prepares plans on national marine nature reserves, reviews any scheme or report on marine nature

³⁰ *Measures on the Administration of Marine Nature Reserves*, adopted by State Oceanic Administration in May 11, 1995, Document No.251, online: State Oceanic Administration <<http://www.soa.gov.cn/soa/governmentaffairs/guojiahaiyangjuwenjian/hyhjbh/webinfo/2009/09/1270102488687020.htm>>, accessed February 10, 2012 [in Chinese] [Measures on the Administration of Marine Nature Reserves].

³¹ Article 42 of the Regulations on Nature Reserves states that competent departments for nature reserves under the State Council may adopt management measures on relevant types of nature reserves in accordance with the Regulations, see Regulations of the PRC on Nature Reserves, *supra* note 15, art.42

³² Keyuan, China's Marine Legal System and the Law of the Sea, *supra* note 16 at 251.

³³ Measures on the Administration of Marine Nature Reserves, *supra* note 30, arts 6, 7 and 13.

reserves at the national level, and examines and approves the comprehensive program for national marine nature reserves. Departments for ocean management at the provincial level are responsible to prepare plans on the selection of marine nature reserves in sea areas within their jurisdictions, make suggestions on the selection of national marine nature reserves, and are in charge of the selection, establishment and management of marine nature reserves within sea areas under their administrative competence at the provincial and county levels.³⁴

5.2.1.3 Standards on Categorizing Marine Nature Reserves, 1998

The Standards on Categorizing Marine Nature Reserves, adopted by the State Oceanic Administration in 1998, define basic principles for classifying marine nature reserves in China.³⁵ According to these Standards, marine nature reserves are classified according to functional categories or importance level.³⁶ Marine nature reserves can also be divided into national, provincial, prefectural and county levels, depending on, *inter alia*, whether an area has an international, national, or local significance.³⁷ A system of point attribution was also set up to determine which level a marine nature reserve would belong to.³⁸

³⁴ *Ibid.* note 33, arts 5 and 8.

³⁵ *Standards on Categorising Marine Nature Reserves*, Doc. GB/T 17504-1998 adopted by the Standardization Administration of China on October 12, 1998, online: Ministry of Environmental Protection of the People's Republic of China <http://kjs.mep.gov.cn/hjbhzbzwb/stzl/199904/t19990401_73915.htm>, accessed March 5, 2012, para. 1 [in Chinese].

³⁶ There are three main categories and 16 types: ocean and coastal natural ecosystems (including 9 types: estuarine ecosystems, intertidal ecosystems, salt marshes ecosystems, mangrove ecosystems, gulf ecosystems, seagrass ecosystems, coral reef ecosystems, upwelling ecosystems, continental shelf ecosystems and islands ecosystems); marine biological species (including 2 types: rare and endangered species and economic species); and marine natural relics and non-living resources (including 4 types: marine geological relics, ancient biological relics, natural landscape and non-living resources), see *ibid.*, para. 4

³⁷ *Ibid.*, para.5.

³⁸ *Ibid.*, para.6.

Besides, specific types of marine nature reserves could be adopted by different government authorities within their scope of authority, such as the nature reserve for the protection of aquatic animals and plants,³⁹ nature reserves for the protection of forests⁴⁰ and potentially nature reserves for the protection of coastal wetlands under the developing wetlands protection regulations.⁴¹

5.2.2 Special Marine Reserves

Special Marine Reserves are regulated by the Measures for the Administration of Special Marine Reserves, adopted by the State Oceanic Administration in 2010.⁴² Based on the geographical location, resources, environmental conditions, the status of exploitation of marine resources and socio-economic development needs, the special

³⁹ For details, see the *Measures for the Management of Nature Reserves of Aquatic Fauna and Flora*, Order No.12 adopted by the Ministry of Agriculture on October 10, 1997, online: Hubei Province Government <http://www.hbepb.gov.cn/hbyw/stbh/zrbhq/200504/t20050429_14738.html>, accessed February 17, 2012 [in Chinese]. Pursuant to article 3 of the Measures, it applies to both freshwater and marine fauna and flora.

⁴⁰ *Forest Law of the People's Republic of China*, adopted by the Seventh Session of the Standing Committee of the Sixth National People's Congress on September 20, 1984 and Revised in Line with the Decision on the Revision of the Forest Law of the People's Republic of China of the Second Session of the Ninth National People's Congress on April 29, 1998, art.24. A forest in Chinese law seems to include also coastal forests such as mangroves, see for example, *Provisions Governing the Management of Coastal Forest Belts under Special State Protection*, Order No.11 adopted by the Ministry of Forestry on November 13th 1996, online: Ministry of Forestry <<http://www.fjforestry.gov.cn/InfoShow.aspx?InfoID=2100&InfoTypeID=5>>, accessed February 17, 2012, art.4.

⁴¹ Cang Wei, "China Issues Preliminary Wetland Regulations" (November 12, 2012) *China Daily* <http://www.chinadaily.com.cn/china/2012-11/12/content_15919453.htm>, accessed January 5, 2013. For the Draft of the Regulations, see *Wetland Conservation Regulations Draft* (November 12, 2012) online: State Forest Administration of China <<http://www.forestry.gov.cn/portal/main/s/198/content-570125.html>>, accessed January 6, 2013. According to article 1 of the Draft, the Regulations are applicable to coastal wetlands. For more details about the regime of marine nature reserves in China, see Zou Keyuan, "Management of Marine Nature Reserves in China: A Legal Perspective" (2003) 6:3 *Journal of International Wildlife Law and Policy* 173; Liu J. *et al.*, *Protecting China's Biodiversity* (2003) 300: 5623 Science 1240; "Marine Nature Reserves" in Qun Liang, *Study of Marine Protected Areas in Australia and in China* (Master's Thesis, University of New South Wales, 2009) [unpublished] 54.

⁴² *Measures for the Administration of Marine Special Reserves*, adopted by State Oceanic Administration in August 31st 2010, Document No.21, online: State Oceanic Administration <<http://www.soa.gov.cn/soa/governmentaffairs/guojiahaiyangjuwenjian/hyhjbh/webinfo/2010/11/1289376295103759.htm>>, accessed February 17th 2012 [in Chinese] [Measures for the Administration of Marine Special Reserves, 2010]. Article 2 of The Measures defines Special Marine Reserves as "areas with special geographic conditions, ecosystems, living or non-living resources and areas which call for special need in marine development".

marine reserve can be classified as a marine special geographical conditions reserve, marine ecological reserve, national park, natural monument, habitat/species management area, protected landscape/seascape, managed resource area and other types of areas. Special marine reserves are also designated at national and local levels.⁴³

Unlike marine reserves which use a zone-based approach for exploitation management, marine special reserves use an activity-based approach. Certain activities are prohibited inside a marine special reserve, namely hunting, mining, bird egg picking; cutting of mangroves, dredging in coral reef areas; fishing using electricity; direct discharges of pollutants into the sea; unauthorized acquisition, processing and marketing of wildlife and mineral products; removing, defacing and damaging the areas' facilities. Other activities, such as ecological aquaculture, artificial breeding of marine species, eco-tourism, leisure fishing, scientific experiments, education and public awareness, are allowed under strict conditions. The conditions to be respected include the control of the tourist flow and the use of healthy farming techniques for aquaculture. The violation of the Measures is subject to an administrative fine that goes from 10,000 to 10,000,000 Reminbi yuan and the obligation to repair the damage caused.⁴⁴

At the central level, the State Oceanic Administration is in charge of the overall supervision and management of special marine reserves in the country. Specifically, it adopts plans for the development of national special marine reserves and supervising their implementation. The Administration establishes and directly manages national

⁴³ Measures for the Administration of Marine Special Reserves, 2010, *supra* note 42, arts 10 and 11.

⁴⁴ *Ibid.*, arts 36, 37, 39, 40 and 47.

marine special reserves located outside the territorial seas and provides guidance on the establishment and development of local special marine reserves.⁴⁵

At the local level, departments in charge of ocean affairs at the provincial level establish and manage national special marine reserves within their jurisdictions in accordance with the development plan for national marine special reserves. They provide planning for the establishment and development of local level marine special reserves and supervise the implementation of the plan. County-level governments are in charge of establishing and managing local marine special reserves according to the plan set up by provincial governments.⁴⁶

Special funds for the planning, establishment and management of marine special areas must be established by local governments above the county level and national marine special areas could receive subsidies from the Special Funds for National Marine Ecological Protection managed by the State Oceanic Administration.⁴⁷

According to the State Oceanic Administration, up to 2011, China established more than 200 nature reserves and marine special reserves at all levels, covering an area of over 3.3 million hectares or 1.12 percent of the total jurisdictional waters claimed by China.⁴⁸ More than thirty of those designated MPAs are located in the four provinces of China bordering the SCS. Among them, 14 are national marine nature reserves; six, are

⁴⁵ *Ibid.*, art. 5

⁴⁶ *Ibid.*, art.5.

⁴⁷ *Ibid.*, arts7 and 8. For more details about the regime of marine special reserves, see “Special Marine Reserves” in Hui Ding *et al.*, “An Overview of Spatial Management and Marine Protected Areas in East China Sea” (2008) 36: 5 Coastal Management 443.

⁴⁸ “1.12 percent of the Jurisdictional Waters Designated as Protected Areas” (September 26, 2010) *Xinhua*, online: Xinhua <http://news.xinhuanet.com/society/2010-09/26/c_12608823.htm>, accessed February 26, 2012 [in Chinese]. In 2013, two new national marine special reserves have been established, making the total number of marine special reserves in the country 23; see “Twenty Three Chinese National Special Marine Reserves” (January 7, 2013) online: *People’s Daily* <<http://politics.people.com.cn/n/2013/0107/c70731-20121961.html>>, accessed January 14, 2013 [in Chinese].

national special marine reserves (marine parks) and 14 are provincial marine nature reserves. According to Google Map, all these MPAs seem to be located in the near-shore areas of the SCS.⁴⁹

5.3 Other Relevant Area-Based Conservation Measures

In addition to marine nature reserves and special marine reserves, a number of area-based conservation measures which could be used for the protection of the marine environment and resources are found under other legislations such as those concerning fisheries, forests and wetlands.

The use of fishery closure as a measure to protect fishery resources has been prescribed in a number of Chinese legislations relating to the protection of aquatic species for many years.⁵⁰ According to the Fisheries Law of 1986 (amended in 2004) and

⁴⁹ See Google Map <<https://maps.google.ca/>>, accessed June 4, 2012. For more details about the MPAs in China, see "Marine Protected Areas (MPAs) in China" in Wanfei Qiu, *Governing Marine Protected Areas (MPAs) in China: Towards the Repositioning of the Central State and the Empowerment of Local Communities* (PhD Thesis, University College of London, 2010) [unpublished] at 106; Wanfei Qiu *et al.*, "Challenges in Developing China's Marine Protected Area System" (2009) 33: 4 Marine Policy 599; C. Y. Jim and Steve S. W. Xu, "Recent Protected Area Designation in China: An Evaluation of Administrative and Statutory Procedures" (2004) 170:1 The Geographical Journal 39 and "Progress of Marine Protected Areas in China" in Qun Liang, *supra* note 41, C4 at 49.

⁵⁰ According to Hui Ding *et al.*, fishery closure stems from the first formal instrument regarding the conservation of fishery resources in China, the Regulation on the Reproduction Protection of the Aquatic Resources issued by the State Council in 1979. But even long before that, a motor trawler restricted zone, some restricted fishing zones and closed fishery zones and seasons were set up by the Executive Order on Motor Trawler Restricted Zones in the Bohai Sea, Yellow Sea, and the East China Sea; see Hui Ding *et al.*, *ibid.* at 449 and Guifang Xue, *China and International Fisheries Law and Policy* (Leiden: Martinus Nijhoff Publisher, 2005) 110. See also *Order of the State Council of the People's Republic of China relating to trawl fishery closure areas in the Bohai Sea, Yellow Sea and East China Sea*, adopted June 8, 1955 by the State Council, online: China Legal Education Network <<http://www.chinalawedu.com/news/1200/22016/22026/22261/22326/2006/3/li0199274621173600224910-0.htm>>, accessed February 22, 2012 [in Chinese] and *Regulations on the Reproduction Protection of the Aquatic Resources*, adopted by the State Council in February 10, 1979, online: Jiangnan District Administrative Center <<http://jh.whsp.gov.cn/website/about.aspx>>, accessed February 17, 2012 [in Chinese] for details of relevant texts.

the Rules of Implementation of 1987,⁵¹ fishery closing areas and seasons are designated by the department in charge of fishery administration under the State Council (i.e. the Ministry of Agriculture) or by provincial, autonomous regional and municipal governments.⁵² The Ministry of Agriculture is responsible for the adoption of fishery management measures (including fishery closures) outside the Motorized Trawler Restricted Zone,⁵³ in the waters located in the boundary between two provinces and concerning important migratory shared resources. Meanwhile, the departments in charge of fishery administration of the provincial governments are in charge of the management of fisheries inside the motor trawler restricted zone and internal waters.⁵⁴

The Chinese Forestry Law distinguishes five types of forests. One of these is the special-purpose forest or forest for special use. *Inter alia*, it includes environmental protection forests, scientific experiment forests and forests in nature reserves.⁵⁵ It is generally forbidden to destroy forests for reclamation, quarrying, sand and earth

⁵¹ *Fisheries Law of the People's Republic of China*, adopted at the 14th Meeting of the Standing Committee of the Sixth National People's Congress on January 20, 1986; amended for the first time in accordance with the Decision on Amending the Fisheries Law of the People's Republic of China adopted at the 18th Meeting of the Standing Committee of the Ninth National People's Congress on October 31, 2000; and amended for the second time in accordance with the Decision on Amending the Fisheries Law of the People's Republic of China adopted at the 11th Meeting of the Standing Committee of the National People's Congress on August 28, 2004. An English version of the text can be found online at North West Pacific Action Plan Data and Information Network Regional Activity Center <<http://dinrac.nowpap.org/NowpapLaw.php>>, accessed February 22, 2012 [Fisheries Law of the PRC, 2004] and *Regulations for the Implementation of the Fisheries Law of the People's Republic of China*, adopted by the State Council on October 14, 1987 online: Ministry of Agriculture <<http://www.moa.gov.cn/zwlml/zqyj/200804/P020080430476870713620.doc>>, accessed February 22, 2012 [in Chinese] [Regulations for the Implementation of the Fisheries Law of the PRC, 1987].

⁵² Fisheries Law of the PRC, 2004, *ibid.* note 51, art.30.

⁵³ For information about the motorized trawler restriction zone, see *supra* note 50.

⁵⁴ Regulations for the Implementation of the Fisheries Law of the PRC, 1987, *supra* note 51, art. 3. For more details about fishery closure in China, see "Closed Zones/Seasons and Summer Moratorium" in Xue, see *supra* 50 at 110.

⁵⁵ *Forest Law of the People's Republic of China*, adopted by the Seventh Session of the Standing Committee of the Sixth National People's Congress on September 20, 1984 and Revised in Line with the Decision on the Revision of the Forest Law of the People's Republic of China of the Second Session of the Ninth National People's Congress on April 29, 1998, art.4. The law does not provide a definition of a forest.

gathering and hunting and catching of wild animals under state protection.⁵⁶ In special-purpose forests, cutting of firewood and grazing are also prohibited.⁵⁷

Another law relating to forest comprises the Provisions Governing the Management of Coastal Forest Belts under Special State Protection adopted by the Ministry of Forests in 1996.⁵⁸ It provides for the establishment of protection forest belts for sand banks, mangrove forests and other trees in coastal areas.⁵⁹ It is forbidden to fell trees, cut firewood, grazing, build tombs, quarry, gather sand and earth and build other facilities illegally in these areas.⁶⁰

Finally, the Administrative Provisions on Wetland Protection adopted by the Chinese State Forestry Administration in March 2013 provides for the protection of wetlands, including coastal wetlands in China.⁶¹ According to these regulations, it is prohibited to, *inter alia*, cultivate, graze, fish, dig sand, mine and destroy wildlife in wetlands.⁶² A number of additional area-based management measures were also created to protect wetlands having important natural, educational, scientific and cultural values such as Wetlands of International Importance and wetland parks.⁶³

⁵⁶ *Ibid.*, arts. 23 and 25.

⁵⁷ *Ibid.*, arts. 23,

⁵⁸ For details, see *Provisions Governing the Management of Coastal Forest Belts under Special State Protection*, Order No.11 adopted by the Ministry of Forestry on November 13, 1996, online: Ministry of Forestry <<http://www.fjforestry.gov.cn/InfoShow.aspx?InfoID=2100&InfoTypeID=5>>, accessed February 17, 2012 [in Chinese].

⁵⁹ *Ibid.*, art.4.

⁶⁰ *Ibid.*, arts 7 and 10.

⁶¹ *Administrative Provisions on Wetland Protection*, State Forestry Administration Order No. 32, March 28, 2013, online: State Forestry Administration <<http://www.forestry.gov.cn/portal/main/s/72/content-594660.html>>, accessed July 20, 2013 [in Chinese].

⁶² *Ibid.*, art.31.

⁶³ *Ibid.* arts 15 and 21.

5.2 The Philippines

5.2.1 The Philippines and the SCS

As one of two important water bodies that surround the Philippine archipelago,⁶⁴ the SCS is connected to the country's archipelagic waters from the West.⁶⁵ Administratively, eleven of the 80 provinces and a special region of the Philippines border directly on the SCS.⁶⁶ This area covers about 46.4 thousand km² and is home to 26 million inhabitants of the country. Among administrative units of the Philippines that border directly on the SCS are the country's biggest province (Palawan) and its most populous region (National Capital Region).⁶⁷

The marine territorial claim of the Philippines in general and in the SCS in particular is influenced by the fact that the country is an archipelago. According to the current Constitution of the Philippines, the national territory comprises:

[T]he Philippine archipelago with the islands and waters embraced therein, and all other territories belonging to the Philippines by historic rights or legal title, including the territorial sea, the airspace, the subsoil, the insular shelves, and other submarine areas over which the Philippines has sovereignty or jurisdiction. The waters around, between or connecting the islands of the archipelago, irrespective of their breadth and dimensions, form part of the internal waters of the Philippines.⁶⁸

It is assumed that these broad and comprehensive terms mean that the Philippine Government continues to consider all the waters embraced by the line defining the

⁶⁴ The other one is the Philippine Sea.

⁶⁵ The official name of the SCS in the Philippines is the West Philippine Sea. See *Philippines* (March 6, 2012) online: CIA World Fact Book <<https://www.cia.gov/library/publications/the-world-factbook/geos/rp.html>>, accessed April 2, 2012.

⁶⁶ Administratively, Philippines is divided into 17 regions, and subdivided into 80 provinces. The National Capital Region is a special region which does not have any province. For the detailed list of regions and provinces of the Philippines, see *Philippine Standard Geographic Codes* (September 30, 2011), online: Philippine National Statistical Coordination Board <<http://www.nscb.gov.ph/activestats/psgc/default.asp>>, accessed April 3, 2012. The units that directly border the SCS are the provinces of Ilocos Norte, Ilocos Sur, La Union, Pangasinan, Zambales, Bulacan, Bataan, Cavite, Batangas, Occidental Mindoro, Palawan and the National Capital Region.

⁶⁷ *Ibid.* and *2007 Census of Population*, online: National Statistic Office of Philippines <<http://www.census.gov.ph/data/census2007/index.html>>, accessed April 2, 2012.

⁶⁸ *Constitution of the Philippines of 1987*, ratified on February 2, 1987, art. I [Constitution of the Philippines of 1987].

Philippine archipelago stated in the Treaty of Peace between the United States and Spain in 1898 as its territorial sea.⁶⁹ In 1961, the Philippines declared the baseline for its territorial sea by the Republic Act No. 3046⁷⁰ that has been modified twice.⁷¹ In 1978, the country declared its 200 nautical mile exclusive economic zone.⁷²

In the SCS, Philippines claims a group of islands, part of the Spratlys (called “the Kalayaan Islands Group” in Philippines),⁷³ the Scarborough Shoal (called “Bajo de Masinloc”)⁷⁴ and the Sabah/North Borneo Island (currently under the jurisdiction of Malaysia).⁷⁵ Both Philippines and China have not yet made their submissions on the outer limits of their continental shelves in the SCS to the United Nations but have issued

⁶⁹ See Haydee B. Yorac, “The Philippine Claim to the Spratlys Islands Group” (1993) 58 Philippine Law Journal 42 at 43 and footnote 10. The Constitution of the Philippines of 1935 stated clearly that “[t]he Philippines comprises all the territory ceded to the United States by the Treaty of Paris concluded between the United States and Spain on the tenth day of December, eighteen hundred and ninety-eight, the limits which are set forth in Article III of said treaty [...]”, see Constitution of the Philippines of 1987, *ibid*. The Treaty of Peace between the United States and Spain stated that “Spain cedes to the United States the archipelago known as the Philippines Islands, and comprehending the islands lying within the following line:

A line running from west to east along or near the twentieth parallel of north latitude, and through the middle of the navigable channel of Bacchi, from the one hundred and eighteenth to the one hundred and eighteenth to the one hundred and twenty-seventh degree meridian of longitude east of Greenwich, thence along the parallel and forty-five minutes north latitude to its intersection with the meridian of longitude one hundred and nineteen degrees and thirty-five minutes east of Greenwich to the parallel of latitude seven degrees and forty minutes north to its intersection with the one hundred and sixteenth degree meridian of longitude east of Greenwich, and thence along the one hundred and eighteenth degree meridian of longitude east of Greenwich to the point of beginning”, see *Treaty of Peace between the United States and Spain*, Paris, 10 December 1898, U.N.T.S No.434, 30 Stat 1754, art. III. For more details, see Ma Reymunda Carmen R. Balasbas, “National Territory of the Philippines: A Brief Study” (1974) 49: 4 Philippine Law Journal 505.

⁷⁰ *An Act to Define the Baselines of the Territorial Sea of the Philippines*, Republic Act No.3046 adopted June 17, 1961. It should be noted that the area of the territorial seas of the Philippines pursuant to this Act is different from the area of the territorial seas claimed by the Philippine Government based on the Treaty of Peace between the United States and Spain of 1898.

⁷¹ For the latest modification in 2009, see *An Act to Amend Certain Provisions of Republic Act No. 3046, as Amended by Republic Act No. 5446, to define the Archipelagic Baseline of the Philippines and for other Purposes*, Republic Act No.9522 adopted March 10, 2009 [RA No.9522].

⁷² *President Decree No. 1599 establishing an Exclusive Economic Zone and for other Purposes*, adopted on June 11, 1978.

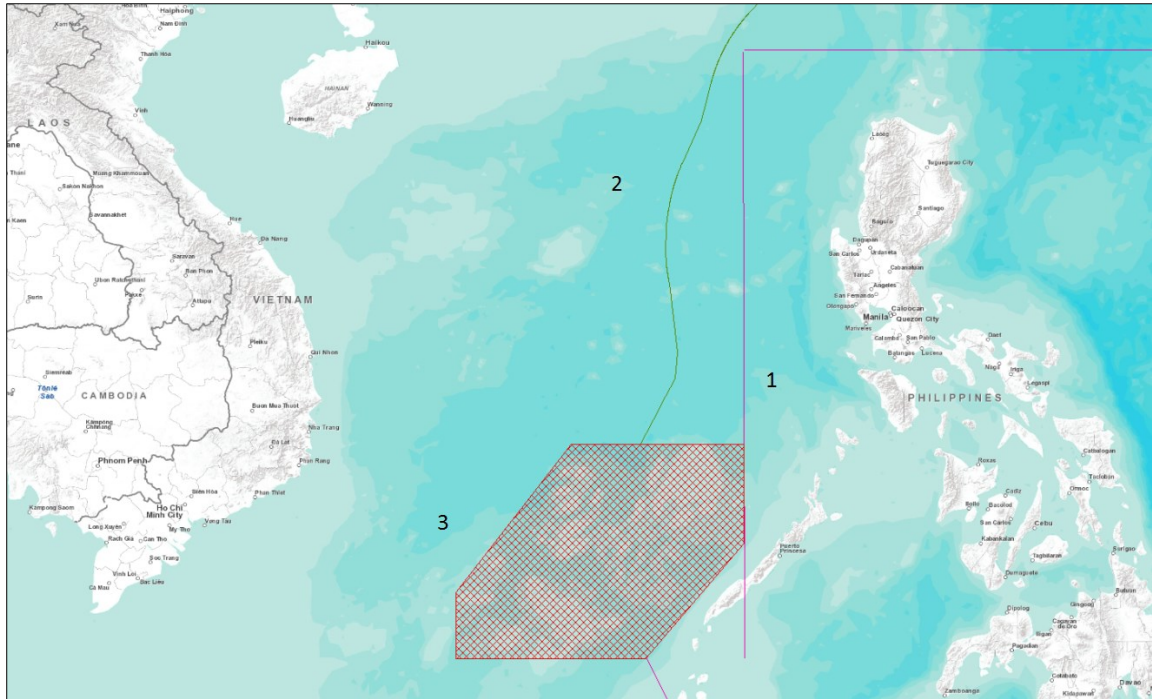
⁷³ *President Decree No. 1596 declaring certain area part of the Philippine Territory and providing for their Government and Administration*, adopted June 11, 1978.

⁷⁴ RA No.9522, *supra* note 71, section 2 (b). Pursuant to this same Act, the exercise of Philippine sovereignty and jurisdiction in the “Kalayaan Islands Group” and Scarborough shoal will comply with the regime of islands as defined by art. 121 of UNCLOS.

⁷⁵ Balasbas, *supra* note 69 at 524.

protestations against the submission of Vietnam.⁷⁶ For a graphic illustration of Philippines' territorial and jurisdictional claims in the SCS, see Figure 5 below.

⁷⁶ See below 5.3.1 Vietnam and the SCS.



- 1: Philippine Treaty Line Claim;
- 2: Philippine Exclusive Economic Zone Claim
- 3: Philippine Kalayaan Claim

Figure 5 Territorial and Jurisdictional Claims of the Philippines in the SCS⁷⁷

(Source: Created by the author using ARCGIS 2012)

5.2.2 Marine Protected Areas in Philippine Law

A particularity of the Philippines is the existence of municipal waters⁷⁸ over which local governments could have certain exclusive jurisdiction in regard to management and conservation of marine resources and fisheries. This exclusive

⁷⁷ At a workshop organized by the Center for Strategic and International Studies (CSIS) in 2012, Ben Suharto, a scholar from the Philippines stated that with adoption of the Republic Act No. 5446, the Philippines changed the nature of its claim with regards to the Spratly Islands (to make it conform with the UNCLOS regime of islands) and the hexagon line instituted by the President Decree of 1596 no longer exists. This information, although acclaimed by many authors, has not been confirmed yet by any governmental authority. For more detail about to Suharto’s presentation, at “The South China Sea and Asia Pacific in Transition: Exploring Options for Managing Disputes”, CSIS Workshop, June 27-28, 2012, Washington, United States.

⁷⁸ Municipal waters is defined by the Philippine Local Government Code of 1991 to include “all inland waters not being subjected of private ownership and not comprised within national parks, public forest, timber lands, forest reserves or fishery reserves and marine waters not exceeding 15 km from the general coastline”, *Local Government Code of 1991*, online: Department of Interior and Local Government of the Philippines <<http://dilg.gov.ph/ReportsResourcesArchive.php>>, accessed February 29, 2012 [Local Government Code of 1991], sections 131(23) and 149.

jurisdiction gives local governments an important role in the development of MPAs in the Philippines. The Local Government Code of the Philippines of 1991 defines the functions and powers of local governments. This is reviewed in this survey of Philippine laws relating to MPAs.⁷⁹ This text⁸⁰ provides the framework for the establishment and management of MPAs at the national and local levels in the Philippines. Also reviewed is the Republic Act No. 7586, an Act Providing for the Establishment and Management of National Integrated Protected Areas System, Defining Its Scope and Coverage, and for other Purposes (or NIPAS Act).⁸¹

5.2.2.1 The Local Government Code, 1991

The Local Government Code of the Philippines of 1991 transferred many governmental functions and powers to local government units (LGU), namely the *barangay*,⁸² municipality, city and province.⁸³ In regard to the environment, natural resources as well as fisheries, the Code states that the *Sangguniang Bayan*, *Sangguniang*

⁷⁹ *Ibid.* There is in the Philippines a number of Codes reflecting the practice in countries influenced by the civil law tradition (Philippines was colonized by Spain for more than 300 years until the signature of the Treaty of Peace between Spain and the United States in 1898).

⁸⁰ The main sources of law in the Philippines include the Republic Act, which are laws adopted by the Parliament (called Congress in Philippines), administrative regulations adopted by the executive power (the President and different departments of the government), court decisions and ordinances adopted by local governments, for more details, see Perfecto V. Fernandez, “The Philippine Legal System and its Adjuncts: Pathways to Development” (1992) 67:21 Philippine Law Journal 42 and Isagani A. Cruz, *Philippine Political Law* (Quezon City: Central Lawbook Publishing, 1991).

⁸¹ *An Act Providing for the Establishment and Management of National Integrated Protected Areas System, Defining Its Scope and Coverage, and for other Purposes*, Republic Act No 7586, June 1, 1992, online: Protected Areas and Wildlife Bureau <http://www.pawb.gov.ph/index.php?option=com_docman&task=doc_details&gid=24&Itemid=175>, accessed February 29, 2012 [NIPAS Act].

⁸² Filipino native term literally translated as village, district or ward, designating the lowest local administrative unit of the Philippines.

⁸³ For details relating to the establishment, role and political organization of these LGUs, see Local Government Code of 1991, *supra* note 78, Book III (Sections 384-510).

Panlungsod and the *Sangguniang Panlalawigan*,⁸⁴ within their jurisdictions, can enact ordinances and approve resolutions to

[...] protect the environment and impose appropriate penalties for acts which endanger the environment, such as dynamite fishing and other forms of destructive fishing, illegal logging and smuggling of logs, smuggling of natural resources products and of endangered species of flora and fauna, slash burn farming, and such other activities which result in pollution, acceleration of eutrophication or rivers and lakes, or of ecological imbalance.⁸⁵

The Sangguniang Bayan and *Sangguniang Panlungsod* can establish, maintain, protect and conserve communal forests and water sheds, tree parks, greenbelts, mangroves and other forest development projects in the municipality and city⁸⁶ and the *Sangguniang Panlalawigan* might take measures and safeguards against pollution and for the preservation of the natural ecosystem in the province⁸⁷. In particular, the *Sangguniang Bayan* has the exclusive authority to grant fishery privileges and impose rentals, fees or charges in municipal waters and is responsible for the enforcement of fishery laws in municipal waters including the conservation of mangroves.⁸⁸ These stipulations are very important for the legal regime of MPAs in Philippines as they set the stage for the LGUs to exercise their powers in the establishment, management and enforcement of local MPAs (other than those established under the NIPAS Act) in municipal waters.⁸⁹

⁸⁴ Terms designating the legislative bodies of respectively municipality, city and province.

⁸⁵ Local Government Code of 1991, *supra* note 78, Sections 447 (1) (vi), 458 (1) (vi) and 468 (1) (vi).

⁸⁶ *Ibid*, Sections 447 (5) (i) and 458 (5) (i)

⁸⁷ *Ibid.*, Section 468 (5) (i).

⁸⁸ Local Government Code of 1991, *supra* note 78, Section 17 (b) (2).

⁸⁹ For details relating to jurisdiction of local governments in the management and conservation of fisheries resources, see Department of Environment and Natural Resources, *Philippine Coastal Management Guidebook No.6: Managing Municipal Fisheries* (Cebu: Coastal Management Project, 2001) and Miriam C. Balgos and Cesario R. Pagdilao, "Provincial and Regional Institutions in the Philippines: An Essential Element in Coastal Resource Management and Marine Conservation", A Background Paper for the Workshop on Institutional Frameworks for Community Based-Coastal Resources Management and Marine Conservation in the Visayas Region, Leyte, Philippines, March 14-15, 2002 and "Municipal-level Management of Fisheries" in Jay Batongbacal, "The Evolution of Philippine Fisheries Legislation" (2002) 76:4 Philippine Law Journal 497 at 514.

The Code also provides for the promotion of the participation of people and NGOs in the governance of local affairs, including in relation to environment, natural resources and fisheries. For instance, LGUs may enter into joint ventures and other cooperative arrangements with people and NGOs for the delivery of basic services, capability-building and livelihood projects, and to develop local enterprises designed to, *inter alia*, promote ecological balance and enhance the economic and social well-being of the people. An LGU may provide assistance to those organizations for economic, socially-oriented, environmental, or cultural projects to be implemented within its jurisdiction.⁹⁰

5.2.2.2 NIPAS Act, 1992

This Act undergirds the establishment of an integrated national system of protected areas for the protection of biodiversity and the promotion of sustainable development in the Philippines.⁹¹ The Act defines protected area as “portions of land and water set aside by reason of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation”.⁹² It establishes eight categories of protected areas.⁹³

The Department of Environment and Natural Resources of the Philippine Government (DENR) is charged to designate protected areas as components of the National Integrated Protected Areas System. For this purpose, the DENR must submit to Parliament and make available to the public maps, the legal description and other data of

⁹⁰ *Ibid.* note 79, Sections 35 and 36.

⁹¹ NIPAS Act, *supra* note 81, Section 2.

⁹² *Ibid.*, Section 4 (b).

⁹³ Namely strict nature reserves, natural parks, wildlife sanctuaries, protected landscapes and seascapes, resource reserve, natural biotic areas and other categories established by law and international treaties, see *ibid.*, Section 3.

all existing protected areas in the country. It must also study and review potential areas to be included in the system and report its findings to the President. A public hearing must be organized in which the public living near the area, concerned government agencies and NGOs could present their views on the findings. Upon the receipt of recommendations from DENR, the President would issue a presidential proclamation to designate the area as a protected area along with measures for its protection until the time when Parliament enacts a law to finally declare the designated area as part of the National Integrated Protected Area System. Parliament can also disestablish an area from the System upon advice from the DENR.⁹⁴

The Act contains general stipulations to guide the management of individual protected areas. For each protected area, peripheral buffer zones are established when necessary to protect the area from activities that will harm it. A management manual must be formulated for each area containing an individual management plan, basic background information, field inventory of the resources, an assessment of assets and limitations, regional interrelationships, particular objectives for managing the area, appropriate division of the area, boundaries of the area and a design of the management programs. Proposals for activities outside the scope of the management plan are subjected to an environmental impact assessment as required by law before they are adopted. Exploration of energy resources can be conducted in a protected area (except in strict nature reserves and national parks) with the least damage to the surrounding area. Any exploitation or utilization of the energy resources found in the protected area must be allowed by a law passed by the Congress.⁹⁵ A Protected Area Management Board

⁹⁴ *Ibid.*, Sections 5 and 7.

⁹⁵ Philippine Parliament.

made up of representatives from relevant government departments, local government, the community as well as NGOs, must be created to decide on matters relating to the general administration, funding and planning of the protected area.⁹⁶ The Act also lists the activities to be prohibited in a protected area.⁹⁷ The violation of the Act is punishable by a fine from 5000 to 500,000 Philippine pesos⁹⁸ or by a term of one to six years in prison.⁹⁹

An Integrated Protected Areas Fund is established by the Act to finance projects designed under the System. The Fund may solicit and receive donations, endowments, and grants under the form of contributions. All incomes generated from the operation of the System, such as taxes from the permitted sale and export of flora and fauna and other resources from protected areas, proceeds from leases of multiple-use areas, contributions from industries and facilities directly benefiting from the protected area could be directly used by DENR for the above-mentioned purpose.¹⁰⁰

⁹⁶ NIPAS Act, *supra* note 81, Sections 8, 9, 11 and 12.

⁹⁷ Namely hunting, destroying, disturbing, or mere possession of any plants or animals or products derived therefrom without a permit from the Management Board; dumping of any waste products detrimental to the protected area, or to the plants and animals or inhabitants therein; use of any motorized equipment without a permit from the Management Board; mutilating, defacing or destroying objects of natural beauty, or objects of interest to cultural communities (of scenic value); damaging and leaving roads and trails in a damaged condition; squatting, mineral locating, or otherwise occupying any land; constructing or maintaining any kind of structure, fence or enclosures, conducting any business enterprise without a permit; leaving in exposed or unsanitary conditions refuse or debris, or depositing in ground or in bodies of water; and altering, removing, destroying or defacing boundary marks or signs, see *ibid.*, Section 20.

⁹⁸ 1 Philippine peso is equivalent to 0.02 Canadian dollars.

⁹⁹ NIPAS Act, *supra* note 81, Section 21.

¹⁰⁰ *Ibid.*, Section 16. For more detail relating to the legal regime of MPAs in the Philippines, see Alan T. White, Albert Salamanca and Catherine A. Courtney, "Experience with Coastal and Marine Protected Area Planning and Management in the Philippines" (2002) 3:1 Coastal Management 1; "Legislation for MPA/ICM" in Balgos Miriam C, "Integrated Coastal Management and Marine Protected Areas in the Philippines: Concurrent Developments" (2005) 48: 11-12 Ocean and Coastal Management 972 at 980; "Creating and Managing Marine Protected Areas" in Department of Environment and Natural Resources, *Philippine Coastal Management Guidebook No. 5: Managing Coastal Habitats and Marine Protected Areas* (Cebu: Coastal Resource Management Project, 2001), C3 at 59 and Antonio G.M. La Viña, James L. Kho and Mary Jean Caleda, "Legal Framework for Protected Areas: Philippines" presented at *Guidelines for Protected Areas Legislation Review Workshop*, IUCN Environmental Law Centre, Bonn, July 13-16, 2009.

Among the three countries, the Philippines has established the greatest number of MPAs so far with more than 1000 MPAs throughout its territory.¹⁰¹ The majority of MPAs in the Philippines have been designated by relevant LGUs, covering about 4.9 percent of the coastal municipal waters of the country.¹⁰² As eight provinces of the Philippines border the SCS, many local MPAs have been designated in Philippine municipal waters in the SCS. According to Rebecca Weeks *et al.*, the Philippine municipal waters in the SCS bioregion are well protected with 1.25 percent of its area covered by MPAs of which 0.66 percent is covered by no-take areas.¹⁰³

Currently, more than 70 protected areas in the Philippine are established under the NIPAS Act. Among them, about 11 are located in provinces of the Philippines

¹⁰¹ See G. K. Lowry, A. T. White and P. Christie, "Scaling Up to Networks of Marine Protected Areas in the Philippines: Biophysical, Legal, Institutional, and Social Considerations" (2009) 37 *Coastal Management* 274 at 275 (the authors seem to have included fisheries management areas such as fishery sanctuaries and fishery reserves in this account). According to an unofficial source, up to 2009, about 1.50 percent of Philippine territorial waters have been covered by MPAs, see *Philippines-marine protected areas*, online: Index Mundi <<http://www.indexmundi.com/facts/philippines/marine-protected-areas>>, accessed March 10, 2012.

¹⁰² Rebecca Weeks *et al.*, "Effectiveness of Marine Protected Areas in the Philippines for Biodiversity Conservation" (2009) 24:2 *Conservation Biology* 531 at 533. For a list of local MPAs in the Philippines see *Summary of Local MPAs in the Philippines*, online: Coastal Conservation Education Foundation <<http://www.coast.ph/resource-center/mpa-database/>>, accessed March 10, 2012. See also P. Christie, A. White and E. Deguit, "Starting Point or Solution? Community-Based Marine Protected Areas in the Philippines" (2002) 66 *Journal of Environmental Management* 441 and Richard B. Pollnac, Brian R. Crawford and Maharlina L. G. Gorospe, "Discovering Factors that Influence the Success of Community-Based Marine Protected Areas in the Visayas, Philippines" (2001) 44: 11-12 *Ocean and Coastal Management* 683; Rebecca Weeks, *Developing Marine Protected Area Networks in the Philippines: Reconciling Regional-Scale Planning with Community-Based Implementation* (PhD Thesis, James Cook University, 2010) and Haribon Foundation, *Atlas of Community-Based Marine Protected Areas in the Philippines* (Quezon City: Haribon Foundation for the Conservation of Natural Resources, 2005).

¹⁰³ The authors also stated that there are 51 MPAs designated in the SCS, covering a total area of 1836.93 km², without specifying how many of them are local MPAs, see Rebecca Weeks *et al.*, *ibid.* note 102.

bordering the SCS. All these areas are located in the Philippine coastal and near-shore waters.¹⁰⁴

5.2.3 Other Relevant Area-Based Conservation Measures

Additional area-based conservation measures which can be used to protect the marine environment and resources in Philippine law appear in other texts, such as the Fisheries Code of 1998, the Revised Forestry Code of 1975 and the Wildlife Resources Conservation and Protection Act of 2001.

The Fisheries Code of 1998 provides the framework for the establishment of fishery management areas, fishery refuges and sanctuaries and fishery reserves.¹⁰⁵ The LGUs of municipalities and cities have jurisdiction to manage and conserve fisheries within municipal waters, including the adoption of applicable measures. At least 15 percent of the total coastal area in a municipality shall be identified and automatically designated as fishery sanctuaries.¹⁰⁶ The Department of Agriculture is competent to establish fishery reservations beyond municipal waters for exclusive use of the government for propagation, educational, research and scientific purposes.¹⁰⁷ The Department could also declare a portion of the municipal waters as fishery reserves for special or limited use for educational, research and special management purposes under

¹⁰⁴ This result was reached based on a visual account of the maps of protected areas under the NIPAS Act and published on the Protected Areas and Wildlife Bureau website, see *Facts and Figures on Protected Areas by Region*, online: Protected Areas and Wildlife Bureau <http://www.pawb.gov.ph/index.php?option=com_content&view=article&id=60:pam-facts-figures&catid=58:protected-area-management&Itemid=192>, accessed March 10, 2012. See also *Establishing and Managing Protected Areas* (June 11th 2009), online: Protected Areas and Wildlife Bureau <http://www.pawb.gov.ph/index.php?option=com_content&view=article&id=120:establishing-and-managing-protected-areas&catid=58:protected-area-management>, accessed March 6, 2012.

¹⁰⁵ For the definition of these terms, see *Philippine Fisheries Code of 1998*, adopted on May 16, 1998 by Republic Act No.8550, Official Gazette No. 28 of 13 July 1998, pp. 23-56, Section 3. It is noteworthy to mention that pursuant to the Code, “fishery species” refers to all aquatic flora and fauna and not only commercial ones.

¹⁰⁶ *Ibid.*, Section 81.

¹⁰⁷ *Ibid.*, Section 80

the recommendation of the LGUs.¹⁰⁸ Finally, it could establish fish refuges and sanctuaries in 40 percent of bays, foreshore lands, continental shelf or any fishing ground for cultivation of mangroves and spawning of fish.¹⁰⁹

Pursuant to the Revised Forestry Code of 1975, certain areas could be qualified as permanent forests or forest reserves including strips of mangrove or swamplands that are at least 20 meters wide along shorelines facing oceans, national parks and wildlife sanctuaries.¹¹⁰ The utilization, exploitation and occupation of those areas must not impair the viability of their resources and must be authorized under agreement, license, lease or permit.¹¹¹ The holder of the agreement to use the timber must ensure the continuity of the productive condition of the area.¹¹² Hunting of wildlife must be regulated to ensure the ecological balance of flora and fauna in the area.¹¹³

The Wildlife Resources Conservation and Protection Act of the Philippines, which applies to both terrestrial and aquatic plants and animals,¹¹⁴ defines the designation of critical habitats. Pursuant to the Act, areas where threatened species are found could be designated as critical habitats based on the best scientific data and taking into consideration species endemicity and/or richness, presence of man-made pressures/threats to the survival of the wildlife living in the area.¹¹⁵ Critical habitats are

¹⁰⁸ *Ibid.*, Section 81.

¹⁰⁹ *Ibid.*

¹¹⁰ *Revised Forestry Code of the Philippines*, President Decree No. 705, adopted May 19, 1975, sections 3(b) and 16.

¹¹¹ *Ibid.*, sections 19 and 20.

¹¹² *Ibid.*, section 38.

¹¹³ *Ibid.*, section 55.

¹¹⁴ *An Act providing for the Conservation and Protection of Wildlife Resources and their Habitats, Appropriating Funds Therefor and for other Purposes*, Republic Act No. 9147, July 30, 2001, section 4.

¹¹⁵ *Ibid.*, section 25.

protected from all forms of exploitation or destruction detrimental to the survival of the dependent species.¹¹⁶

5.3 Vietnam

5.3.1 Vietnam and the SCS

Of the three countries, the SCS has the greatest geostrategic importance for Vietnam. The SCS (including the Gulf of Thailand) is not only the unique body of waters that Vietnam has access to; it also borders the whole Eastern half¹¹⁷ of the country's land space. The length of the country's coastline is more than 3000 km and with quite a narrow land area¹¹⁸, Vietnam has a high land area/coast line ratio of 100 km² per 1km.¹¹⁹ The continental shelf of Vietnam hosts more than 3000 islands, but only 84 of them have an area of more than 1 km².¹²⁰ From an administrative perspective, 28 of the country's 64 provinces and cities are coastal areas.¹²¹ The number of people living near the shore and

¹¹⁶ *Ibid.*

¹¹⁷ The official name for the SCS in Vietnam is Biển Đông, literally translated as the East Sea.

¹¹⁸ No location in Vietnam's land territory is more than 550 km from the coast. The furthest land border point in Vietnam from the coast is 540 km and the closest one is 50 km, see Committee of Propaganda and Education-Communist Party of Vietnam Secretariat, *Vietnam's Sea and Islands* (Hanoi: Committee of Propaganda and Education, 1993) 19 [in Vietnamese].

¹¹⁹ The world average land area/coast line rate is 600 km² per 1 km, see *General Background about Vietnam's Sea* (May 21, 2011) online: Committee of National Boundary-Ministry of Foreign Affairs of Vietnam <<http://biengioilanhtho.gov.vn/vie/tongquanvebienvietnam-nd-b46a796d.aspx>>, accessed March 12, 2012 [in Vietnamese].

¹²⁰ See Committee of National Boundary-Ministry of Foreign Affairs of Vietnam, *Document for Marine Management Training* (Hanoi: Committee of National Boundary, 2003) 3 [in Vietnamese].

¹²¹ They are Quang Ninh, Hai Phong, Thai Binh, Nam Dinh, Ninh Binh, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue, Da Nang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Binh Thuan, Ba Ria-Vung Tau, Ho Chi Minh City, Tien Giang, Ben Tre, Soc Trang, Bac Lieu, Kien Giang and Ca Mau. For the system of administrative units of Vietnam, see *infra* note **Error! Bookmark not defined.**

on the islands in 2009 was about 42.5 million,¹²² equivalent to almost half of the Vietnamese population at the time.¹²³

Based on its long coastline, Vietnam claims jurisdiction over about one third of the SCS area. In 1977, Vietnam issued a statement claiming its territorial sea, contiguous zone, exclusive economic zone and continental shelf.¹²⁴ In 1982, a straight baseline for the measurement of the territorial sea was declared, covering most of the coast of Vietnam except in the Gulf of Tonkin and the Gulf of Thailand.¹²⁵ In 2009, the country submitted to the Commission on the Limits of the Extended Continental Shelf of the United Nations its claim on the outer limit of its continental shelf. There were two submissions: one for the Northern part of the SCS and the other for the Southern part (jointly with Malaysia).¹²⁶ Vietnam also claims sovereignty over the two island groups:

¹²² Calculated based on statistics from Vietnam's General Office for Population and Family Planning, see *Area, Population and people ratio in Vietnam's Provinces and Regions, 2009*, online: General Office for Population and Family Planning <<http://www.gopfp.gov.vn/so-lieu>>, accessed March 12, 2012 [in Vietnamese].

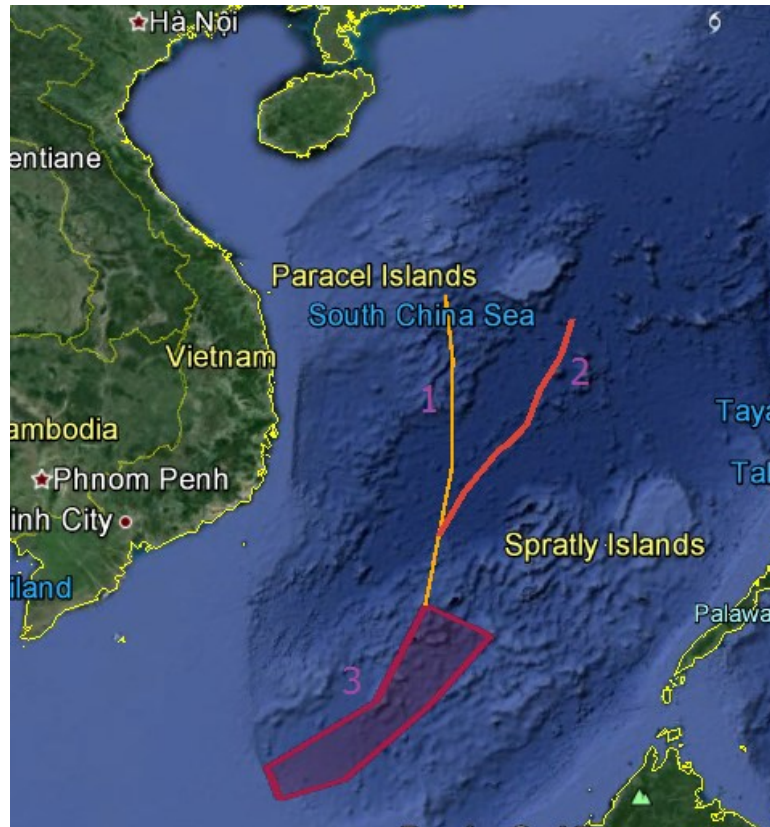
¹²³ In 2009, the population of Vietnam was about 86 million people, see Vu Quynh, "Vietnam's population reached almost 86 million people" (13/8/2009) *Vneconomy News*, online: Vneconomy News <<http://vneconomy.vn/20090813080916457P5C11/dan-so-viet-nam-dat-gan-86-trieu-nguoi.htm>>, accessed March 12, 2012.

¹²⁴ *Statement on the Territorial Sea, Contiguous Zone, Exclusive Economic Zone and Continental Shelf of May 12th 1977*, an English version of the Statement could be found online at the United Nations Department of Ocean Affairs and the Law of the Sea <<http://www.un.org/depts/los/LEGISLATIONANDTREATIES/STATEFILES/VNM.htm>>, accessed March 14, 2012.

¹²⁵ *Statement of November 12th 1982 of the Government of the Socialist Republic of Vietnam on the Territorial Sea Baseline of Vietnam*, an English version of the Statement could be found online at the United Nations Department of Ocean Affairs and the Law of the Sea <<http://www.un.org/depts/los/LEGISLATIONANDTREATIES/STATEFILES/VNM.htm>>, accessed March 14, 2012. This baseline was protested by the United States, see United States Department of State, Bureau of Intelligence and Research, *Straight Baseline: Vietnam, Limits in the Sea No.99* (December 12, 1983), online: United States Department of State <<http://www.state.gov/e/oes/ocns/opa/c16065.htm>>, accessed March 14, 2012, footnotes 3 at 8.

¹²⁶ See *Submission to the Commission on the Limits of the Continental Shelf Pursuant to Article 76, paragraph 8 of the United Nations Convention on the Law of the Sea 1982: Partial Submission in Respect of Vietnam's Extended Continental Shelf: North Area (VNM-N)*, Executive Summary (May 7, 2009), online: United Nations Commission of Limits of the Continental Shelf <http://www.un.org/depts/los/clcs_new/submissions_files/submission_vnm_37_2009.htm>, accessed

the Paracels and Spratlys.¹²⁷ For a graphic illustration of Vietnam's territorial and jurisdictional claims in the SCS, see Figure 6 below.



Paracels, Spratlys: Islands' claim
 1: Exclusive economic zone
 2: Outer limits of the continental shelf
 3: Joint submission area with Malaysia

Figure 6 Territorial and Jurisdictional Claims of Vietnam in the SCS

Created by author using Google Earth, June 2013

March 14, 2012 and *Joint Submission of the Commission on the Limits of the Continental Shelf Pursuant to Article 76, paragraph 8 of the United Nations Convention on the Law of the Sea 1982 in Respect to the Southern Part of the South China Sea*, Executive Summary (May 6, 2009), online: United Nations Commission of Limits of the Continental Shelf
http://www.un.org/depts/los/clcs_new/submissions_files/submission_mysvnm_33_2009.htm, accessed March 14, 2012. These two submissions have been protested by China and Philippines, see *Note Verbale of the Permanent Mission of the Republic of Philippines to the United Nations* No.000818, dated August 4, 2009, online: United Nations Commission of Limits of the Continental Shelf
http://www.un.org/depts/los/clcs_new/submissions_files/submission_vnm_37_2009.htm, accessed March 14, 2012 and CML/18/2009, *supra* note 11.

¹²⁷ Law No.06/2003 on National Border, adopted on June 17, 2003 by the 3rd meeting of the National Assembly, session XI, an English version of the Law is found online at Authority on Foreign Information Service-Ministry of Information and Communication of Vietnam <http://vietnam.vn/the-law-on-national-border-c1071n20110804150224718.htm>, accessed March 14, 2012, art.1.

5.3.2 Marine Protected Areas in Vietnamese Law

Core elements of the legal regime of MPAs in Vietnam include general rules relating to protected areas defined in the legal texts¹²⁸ relating to the protection of biodiversity, and rules relating to MPAs and coastal wetland protected areas in legal texts relating to fisheries and wetland. As well, penalization of violations of prohibitions in MPAs is provided in Vietnam's Criminal Code.

5.3.2.1 Protected Areas

The general rules relating to protected areas in Vietnam are found in the Biodiversity Law¹²⁹ and in Decree No.65/2010/ND-CP.¹³⁰

A nature protected area or protected area is defined by the Biodiversity Law as an area with determined geographical location and functional zoning to conserve biodiversity.¹³¹ The Law and the Decree also define four categories of protected areas.¹³² Functionally, every protected area must have three basic zones: strictly protected zone,

¹²⁸ Vietnam's system of legislative texts includes, *inter alia*, Law (or Code) and Resolution adopted by Parliament (National Assembly in Vietnamese); Decree adopted by the Government; Decision adopted by the Prime Minister; Circular adopted by Ministries and Resolution, Decisions and Instructions adopted by local governments (comprising People's Councils and People's Committees at different levels). See *Law No.17/2008/QH12 on the Issuance of Legislative Texts*, adopted on June 3rd 2008 by the 3rd meeting of the National Assembly session XII, art.2 and *Law No.31/2004/QH11 on the Issuance of Legislative Texts by People's Councils and People's Committees adopted on December 3, 2004 by the 6th meeting of the National Assembly, session XI*, art.1. See also Hanoi University of Law, *Textbook on Theories of State and Law* (Hanoi: People's Police Publishers, 2008).

¹²⁹ *Law No. 20/2008/QH 12 on Biodiversity*, adopted by 4th meeting of the National Assembly on Biodiversity, session XII, on November 13, 2008, an English version can be found online: The REDD Desk < http://www.theredddesk.org/countries/vietnam/info/law/law_on_biodiversity_vietnam>, accessed March 19, 2012 [Biodiversity Law].

¹³⁰ Decree No.65/2010/ND-CP adopted on July 30, 2010 by the Government to specify and guide the implementation of a number of articles of the Biodiversity Law [in Vietnamese] [Decree No.65/2010/ND-CP]. See also "Protected Areas Management System" in ICEM, *Vietnam National Report on Protected Areas and Development* (Queensland: ICEM, 2003) 21.

¹³¹ Biodiversity Law, *supra* note 129, art.3 (12).

¹³² Namely national park, nature reserve, habitat and species conservation areas and protected landscapes. Except for national parks, each category of protected area can be further divided into national or provincial level, see Biodiversity Law, *ibid.*, arts 16, 17, 18, 19, and 20 and Decree No. 65/2010/ND-CP, *supra* note 130, art.7.

ecological restoration zone and service-administrative zone.¹³³ A buffer zone must also be determined in the decision designating the protected area to prevent and decrease negative impacts from outside on the area.¹³⁴

The level of restriction on activities in a protected area depends on its functional status. It is forbidden to invade land, convert land illegally, destroy landscape, natural ecosystem and grow invasive species in any locations in the protected area. In the strictly protected zone, it is forbidden to hunt, fish and exploit wild species except for scientific research and it is forbidden to build there except for security or national defence purposes. Exploration of mineral resources, raising of cattle at farm-scale and fishing at industrial scale are forbidden in both strictly protected and ecological restoration zones. All activities in the buffer zone must follow the management statutes governing the buffer zone of a protected area issued by the Prime Minister and no activity must have any negative effect on the protected area.¹³⁵

The competence to plan, establish and manage protected areas is shared between the Prime Minister, the Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development and the People's Committee of a province.¹³⁶ The

¹³³ Biodiversity Law, *ibid.*, art. 26.

¹³⁴ Biodiversity Law, *ibid.*, arts 1(30) and 32.

¹³⁵ Biodiversity Law, *ibid.*, arts 7 and 32.

¹³⁶ The system of local administration of Vietnam is divided into three basic levels: tỉnh (provinces); huyện (districts) and xã (commune), see *Constitution of Vietnam*, adopted by the 11th meeting of the National Assembly, session VIII on April 15, 1992, an English version can be found online at Asian Legal Information Institute

Prime Minister is responsible to decide on the adoption of the planning of protected areas at the national level and the establishment of national protected areas.¹³⁷ The Ministry of Natural Resources and Environment is responsible for the proposal for protected areas' planning at the national level. It also initiates the establishment of and manages national protected areas in wetland, limestone, unused land and ecologically mixed areas that straddle the territories of many provinces. The Ministry of Agriculture and Rural Development could propose the establishment of and manages national protected areas in special-use forest and marine areas that straddle the territories of many provinces.¹³⁸ People's Committee of a province is responsible for the planning,¹³⁹ proposal for the establishment of national protected areas, designation of provincial protected areas and management of both national and provincial protected areas located totally in its provinces.¹⁴⁰

<<http://www.asianlii.org/vn/legis/const/1992/index.html>>, accessed March 27, 2012, art.118. For each level, public administration is entrusted to two institutions: the People's Council which functions as a local legislative body and the People's Committee which plays the role of a local executive body, see *Law No. 11/2003/QH11 on the Organization of People's Councils and People's Committees*, adopted on November 26, 2003 by the 10th meeting of National Assembly of Vietnam, session XI, arts. 1-4 [in Vietnamese]. Since 2008, Vietnam has been experimenting with stopping People's Councils at the district-level in a number of districts, see *Resolution No.26/2008/NQ-QH on the experimental removal of People's Councils at the district-level*, adopted by the 4th meeting of National Assembly of Vietnam, session XII on November 15, 2008 [in Vietnamese]. See also *Background: State Administrative System in Vietnam* (August 31, 2008) online: Ministry of Internal Affairs <<http://caicachanhchinh.gov.vn/PortalPlus.aspx?en-US/News/71//104010/0/103/>>, accessed March 26, 2012.

¹³⁷ Biodiversity Law, *supra* note 129, arts 9, 10 and 23.

¹³⁸ Biodiversity Law, *ibid.*, arts 23, and 27 and Decree No. 65/2010/ND-CP, *supra* note 130, art.9.

¹³⁹ The provincial planning of protected areas must comply with the national planning, see Biodiversity Law, *ibid.* art.12.

¹⁴⁰ Biodiversity Law, *ibid.*, arts 13, 14, 24, and 27 and Decree No. 65/2010/ND-CP, *supra* note 130, arts 8 and 9.

A Management Board must be established to manage protected areas in accord with duties defined by the Biodiversity Law.¹⁴¹ Every three years, the Management Board must report to the relevant authority about the biodiversity status of the protected area.¹⁴² For the fulfilment of its missions, the Management Board is allowed to engage in business activities, ecological tourism and other services in the protected area and to have a share in the benefits from access to the genetic resources in the protected area.¹⁴³

5.3.2.2 MPAs

The stipulations relating specifically to MPAs are provided in a number of different instruments under the Fisheries Law. The Fisheries Law¹⁴⁴ and Decree No.27/2005/ND-CP of 2005¹⁴⁵ define the background of MPAs. Decree No.57/2008/ND-CP stipulates the Management Statutes of MPAs of International and/or National Importance.¹⁴⁶

Background of MPAs

MPA is defined as a determined marine area (including islands inside the area) that has species with a scientific, educational, tourist or entertainment value of

¹⁴¹ The duties of the Management Board include conserving biodiversity, establishing and implementing programs and projects for the restoration of the natural ecosystem, organizing and managing scientific research and implementing measures to prevent fire and the outbreak of diseases in the protected area, see Biodiversity Law, *ibid.*, arts 28 and 29.

¹⁴² Biodiversity Law, *ibid.*, art. 33. The report must contain information relating to the status restoration state and restoration plan of the ecosystem in the protected area, status and plan to conserve endangered species, status of land-use in protected areas and needs for biodiversity conservation in the protected area.

¹⁴³ Biodiversity Law, *ibid.*, art. 29.

¹⁴⁴ *Law No.17/2003/QH 11 on Fisheries*, adopted on November 26, 2003 by 4th meeting of the National Assembly of Vietnam, session XI, an unofficial English translation can be found online at Viet Linh <http://www.vietlinh.com.vn/library/law_standard_quality_safety/luatthuysan_en.htm>, accessed March 27, 2012 [Fisheries Law].

¹⁴⁵ Decree No. 27/2005/ND-CP adopted on March 8, 2005 by the Government to specify and guide the implementation of a number of articles of the Fisheries Law [in Vietnamese] [Decree No. 27/2005/ND-CP].

¹⁴⁶ Decree No.57/2008/ND-CP adopted by the Government on May 2, 2008 issuing the Management Statutes of MPAs in Vietnam that have international and/or national importance [in Vietnamese] [Decree No.57/2008/ND-CP].

international or national importance and need to be protected and managed in accordance with the management statutes of the protected area.¹⁴⁷ There are three types of MPAs.¹⁴⁸

The competence to plan, establish and manage MPAs is shared between the Prime Minister, the Government, the Ministry of Agriculture and Rural Development and People's Committees of Provinces. The Prime Minister must adopt the planning of the MPAs system. He/she must also make the decision to establish national parks, MPAs of an international and/or national importance, MPAs which are managed by different ministries and MPAs located in the territories of more than two provinces.¹⁴⁹ The Government issues the management statutes for MPAs of international and/or national importance.¹⁵⁰ The Ministry of Agriculture and Rural Development submits the proposal for MPAs planning to the Prime Minister and organizes the management of MPAs that the Prime Minister establishes.¹⁵¹ The People's Committees of provinces may designate, issue management statutes and manage MPAs other than those falling within the competence of the Prime Minister.¹⁵²

Management Statutes for MPAs of International and/or National Importance

To implement article 9(2) of the Fisheries Law which asks the Government to adopt management statutes for MPAs of international and/or national importance, the

¹⁴⁷ Decree No. 27/2005/ND-CP, *ibid.*, art. 2 (1).

¹⁴⁸ Namely national parks, species and habitat conservation areas and aquatic nature reserves, see Fisheries Law, *supra* note 144, art. 9 (1), and (2) and Decree No. 27/2005/ND-CP, *ibid.*, art.3.

¹⁴⁹ Decree No.27/2005/ND-CP, *ibid.*, art.4 (1).

¹⁵⁰ Fisheries Law, *supra* note 144, art. 9 (2).

¹⁵¹ Decree No.27/2005/ND-CP, *supra* note 145, art. 4 (2).

¹⁵² Fisheries Law, *supra* note 144, art. 9 (2) and Decree No.27/2005/ND-CP, *supra* note 145, art 4 (3). See also "National System of Marine Protected Areas" in James Hall and Bui Thi Thu Hien, "Establishing Marine Protected Areas in Vietnam: A Capacity-Building Approach" in J. P. Beumer, A. Grant and D. C. Smith, *Aquatic Protected Areas: What Work Best and How Do We Know?*, World Congress on Aquatic Protected Areas (Cairns, Australia: August 2002) 229 at 232.

Government adopted Decree No.57/2008/ND-CP in 2008 issuing such Management Statutes.¹⁵³

The Statutes provide concrete criteria for the classification of MPAs into national parks, species and habitat conservation areas and aquatic nature reserves.¹⁵⁴ MPAs of international and/or national importance have the same functional zoning as protected areas defined under the Biodiversity Law.¹⁵⁵ The degree of restriction of activities is also determined reference to the functional zones of an MPA.¹⁵⁶

A Management Board is established to manage each MPA. Its concrete tasks include to organize aquatic species conservation and development activities in the MPA; to prevent pollution, outbreak of diseases and other harmful activities; monitor and regularly report to relevant authorities on the biodiversity and environmental status of the MPA; and educate the communities living in the MPA and the surrounding area and assist them to find activities for alternative income. The Board is allowed to implement or cooperate with individuals and organizations to implement tourism activities and other services inside the MPA.¹⁵⁷

The Statutes encourage individuals, organizations and communities to participate in the management, conservation and development of MPAs. The activities that they can

¹⁵³ Decree No.57/2008/ND-CP, *supra* note 146.

¹⁵⁴ *Ibid.*, arts 2 (2) (a) and (b), 2 (3) (a) and (b), and art. 4 (a) and (b). It should be noted that the definition of the aquatic nature reserve cover greater scope than the definition of MPAs which concerns only “species with a scientific, educational, tourist or entertainment value”.

¹⁵⁵ The MPA is divided into at least three zones with different functions: a strictly protected zone, an ecological restoration zone and a development zone. A protection belt is also established outside the MPA with a width from 500-1000 meters from the limit of the MPA to prevent harmful external impacts on the area, see *ibid.*, art.3

¹⁵⁶ For instance, in the strictly protected area, most exploitation activities are forbidden including even the passage of boats. Other activities, such as tourism, observations and scientific research can only be carried out under the authorization of the Ministry of Agriculture and Rural Development and the supervision of the Management Board. In the development area and protection belt, exploitative activities are, in principle, allowed if they do not cause any harm to the habitat and species in the MPA, see Decree No. 27/28/ND-CP, *supra* note 145, arts 6, 7 and 8.

¹⁵⁷ Decree No.57/2008/ND-CP, *supra* note 146, art.5.

participate in include information and education to enhance awareness; monitoring, patrol and guarding of the MPA; scientific research and training and provision of ecological services inside the MPA. All these activities must be implemented in compliance with relevant laws and regulations as well as the internal rules of the Management Board of the MPA.¹⁵⁸

Stipulations relating to the financing of MPAs are also provided. Sources of financing for MPAs include State budget, revenues from tourism and other service activities, donations and fees for administration and use of the MPA. The State encourages individuals and organizations to invest in the protection and development of MPAs.¹⁵⁹

5.3.2.3 Coastal Wetland Protected Areas

In Vietnam, wetlands are governed by fisheries and wetland laws. There are two types of wetlands, namely internal waters and coastal wetlands. Coastal wetlands are mangrove areas, coastal brackish water areas with a depth less than six meters at low tide.¹⁶⁰ Coastal wetland protected areas are governed by the Fisheries Law, Decree No.27/2005/ND-CP, Decree No.109/2003/ND-CP¹⁶¹ and Circular No.018/2004/TT-BTNMT¹⁶².

Decree No. 27/2005/ND-CP of 2005 defines an internal waters protected area as a delineated area in wetlands to provide the strict protection of typical ecosystems of

¹⁵⁸ Decree No. 27/28/ND-CP, *supra* note 145, art.4.

¹⁵⁹ Decree No. 27/28/ND-CP, *ibid.*, art.10.

¹⁶⁰ *Circular No.18/2004/TT-BTNMT*, adopted by the Ministry of Natural Resources and Environment on August 23, 2004 to guide the implementation of Decree No.109/2003/ND-CP adopted by the Government on September 23, 2003 for the Conservation and Sustainable Development of Wetlands, section II [in Vietnamese] [Circular No.18/2004/TT-BTNMT]. The Section defines a wetland as an area with permanent or temporary flowing or static water whether it is fresh water, sour water, brackish water or salty water.

¹⁶¹ *Decree No.109/2003/ND-CP on the conservation and sustainable use of wetlands* adopted by the Government on September 23, 2003 [in Vietnamese] [Decree No.109/2003/ND-CP].

¹⁶² *Circular No.18/2004/TT-BTNMT*, *supra* note 160.

international and/or national importance, high biodiversity value as well as the protection of species living in there. There are three categories of internal waters protected areas: national parks, species-habitat conservation areas and aquatic nature reserves.¹⁶³ Internal waters protected areas are managed in accordance with Decree 109/2003/ND-CP of 2003 on the conservation and sustainable development of wetlands.¹⁶⁴

The Decree stipulates that wetlands of international and/or national importance, typical ecosystems, high biodiversity value areas and areas of notable water sustaining capacity could be delineated for protection under the regime of wetland protected areas.¹⁶⁵ According to its implementation guiding Circular, a wetland must fulfill one of the stated criteria and more than 50 percent of its area must still be in a natural condition in order to be designated as a wetland protected area.¹⁶⁶ There are three main categories of wetland protected areas: Ramsar area, nature protected area and species-habitat protected area. The other category of wetland protected areas is those wetlands that have an importance for the provinces.¹⁶⁷

The competence to establish and manage wetland protected areas belongs to the Prime Minister, Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development and People's Committees of provinces. The Prime Minister is responsible for the adoption of the conservation and sustainable development plan for wetland areas and makes the decision to designate Ramsar areas, nature protected areas

¹⁶³ Decree No.27/2005/ND-CP, *supra* note 145, art.5 (1) and Fisheries Law, *supra* note 144, art.9 (1).

¹⁶⁴ Decree No.27/2005/ND-CP, *supra* note 145, art.5 (2). It should be noted that there is a confusion in the use of "internal waters" in Decrees No.109/2003/ND-CP and No. 27/2005/ND-CP: the category of internal waters protected areas as defined by Decree No.27/2005/ND-CP can be used to protect both coastal and internal waters wetlands as divided by Decrees No.109/2003/ND-CP.

¹⁶⁵ Decree No.109/2003/ND-CP, *supra* note 161, art.1.

¹⁶⁶ Circular No.18/2004/TT-BTNMT, *supra* note 160, Part 2, Section I.

¹⁶⁷ Decree No.109/2003/ND-CP, *supra* note 161, art.12. For details relating to criteria for the classification of wetland protected areas, see Circular No.18/2004/TT-BTNMT, *ibid.* note 160, Part 2, Section II.

and species-habitat conservation areas. The Ministry of Natural Resources and Environment is responsible for the development of regulations and policies relating to wetland protected areas and for the planning and proposal for the designation of multisectoral wetland protected areas that have an international and/or national importance or that straddle the territories of many provinces. The Ministry of Agriculture and Rural Development is responsible for the planning, proposals for designation and the management of sectoral wetland protected areas that have an international and/or national importance or that straddle the territories of many provinces. The People's Committees of provinces are responsible for the designation and management of wetland protected areas that have an importance for provinces or that are located totally in their provinces.¹⁶⁸

Functionally, a wetland protected area is divided into three zones: the strictly protected area, ecological restoration area and service-administration area. The level of restriction of activities depends on the functional zone of the wetland protected area. In the protected area as a whole, it is forbidden to extract mineral resources, import harmful alien species, immigrate to the area, raise domestic animals and develop aquaculture at industrial scale and pollute the environment. In the ecological restoration area, other interdictions are to build habitations and exploit forest and aquatic products. In the strictly protected areas, in addition to all the foregoing restrictions, it is forbidden to collect living and non-living samples and even visit the area. A buffer zone should also be established around the protected area in which it is forbidden to undertake any activity

¹⁶⁸ Decree No.109/2003/ND-CP, *ibid.*, arts 13 and 15 and Circular No.18/2004/TT-BTNMT, *ibid.*, Part 2, Section V, paras 1 and 3.

that may have a negative impact on the management and protection of the wetland protected area.¹⁶⁹

A Management Board must be established to manage a wetland protected area of international and/or national importance at the same time as its designation decision is made. The Management Board must adopt the management statutes, establish and implement development and investment projects for the protected area. It must also monitor the area and organize all other activities including income-generating services relating to the protected area. Overall, a set of management statutes must be adopted for all wetland protected areas.¹⁷⁰

5.3.2.4 Penalization for Violation of Regulations Relating to Protected Areas

The Criminal Code of Vietnam, under Chapter XVII, prescribes punishments for the violation of the regulations relating to protected areas. The Chapter is titled “Offences relating to the environment”.¹⁷¹ According to article 191 of the Code, violations of regulations relating to protected areas that cause serious consequences are punishable of a fine from 10 to 100 million dong¹⁷² and prohibition from undertaking relevant works for between one to five years. If an offence causes serious consequences, the punishment is a fine from 50 to 500 million dong, education without imprisonment¹⁷³ up to three years or imprisonment from six months to three years. The punishment is imprisonment from three to 10 years if the violation causes very serious consequences to

¹⁶⁹ Circular No.18/2004/TT-BTNMT, *ibid.*, Part 2, Section III, para.1, and Section IV paras 1 and 4.

¹⁷⁰ Circular No.18/2004/TT-BTNMT, *ibid.*, Part 2, Section IV, paras 2 and 3.

¹⁷¹ *Vietnam’s Criminal Code*, Code No. 15/19/QH 10, adopted on February 21, 1999 by the 6th Meeting of session X of the National Assembly of Vietnam, an English version can be found online at: World Intellectual Property Organization <<http://www.wipo.int/wipolex/en/details.jsp?id=5025>>, accessed March 26, 2012, Chapter XVII, arts 182-191a [Vietnam Criminal Code].

¹⁷² 20,000 dong is equal to 1 Canadian dollar.

¹⁷³ This is a special punishment in Vietnamese Criminal Law for no serious offences for which the offender is handed over by a tribunal’s decision to the local government or the organization where the person works for observation and education, see Vietnam’s Criminal Code, *supra* note 171, art.31.

the strictly protected zone, and is organized or done using forbidden measures or equipment.¹⁷⁴

Following the designation of the first MPA in Vietnam in 2001,¹⁷⁵ the Government currently plans to establish a total of 15 MPAs and nine coastal wetland protected areas by 2020. The Plan for the MPAs System of Vietnam to 2020, adopted in 2010¹⁷⁶ indicates that Vietnam aims to designate and operate 16 MPAs covering 0.24 percent of “Vietnam’s marine area” of which 30 percent will be under strict protection by 2015.¹⁷⁷ So far, six of them have been established.¹⁷⁸ As well, according to the Plan for the Internal Water Protected Areas System adopted in 2008,¹⁷⁹ by 2020, the country aims to establish and operate a total of 45 internal waters protected areas, nine of which

¹⁷⁴ Vietnam’s Criminal Code, *ibid.*, art.191. It should be noted that the meaning of “serious consequences” and “very serious consequences” have not been defined by Vietnamese law yet.

¹⁷⁵ International Centre for Environmental Management, *Vietnam National Report on Protected Areas and Development* (Hanoi: Kim Do design, 2003) 24. For details about the pilot project, see Hon Mun Marine Protected Area Pilot Project, online: <http://www.nhatrangbaympa.vnn.vn/intro/01nhatrangbay_en.htm>, accessed March 28, 2012. See also Le Doan Dung, “Nha Trang Bay Marine Protected Area, Vietnam: Initial Trends in Coral Structure and Some Preliminary Linkages between these Trends and Human Activities (2002-2005)” (2009) 12:3 Aquatic Ecosystem Health and Management 249.

¹⁷⁶ *Decision No.742/QD-TTg*, adopted on May 26, 2010 by the Prime Minister on the Plan of Vietnam’s System of MPAs to 2020 [in Vietnamese] [Decision No.742/QD-TTg]

¹⁷⁷ *Decision No.742/QD-TTg*, *ibid.* note 176, art.1 (II) (2) (a).

¹⁷⁸ V. Hung, “Management of MPAs: Pressures from Conservation and Development” (September 27, 2011) Tuoi Tre online <<http://tuoitre.vn/Chinh-tri-Xa-hoi/457723/Quan-ly-cac-khu-Bao-ton-bien-Ap-luc-giua-bao-ton-va-phat-trien.html>>, accessed January 9, 2013. For details relating to these MPAs, see for example Nguyen Thi Trang Nhung, *Effectiveness Evaluation of a Marine Protected Area in Vietnam-the Cu Lao Cham MPA Case Study* (Master’s Thesis, University of Tromsø, May 2010) [unpublished]; Le Doan Dung, *supra* note 175; and Pham Khanh Nam, Tran Vo Hung Son and Herman Ceasar, *Economic Valuation of the Hon Mun Marine Protected Area in Vietnam: Lessons for Other Marine Parks in Vietnam* (December 2, 2005), PREM Working Paper 05/13, online: Poverty Reduction and Environmental Management Programme <www.prem-online.org/archive/8/doc/PREM%20WP%2005-13.pdf>, accessed March 17, 2012.

¹⁷⁹ *Decision No.1479/2008/QD-TTg*, adopted on October 13, 2008 by the Prime Minister on the Plan for the Internal Waters Protected Areas System up to 2020 [in Vietnamese].

are coastal wetland protected areas.¹⁸⁰ To date, none of these coastal wetland protected areas seems to have been designated yet.¹⁸¹

5.3.3 Other Relevant Area-Based Conservation Tools

Other area-based tools which could be used for the protection of the marine environment and resources in Vietnamese law include fishery closures, special-use forest and beautiful landscapes and scenic spots.

5.3.3.1 Fisheries Closure

Pursuant to the Fisheries Law, the Ministry of Agriculture and Rural Development is responsible for the establishment of fisheries closure areas in Vietnam.¹⁸² A number of temporary fishery closures have been established by the Ministry over the years through its Circulars.¹⁸³ The most recent Circular in 2011 established 16 temporary fishery closure areas to protect different species.¹⁸⁴ Six of those closed areas are located in marine or coastal areas.

¹⁸⁰ *Ibid.*, Annex.

¹⁸¹ For details relating to the general situation of protected areas and MPAs in Vietnam, see PARC Project, *Building Viet Nam's Protected Areas System: Policy and Institutional Innovations Required for Progress* (2006) Policy Brief; "Protected Areas and Development Lessons from Vietnam" in ICEM, *Lessons Learned in Cambodia, Lao PDR, Thailand and Vietnam*, Review of the Protected Areas and Development in Lower Mekong River Region (Queensland: ICEM, 2003) 85 and Birdlife, *Sourcebook of Existing and Proposed Protected Areas in Vietnam*, 2nd ed. (Hanoi: Birdlife, 2004).

¹⁸² Fisheries Law, *supra* note 144, art.8.

¹⁸³ See for example *Circular No.02/2006/TT-BTS*, adopted by the then Ministry of Fisheries (now merged with the Ministry of Agriculture and Rural Development) on March 20, 2006 to guide the implementation of Decree No.59/2005/ND-CP, May 4, 2005 on conditions for the implementation of certain activities in the fisheries [in Vietnamese], designated a total of eight fishery closures at different times of the year.

¹⁸⁴ *Circular No.89/2011/TT-BNNPTNT*, adopted by the Ministry of Agriculture and Rural Development on December 29th 2011 releasing the list of annual temporary fisheries closures, Annex [in Vietnamese] [Circular No.89/2011/TT-BNNPTNT].

5.3.3.2 Special-Use Forests

The regime of special-use forests¹⁸⁵ in Vietnam comes under the Forest Protection and Development Law,¹⁸⁶ Decree No.23/2006/ND-CP¹⁸⁷ and Decree No.117/2010/ND-CP of 2010.¹⁸⁸ Decree No.117/2010/ND-CP of 2010 defines a special-use forest as “the type of forest defined by the Forest Protection and Development Law, having special value in natural conservation, typical characteristics in the national forest system and the genetic resources of forest species; or having value for scientific research and the protection of historical, cultural and landscape sites”.¹⁸⁹ Special-use forests are divided into five sub-categories.¹⁹⁰ They also have a functional zoning system similar to protected areas as defined in the Biodiversity Law.¹⁹¹

The extent of restriction of activities in a special-use forest depends on the category of special-use forest, its functional zones as well as the type of activities in view. For instance, in national parks, nature reserves and species-habitat conservation areas, it is allowed to collect dead wooden trees and branches as well as to exploit certain types of trees in ecological restoration and service-administrative zones. But in protected

¹⁸⁵ A forest in Vietnamese law is understood to include mangrove forests located in coastal areas, see Slayde Hawkins *et al.*, *Roots in the Water: Legal Frameworks for Mangrove PES in Vietnam*, Katoomba Group’s Legal Initiative Country Study Series (Washington, D.C: Forest Trends, 2010) 3. For a legal definition of forest, see Forest Protection and Development Law, *supra* note 186, art. 3(2)

¹⁸⁶ *Law No.29/2004/QH11 on Protection and Development of Forest*, adopted on December 3, 2004 by the 10th meeting of the National Assembly of Vietnam, session X, an English version can be found online at The REDD Desk

<http://www.threddesk.org/countries/vietnam/info/law/the_law_on_forest_protection_and_development_vietnam>, accessed March 20, 2012 [Forest Protection and Development Law]

¹⁸⁷ *Decree No.23/2006/ND-CP on the implementation of the Law on Protection and Development of Forest*, adopted by the Government on March 3, 2006 (in Vietnamese) [Decree No.23/2006/ND-CP].

¹⁸⁸ *Decree No.117/2010/ND-CP on the Organization and Management of the System of Special-Use Forest*, adopted by the Government on December 12, 2010 [in Vietnamese] [Decree No.117/2010/ND-CP].

¹⁸⁹ Decree No.117/2010/ND-CP, *ibid.*, art.3 (1).

¹⁹⁰ Namely national parks, nature reserves, habitat-species conservation areas, protected landscapes and forest used for scientific research and experiments, see Forest Protection and Development Law, *supra* note 186, art.4 (2) and Decree No.117/2010/ND-CP, *ibid.*, arts 4 and 5.

¹⁹¹ Forest Protection and Development Law, *ibid.*, art. 3 (15), (16), (17) and (18) and Decree No.117/2010/ND-CP, *ibid.*, art.32.

landscapes, those activities are allowed in all their zones. In forests used for scientific and experiments, it is allowed to exploit their products in accordance with the approved research project or program. However, scientific research, education and training; tourism and leisure services; and even the implementation of conservation and restoration measures must comply with a number of conditions, such as not causing bad effects on the forest, having an approved plan or project, and reporting the results of the activity back the Management Board.¹⁹²

5.3.3.3 Beautiful Landscapes and Scenic Spots

The legal regime of beautiful landscapes and scenic spots in Vietnam is prescribed in the Law on Cultural Heritage, adopted in 2001.¹⁹³ This Law regulates the protection and promotion of cultural heritage in Vietnam¹⁹⁴ and Decree No.98/2010/ND-CP provides for its implementation.¹⁹⁵

Pursuant to the Law, beautiful landscapes and scenic spots are a category of cultural heritage. They are defined as “natural landscapes or sites of combination between natural landscapes and architectural works having esthetic or scientific

¹⁹² For details, see Forest Protection and Development Law, *ibid.*, arts 51, 52 & 53 and Decree No.117/2010/ND-CP, *ibid.*, arts 19, 20, 21 and 23. See also Watanee Suntikul, Richard Butler and David Airey, “Implications of Political Change on National Park Operations: Doi Moi and Tourism to Vietnam's National Parks” (2010) 9:3 Journal of Ecotourism 201.

¹⁹³ *Law No.28/2001/QH10 on Cultural Heritage*, adopted on June 29, 2001 by the 9th meeting of the National Assembly of Vietnam, session X, an English version can be found online at: The Province of Dong Nai <http://laws.dongnai.gov.vn/2001_to_2010/2001/200106/200106290006_en/lawdocument_view>, accessed April 9, 2012. The Law was amended in 2010, see *Law No. 32/2009/QH12 complementing and amending a number of articles of the Law on Cultural Heritage*, adopted by the 5th meeting of the National Assembly of Vietnam, session XII on June 18, 2006. [Law on Cultural Heritages].

¹⁹⁴ Law on Cultural Heritage, *ibid.*, art.2.

¹⁹⁵ *Decree No. 98/2010/ND-CP*, adopted by the Government on September 21, 2010 to specify the implementation of a number of articles of the Law complementing and amending a number of articles of the Law on Cultural Heritage [in Vietnamese] [Decree No. 98/2010/ND-CP]

value”¹⁹⁶. According to article 28 (2), an area with scientific value for biodiversity or which has a special ecosystem could be designated a beautiful landscape and scenic spot site.¹⁹⁷

For the protection of a beautiful landscape and scenic spot, two zones must be determined: protection zone I and protection zone II. Protection zone I is where the original area is located and its space and area must be kept intact. Protection zone II is the area that surrounds the site. The construction of structures serving to protect and promote the value of the area must be approved by relevant authorities. These works cannot affect the landscape, ecosystem and environment of the original area.¹⁹⁸ Besides, it is forbidden to cause changes in the environment and landscape of the site including cutting down trees, destroying stones and building structures illegally.¹⁹⁹

¹⁹⁶ Law on Cultural Heritage, *supra* note 193, art.4. This definition is, apparently also applicable to sites located in terrestrial and marine areas.

¹⁹⁷ Law on Cultural Heritage, *ibid.*, arts 28 (2) and 29.

¹⁹⁸ Law on Cultural Heritage, *ibid.*, art. 32.

¹⁹⁹ Decree No. 98/2010/NĐ-CP, *supra* note 195, art.4 (2).

Conclusion

This Chapter has considered the definition, establishment and management of MPAs and other area-based conservation measures in the national laws of the three coastal States in the SCS: China, Philippines and Vietnam. A number of specific comments can be drawn from the comparative study of these States:

Overall, the legal regimes of MPAs in China, Philippines and Vietnam have many similarities. In all three States, MPAs are designated to conserve marine biodiversity, representative and important ecosystems, valuable and endangered species, and special features; and to protect of coastal and marine resources. Equivalent legal regimes exist in the three States also with regards to the distribution of competence relating to the establishment and management of an MPA, functional zoning, restriction of activities, functioning of the MPA management organ, financing, participation of the community; and punishment of violations. In addition to MPAs, all three countries also have some other similar legal area-based conservation measures which could be used to protection of marine environment and resources, such as fishery closure or measures for the conservation of coastal forests.

Some details in the relevant legislation of each State are different. These differences include the competent agency to establish and manage MPAs, the classification of MPAs, the role of local governments; and specific relevant area-based conservation measures. The differences should not significantly affect the possibility for cooperation among the three States toward the establishment of a network of MPAs in the SCS.

Among the three States, only Vietnam seems to express quite clearly under its Biodiversity Law of 2008 the willingness to cooperate internationally to establish MPAs

and developing networks of MPAs. For instance, it is stated in Vietnam's Biodiversity Law that the country gives priority to cooperation with neighbouring countries to manage biodiversity corridors, transboundary migratory routes of species and to protect migratory species.²⁰⁰ However, the commitments of China and Philippines regarding international and regional cooperation relating to MPAs and networks of MPAs may be found in other national and international texts.

A possible important obstacle to regional cooperation in the development of a network of MPAs in the SCS is the existence of exclusive local maritime jurisdictions as in the Philippines.²⁰¹ The establishment of new MPAs by the national government to fulfill its international and regional commitments could be prevented by the disagreement of the local government having jurisdiction in the area where the MPA should be established. This dilemma could be dealt with by involving local governments in formulating the national position on relevant matters. However, this could cause another problem as local governments might not want to sacrifice their interests for the sake of a regional common good. In this case, appropriate incentives and efforts to raise awareness of the need for regional cooperation might be needed.

National laws relating to MPAs and other area-based conservation measures in these States are in general in compliance with international stipulations and consistent with international guidelines relating to MPAs. For instance, they comply with the CBD which requires States to develop systems of protected areas.²⁰² They comply with the UNCLOS which, at the same time, requires States to take measures to protect the marine

²⁰⁰ Biodiversity Law, *ibid.*, art.70.

²⁰¹ China has also conferred on its Hainan province with local maritime jurisdiction but it does seem to be an exclusive jurisdiction; for more details, see *Resolution of the 1st Meeting of the Seventh National People's Congress on the Establishment of Hainan*, April 13, 1988.

²⁰² See above 3.1.2 Convention on Biological Diversity, 1992.

environment and living resources and allows them to limit freedom of navigation for this purpose.²⁰³ They are also in line to the Ramsar Convention with regards to the protection of coastal wetlands.²⁰⁴ The rules relating to planning for MPAs, as well as their management including involvement of local communities and their financing are generally consistent with guidelines relating to the establishment and management of MPAs as provided by the COP of the CBD.²⁰⁵ The national classifications of MPAs in the three regional countries seem to reflect also the IUCN classification system.²⁰⁶

All the MPAs established so far by China, Philippines and Vietnam in the SCS under the national laws in the SCS are located in coastal and near-shore areas and most importantly, in waters without overlapping claims. However, since 1999, China has been enacting annual fishery closures in large areas of the SCS.²⁰⁷ These have been enforced against Vietnamese fishermen in areas claimed by Vietnam. This has caused a lot of tension between Vietnam and China.²⁰⁸ According to the Plan for the MPAs System of Vietnam to 2020, an MPA is planned to be established by the Vietnamese Government for the Nam Yit Island in the Spratlys. This might also provoke protests from China and Philippines.

²⁰³ See above 3.1.1 United Nations Convention on the Law of the Sea, 1982.

²⁰⁴ See above 3.1.3 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971.

²⁰⁵ See above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

²⁰⁶ See above 2.1.1.3 Classification of Marine Protected Areas.

²⁰⁷ *Notice on the Implementation of the Fisheries Moratorium in the South China Sea*, March 4, 2008, online: Ministry of Agriculture <http://www.moa.gov.cn/zwllm/zcfg/nybgz/200806/t20080606_1057142.htm>, accessed February 22, 2012 [in Chinese]. See also *Notice of the Ministry of Agriculture on the Time Adjustment for the Gill Net Fishing Ban*, adopted January 12, 2012, online: Ministry of Agriculture <<http://www.cnfm.gov.cn/info/display.asp?sortid=2&id=66653>>, accessed February 29, 2012 [in Chinese] for the most recent notice adopted by the Ministry of Agriculture of China relating to fishery closure.

²⁰⁸ For more details, see Hai Dang Vu, “Bilateral Network of Marine Protected Areas between Vietnam and China: An Alternative to the Chinese Unilateral Fishing Ban in the South China Sea” (2013) 44:2 *Ocean Development and International Law* 145.

According to the author of this dissertation, the establishment of an MPA in a disputed area might not cause the conflict *per se* but its enforcement against fishermen flying the flag of another claimant might create tension and possibly lead to conflict.

The two Chapters IV and V of this dissertation have reviewed the current status relating to the establishment of MPAs and a network of MPAs in the SCS at both regional and national levels. It is interesting to see now how a network of MPAs has been developed under another regional sea and what lessons it can provide to the SCS. This is the topic of the next Chapter of the dissertation.

Chapter VI. Developing a Network of Marine Protected Areas under the Mediterranean Action Plan: Lessons for the South China Sea

This Chapter reviews developments relating to MPAs and a network of MPAs under the Mediterranean Action Plan (MAP), the oldest of UNEP Regional Sea Programmes to draw applicable lessons for enhancing regional cooperation in the SCS in the same issue-area. There are two reasons why the MAP is chosen for studies. First, MAP has achieved important progresses in the establishment of MPAs and a network of MPAs.¹ Second, as a regional sea, the Mediterranean bears a number of similar characteristics to the SCS, of which the most relevant is the existence of complicated, unresolved and conflict-prone maritime disputes.

The discussion of this Chapter is divided into three sections. The first section discusses the geographical, ecological and socio-economic background of the Mediterranean, in particular, its unresolved disputes. The second section discusses the current context of regional cooperation for the protection of the marine environment and resources and the differences between this context and that of the SCS. The last section analyzes developments relating to MPAs and a network of MPAs under the MAP process and its lessons for the SCS.

¹ There are no well-defined criteria to determine which region is doing better in developing a regional network of MPAs yet. However, in a report in 2008, the UNEP World Conservation Monitoring Centre seems to suggest that regions that have progressed the furthest in planning a regional network of MPAs are those under which a regional list or network of MPAs of regional importance have been institutionalized, see UNEP-WCMC, *National and Regional Networks of Marine Protected Areas: A Review of Progress* (Cambridge: UNEP-WCMC, 2008) ii. As discussed later, under the Mediterranean Action Plan, a List of Special Protected Areas of Mediterranean Importance has been established by the Special Protected Area and Biodiversity Protocol of 1995 along with relevant rules and procedures relating to the inscription of MPAs on the List, their management, monitoring and declassification from it, see above 6.3 The Developments relating to Marine Protected Areas and Networks of Marine Protected Areas under the Mediterranean Action Plan Process.

6.1 The Mediterranean Marine Region: Background

This section of the dissertation gives an overview of the general characteristics of the Mediterranean such as its geography, its biodiversity and its socio-economic situation and of current unresolved maritime disputes in this region.

6.1.1 General Characteristics

The Mediterranean is bounded by the coasts of Europe, Africa and Asia from the Strait of Gibraltar on the West to the entrances to the Dardanelles and the Suez Canal on the East.² It occupies an area of about 2.5 million km² (about 3,800 km wide from East to West and 900 km maximum from North to South) and a volume of 3.7 million km³.³ This marine region has an average width of 1,460 meters and a maximum depth of 5,267 meters.⁴ The total coastline of the Mediterranean is 46,000 kilometers plus 19,000 kilometers of coast in the islands.⁵ The Mediterranean Sea is surrounded by 22 countries and territories.⁶ For a graphic illustration of the Mediterranean Sea, see Figure 7 below.

² International Hydrographic Organization, *Limits of the Oceans and Seas*, Special Publication No.23, 3rd ed. (Monte-Carlo: International Hydrographic Organization, 1953) 15.

³ Fouad Abousamra, Ante Baric and Francesco Saverio Civili, *Transboundary Diagnosis Analysis for the Mediterranean Sea* (Athens: UNEP/MAP/POL: 2005) 4 and John C. Pernetta and Susan M. Wells, *A Global Representative System of Marine Protected Areas, Vol. I: Antarctic, Arctic, Mediterranean, Northwest Atlantic, Northeast Atlantic and Baltic* (Washington, D.C.: Great Barrier Reef Marine Park Authority, 1995) 77 .

⁴ Marta Coll *et al.*, “The Biodiversity of the Mediterranean Sea: Estimates, Patterns, and Threats” (2010) 5:8 *PLOS(ONE)* 1 at 2.

⁵ RAC/SPA, *Impact of Climate Change on Marine and Coastal Biodiversity in the Mediterranean Sea: Current State of Knowledge* (Tunis: RAC/SPA, 2010) 7.

⁶ Namely Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Palestinian territories, Slovenia, Spain, Syria, Tunisia and Turkey.

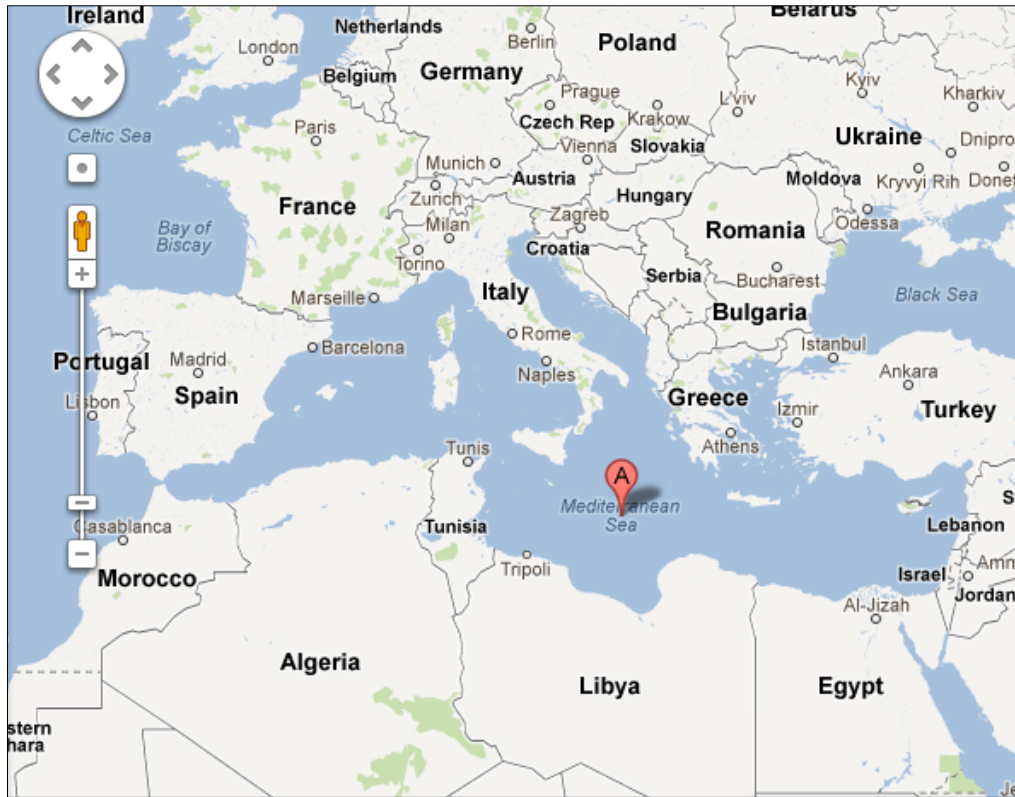


Figure 7 The Mediterranean Sea

(Google Map⁷)

Though it has a low level of primary biological production,⁸ the Mediterranean is characterized by a very high degree of biodiversity. Despite its limited physical dimension,⁹ the marine region is thought to host at least from four to 18 percent of

⁷ Online: Google Map

<<http://maps.google.ca/maps?q=Mediterranean+Sea&hl=en&ll=36.809285,29.794922&spn=38.549325,86.572266&sl=44.741732,-63.240539&sspn=1.078824,2.705383&oq=Mediterranean+Sea&hnear=Mediterranean+Sea&t=m&z=4>>, accessed October 2, 2012.

⁸ Pernetta and Wells, *supra* note 3 at 80 and Kenneth Sherman and Gotthilf Hempel (eds), *The UNEP Large Marine Ecosystem Report: A perspective on changing conditions in LMEs of the world of Regional Seas*, UNEP Regional Seas Report and Studies No.182 (Nairobi: UNEP, 2009) 189.

⁹ The Mediterranean accounts for about 0.8 percent of total surface and 0.3 percent of total volume of the world' oceans; see Blue Plan-Regional Activity Centre, *State of the Environment and Development in the Mediterranean* (Athens: Plan Bleu, 2009) 53; Ameer Abdulla *et al.*, *Status of Marine Protected Areas in the Mediterranean Sea* (Paris: IUCN, 2008) 25; C. Nike Bianchi and Carla Morri, "Marine Biodiversity of the Mediterranean Sea: Situation, Problems and Prospects for Future Research" (2000) 40:5 Marine Pollution Bulletin 367 at 368 and Charles-Francois Boudouresque, "Marine Biodiversity in the Mediterranean: Status of Species, Populations and Communities" (2004) 20 Scientific Report of Port-Cros National Park 97 at 103.

known fauna and flora in the world depending on taxonomic groups (or an average of seven percent).¹⁰ According to recent estimates, a total of 17,000 species are known to occur in the Mediterranean.¹¹ It also has one of the highest levels of endemism in the world at an average of about 28 percent of its species.¹² The dominant habitats of the Mediterranean are seagrass meadows, wetlands and lagoons, estuaries and rocky coasts.¹³ Mediterranean species are unevenly distributed. Its western basin is much richer than the eastern basin¹⁴ and from a bathymetrical point of view, the level of biodiversity generally diminishes with the increase of depth.¹⁵ The biggest threats to the Mediterranean marine environment include habitat loss and destruction, over-fishing, marine pollution, climate change and invasive species.¹⁶

¹⁰ Abousamra, Baric and Civili, *supra* note 3 at 9; UNEP/MAP-Plan Bleu, *supra* note 9 at 53; Bianchi & Morri, *ibid.* note 9 at 368; and Charles-Francois Boudouresque, *ibid.* at 103.

¹¹ Coll *et al.*, *supra* note 4 at 6.

¹² Abousamra, Baric and Civili, *supra* note 3 at 9; Pernetta and Wells, *supra* note 3 at 82; MAP and RAC/SPA, *The Mediterranean Sea Biodiversity: State of the Ecosystems, Pressures, Impacts and Future Priorities* (Tunis: RAC/SPA, 2010) 53; Abdulla *et al.*, *supra* note 9 at 25; Argyro Zenetos *et al.*, *Europe's biodiversity-biogeographical regions and seas. Seas around Europe. The Mediterranean Sea- blue oxygen-rich, nutrient-poor waters* (2002) Europe Environment Agency at 1.4; and Boudouresque, *supra* note 9 at 105.

¹³ Pernetta and Wells, *supra* note 3 at 80.

¹⁴ Abousamra, Baric and Civili, *supra* note 3 at 9; Pernetta and Wells, *supra* note 3 at 82; UNEP/MAP-Plan Bleu, *supra* note 9 at 53; Zenetos *et al.*, *supra* note 12, Table 3 and Coll *et al.*, *supra* note 4 at 9.

¹⁵ About 90 percent of known benthic plant species, 75 percent of fish species and 38 percent of invertebrates are found in shallow waters up to 50 meter-depths. This accounts for about five percent of the Mediterranean waters. The deepwaters of the Mediterranean generally have a low level of biodiversity. Less than 10 percent of Mediterranean species are found below 1000 meters and less than 3 percent below 3000 meters, see UNEP/MAP-Plan Bleu, *supra* note 9 at 53; Boudouresque, *supra* note 9 at 103; Coll *et al.*, *supra* note 4 at 8. For more details about the biodiversity of the deep Mediterranean, see WWF and IUCN, *The Mediterranean Deep-Sea Ecosystems: An Overview of their Diversity, Structure, Functioning, and Anthropogenic Impacts, with a Proposal for their Conservation* (Malaga: IUCN, 2004).

¹⁶ Coll *et al.*, *supra* note 4 at 19; Abdulla *et al.*, *supra* note 9 at 22; Blue Plan-Regional Activity Center, *The Blue Plan's Sustainable Development Outlook for the Mediterranean* (Sophia Antipolis: Plan Bleu, 2008) at 20; Annabele Cuttelod *et al.*, "The Mediterranean: A Biodiversity Hotspot under Threat" in J.C. Vié *et al.* (eds), *The 2008 Review of the IUCN Red List of Threatened Species* (Gland: IUCN, 2008) 8; *20 years of Sustainable Development in the Mediterranean*, *supra* note 17.

The Mediterranean has a total of 473 million inhabitants, representing seven percent of the world's total.¹⁷ The growth rate of the regional population is not homogeneous with a faster increase in countries located in the Southern rim, which may account for 75 percent of the region's total in 2025.¹⁸ Population densities are much higher in the coastal areas (over 150 million in 2008).¹⁹ Economically, the Mediterranean accounts for 11.5 percent of the global GDP (at 2005 purchasing power parities).²⁰ However, wealth in the Mediterranean is unevenly distributed: States that are members of EU have about 90 percent of the GDP and GDP per capita twelve times higher than in North African States.²¹ The most important ones of the sea in the Mediterranean centre on tourism, shipping and fisheries.²² However, compared to the SCS, fishing in the Mediterranean region only represents a small share of the world total capture production.²³

¹⁷ *20 years of Sustainable Development in the Mediterranean: Review and Outlook*, Blue Plan No 22 (June 2012) online: Blue Plan <http://www.planbleu.org/publications/publications_recentesUk.html>, accessed July 16, 2012 at 4 [20 years of Sustainable Development in the Mediterranean]. The total population of the Mediterranean region was predicted to reach 500 million in 2025 and 600 million in 2050; see Abousamra, Baric and Civili, *supra* note 3 at 11 and Sherman and Hempel (eds), *supra* note 8 at 196.

¹⁸ See Abousamra, Baric and Civili, *supra* note 3 at 11.

¹⁹ *20 years of Sustainable Development in the Mediterranean*, *supra* note 17 at 5; Abousamra, Baric and Civili, *supra* note 3 at 11 and Abdulla *et al.*, *supra* note 9 at 22.

²⁰ *20 years of Sustainable Development in the Mediterranean*, *supra* note 17 at 5, it should be noted that this share has a decreasing trend.

²¹ Sherman and Hempel (eds), *supra* note 8 at 196.

²² For details, see Abousamra, Baric and Civili, *supra* note 3 at 14; UNEP/MAP-Plan Bleu, *supra* note 9 at 99; UNEP, MAP and Blue Plan-Regional Activity Center, *supra* note 16 at 1; *Maritime Transport of Goods in the Mediterranean: Outlook 2025*, Blue Plan Papers 7 (Valbonne: Blue Plan-Regional Activity Centre, 2010) 11 and "Other Threats in the Mediterranean" (May 5, 2009) online: Green Peace <<http://www.greenpeace.org/international/en/campaigns/oceans/marine-reserves/the-mediterranean/mediterranean-other-threats/>>, accessed July 17, 2012.

²³ The quantity of fish captured in the FAO Fishing Area No. 37, comprising the Mediterranean and Black Sea, is more than 1,400,000 tons per year, see FAO Yearbook, *Fishery and Aquatic Statistics 2010*, online: FAO Department of Fisheries and Aquaculture <ftp://ftp.fao.org/FI/CDrom/CD_yearbook_2010/navigation/index_intro_e.htm>, accessed July 20, 2012 at 8 and J. Leonard, "Review of Mediterranean and Black Sea Fishery Resources" (2008) Series B, No. 62 Options Méditerranéennes 57 at 58.

6.2.2 Unresolved Maritime-Related Disputes

The Mediterranean Sea, in particular, the Middle East region which comprises many coastal States of the Eastern Mediterranean basin, is very unstable politically with numerous complicated interstate disputes, in particular, maritime-related disputes. In addition to various undelimited maritime boundaries and maritime jurisdictional disputes,²⁴ many other disputes have maritime implications. These include the sovereignty over Hatay/Liwa'aliskenderun,²⁵ the status of the Crown Colony of Gibraltar²⁶ and the sovereignty over the Spanish exclaves in North Africa.²⁷ Some of these disputes are sensitive, complicated and conflict-prone like the ones in the SCS. The latter are the Israeli-Palestinian conflict, the Aegean Sea and the Cyprus status disputes. This section provides a summary of the latter three disputes.

- ***The Israeli-Palestinian Conflict:*** The Israeli-Palestinian conflict is a long-standing conflict between Israel and Palestine²⁸ over a range of issues from mutual

²⁴ For a list of unresolved maritime boundary and jurisdictional disputes in the Mediterranean, see Juan Luis Suárez de Vivero, *Jurisdictional Waters in the Mediterranean and Black Seas* (December 2009) Study requested by the European Parliament Committee on Fisheries at 77; Victor Prescott and Clive Schoffield, *Maritime Political Boundaries of the World*, 2nd ed. (Leiden: Martinus Nijhoff Publishers, 2005) 384 and Tullio Scovazzi, "Maritime Boundaries in the Eastern Mediterranean Sea" (June 2012) *Policy Brief*. For agreements relating to maritime boundaries in the Mediterranean, see the Department of Ocean Affairs and the Law of the Sea

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/ISR.htm>>, accessed December 16, 2012.

²⁵ See Majid Khadduri, "The Alexandretta Dispute" (1945) 39:3 *The American Journal of International Law* 406.

²⁶ See Gerry O'Reilly, "Gibraltar: Sovereignty Disputes and Territorial Waters" (2000) No.95 *The Hydrographic Journal* 67 and "Gibralta" in Rongxing Guo, *Territorial Disputes and Resources Management: A Global Handbook* (New York: Nova Science Publishers, 2007) 121.

²⁷ Such as Ceuta, Penon de Velez de la Gomera, Al Hoceima, Penon de Alhucemas, Melilla and Islas Chafarinas; see Gerry O'Reilly, "Ceuta and the Spanish Sovereign Territories: Spanish and Moroccan Claims" (1994) 1:2 *IBRU Boundary and Territory Briefing*; "Ceuta", "Chafarinas, Islas (Island)", "Melilla", "Penon de Alhucemas, Island of", "Penon de Velez de la Gomera, Island of" in Guo, *ibid.* at 77, 80, 182, 207 and 208 and Mónica Ceberio, Ignacio Cembrero and Miguel González, "The Last Remains of the Empire" (September 17, 2012) *El País* <http://elpais.com/elpais/2012/09/17/inenglish/1347895561_857013.html>, accessed December 18, 2012.

²⁸ A distinction should be made between Palestine as the designation of the Palestine Liberation Organization governmental authority representing the Palestinian people and the territory of Palestine referring to the territory where both Israel and the Palestinian Liberation Organization claim ownership.

recognition, Jewish settlements, the division and control of the territory of Palestine, and the return of refugees.²⁹ The maritime dimension of the dispute comes from the fact that, under the Cairo Agreement on the Gaza Strip and the Jericho Area signed between Israel and Palestine in 1994, Israel transferred the administration of the Gaza Strip, a territory located East of the Mediterranean, to the Palestinian Authority.³⁰ In terms of maritime jurisdiction, the Agreement states that the Palestinian Authority has jurisdiction only over the territorial sea of the Gaza Strip (with the exception of those parts of the territorial sea under the control of Israeli settlements and military installations in this region). Nothing is said about jurisdiction over the other marine zones.³¹ Palestinian fishermen are also allowed to fish in an area outside of these zones under the jurisdiction of the Israeli Navy and up to 20 nautical miles from the coast.³² The Interim Agreement on the West Bank and the Gaza Strip, 1995 did not change these arrangements.³³

The arrangements are temporary and obviously limit the jurisdiction of Palestine in the waters belonging to the Gaza Strip.³⁴ The intention was that this would be replaced by a permanent maritime treaty between Palestine and Israel. However, as the peace

²⁹ For details see, for example, Ian J. Bickerton, *The Arab-Israeli Conflict* (London: Reaktion Books, 2009); Gregory Harms and Todd M. Ferry, *The Palestine-Israel Conflict: A Basic Introduction* (Pluto Press, 2005) and T. G. Fraser, *The Arab-Israeli Conflict*, 2nd ed. (Hampshire: Palgrave Macmillan, 2004).

³⁰ “Agreement on the Gaza Strip and the Jericho Area” in *Letter dated 27 May 1994 from the Permanent Representatives of the Russian Federation and the United States of America to the United Nations addressed to the Secretary-General*, UNGA, 49th session, Doc. A/49/180(1994), Annex, art.III.

³¹ *Ibid.*, Annex, art.V.

³² *Ibid.*, Annex, art. XI of Annex I of the Agreement.

³³ See Interim Agreement on the West Bank and the Gaza Strip, Israel and Palestine, 9 April 1994, online: Negotiations Affairs Department, Palestine Liberation Organization <<http://www.nad-plo.org/einside.php?id=74>>, accessed December 17, 2012, art. XVII and Annex I, art. XIV.

³⁴ In 2005, Israel withdrew all its forces and citizens from the Gaza strip but continues to carry out military activity in its waters and over its air space, see “Gaza Strip” in Guo, *supra* note 26 at 119 and “Israel’s Control of the Airspace and the Territorial waters of the Gaza Strip” (January 1, 2012) The Israeli Information Center for Human Rights in the Occupied Territories, online: B’Tselem <http://www.btselem.org/gaza_strip/control_on_air_space_and_territorial_waters>, accessed December 17, 2012. See also *Gaza Strip*, online: CIA World Fact Book <<https://www.cia.gov/library/publications/the-world-factbook/geos/gz.html>>, accessed December 17, 2012.

process is currently stalled,³⁵ such a treaty is not expected in the near future. Besides, Israel currently has *de facto* control of most of the maritime space belonging to Gaza Strip.³⁶

- *The Dispute between Greece and Turkey in the Aegean Sea:* The Aegean Sea dispute between these two Mediterranean States that border the Aegean Sea³⁷ focuses on five issues: the breadth of territorial waters, delimitation of the continental shelf, jurisdiction over airspace, sovereignty over some islets and rocks and demilitarization of Greek islands.³⁸ It has caused many dangerous frictions between Greece and Turkey. At sea, the escalation due to the islet sovereignty issue in 1996 brought the two countries' armed forces to the brink of an armed conflict³⁹ while the confrontation in the air has provoked frequent military jets' mock dog fights resulting in a number of deaths on both sides. According to a report of the International Crisis Group in 2011, even now when the relationship between Greece and Turkey is getting better and both sides have moved away from their hardline position, the prospect for a solution to this dispute is still far away.⁴⁰

³⁵ See for example *Letters dated 12 December 2012 from the Permanent Representative of Israel to the United Nations addressed to the Secretary-General and the President of the Security Council*, Security Council, Doc. S/2012/924 (2012).

³⁶ It was reported that the Israeli Navy routinely fires on Palestinian fishermen going more than 6 nautical miles from the coast despite the Agreements, see Linda Butler, "Gaza at a Glance" (Spring 2009) XVIII: 3 *Journal of Palestine Studies* 93 at 97 and "Israel's Control of the Airspace and the Territorial waters of the Gaza Strip", *supra* note 34. Besides, since 2007, Israel, along with Egypt, also established a sea blockade against Gaza, see Nidal al-Mughrabi, "Israel Gaza Naval Blockade Eased" (December 13, 2012) *Huffington Post* <http://www.huffingtonpost.com/2012/12/13/israel-gaza-naval-blockade_n_2293628.html>, accessed December 17, 2012.

³⁷ A semi-enclosed sea located in the Northeast of the Mediterranean.

³⁸ For details see "Aegean Seas" in Guo, *supra* note 34 at 42; Yucel Acer, *The Aegean Maritime Disputes and International Law* (Hants: Ashgate, 2003); International Crisis Group, "Turkey and Greece: Time to Settle the Aegean Dispute" (July 19, 2011) Europe Briefing No. 64 at 4 and Stergios Arapoglou, *Dispute in the Aegean Sea: The Imia/Kardak Crisis* (April 2002) Air Command and Staff College-Air University.

³⁹ International Crisis Group, *ibid.* at 3; Stephen Mann, *The Greek-Turkish Dispute in the Aegean Sea: Its Ramifications for NATO and the Prospects for Resolution* (Naval Post Graduate School: Master's Thesis, 2001) [unpublished] 34 and Arapoglou, *ibid.* at 34.

⁴⁰ International Crisis Group, *ibid.* at pp. 9-11.

- *The Status of Cyprus*: The Cyprus⁴¹ status dispute refers to the ongoing inter-communal problem between two largest ethnic groups that live on the island, namely the Greek Cypriots and Turkish Cypriots, with the involvement of outside powers like United Kingdom, Greece and Turkey.⁴² As the result of this dispute, the island is currently divided into the Republic of Cyprus that occupies the southern part of Cyprus and is inhabited by Greek ethnics and the “Turkish Republic of Northern Cyprus”, occupying the northern part of Cyprus and inhabited by ethnic Turks.⁴³ While the Republic of Cyprus has established diplomatic relations with most States in the world,⁴⁴ except Turkey,⁴⁵ and become a member of a dozen international organizations including the UN, Commonwealth and the EU,⁴⁶ the Turkish Republic of Northern Cyprus has so

⁴¹ An island located in the Eastern Mediterranean with an area of 9,251 square kilometer, see *Cyprus*, online: CIA <<https://www.cia.gov/library/publications/the-world-factbook/geos/cy.html>>, accessed July 24, 2012.

⁴² For more details, see for example Clement H. Dodd, *The History and Politics of the Cyprus Conflict* (Basingstoke: Palgrave Macmillan, 2010); Ronan Kennedy, *Resolution of the Cyprus Dispute, the Role of Domestic and International Actors* (Masters of Science in Nationalism and Ethno-Communal Conflict Thesis, School of Politics and International Relations, University College Dublin, 2010) [unpublished]; Barbara A. Daniels, *Diplomacy and Its Discontents: Nationalism, Colonialism, Imperialism and the Cyprus Problem (1945-1960)* (Doctor of Philosophy and Literature Thesis, University of South Africa, 2009); Deniz Sonalp, *Cyprus Conflict: Noncompliance with the 1960 Constitution and Treaties, Political Disagreements* (Master of Arts European Studies Thesis, University of Maastricht, 2009) [unpublished]; David Hannay, *Cyprus: The Search for a Solution* (London: I.B. Tauris, 2005); Michael A. Zachariades, *Transplanted Populations and the Problems Caused: Cyprus* (LLM Thesis, University of Leiden, 2002) and Meltem Muftuler-Bac, “The Cyprus Debacle: What the Future Holds” (1999) 31 *Futures* 559.

⁴³ Sonalp, *ibid.* at 11. See also *Cyprus Problem*, online: Permanent Mission of the Republic of Cyprus to the United Nations <<http://www.cyprusun.org/?cat=74>>, accessed July 25, 2012.

⁴⁴ See *Bilateral Relations*, online: Ministry of Foreign Affairs of the Republic of Cyprus <http://www.mfa.gov.cy/mfa/mfa2006.nsf/policy02_en/policy02_en?OpenDocument>, accessed July 25, 2012.

⁴⁵ Turkey has refused to recognize the government of the Republic of Cyprus (which it refers to as “The Greek Cypriot Administration of South Cyprus”) as the representative of the whole Cyprus’ island, see, for example, *Press Release Regarding the Turkish Views on the EU Membership of Greek Cypriot Administration of Southern Cyprus* (November 11, 1998), online: Ministry of Foreign Affairs of the Republic of Turkey <http://www.mfa.gov.tr/press-release-regarding-the-turkish-views-on-the-eu-membership-of-greek-cypriot-administration-of-southern-cyprus_-_br_unofficial-translation_br_november-11_-1998-.en.mfa>, accessed July 25, 2012. See also Sonalp, *supra* note 42 at 21.

⁴⁶ See *International Organizations*, online: Ministry of Foreign Affairs of the Republic of Cyprus <http://www.mfa.gov.cy/mfa/mfa2006.nsf/policy01_en/policy01_en?OpenDocument>, accessed July 25, 2012.

far been recognized by only Turkey.⁴⁷ Despite numerous mediation initiatives from the UN to reunite Cyprus,⁴⁸ the status of the Cyprus remains unresolved.⁴⁹

The Cyprus status dispute also has negative consequences on maritime activities around the Island. As Turkey does not recognize the Government of the Republic of Cyprus, it has protested against Republic of Cyprus's maritime delimitation agreements signed with other countries and against its prospective offshore oil and gas exploitation. For instance, Turkey challenged the legitimacy of the Republic of Cyprus' EEZ agreements with Egypt, Lebanon and Israel.⁵⁰ Turkey is also opposed to the offshore gas exploration activities carried out by the Republic of Cyprus in its exclusive economic

⁴⁷ *The 1974 Turkish Invasion and its Consequences* (December 2010), online: Press and Information Office of the Republic of Cyprus <<http://www.moi.gov.cy/MOI/pio/pio.nsf/All/6F5DD418DD053ED1C2256D6D001E7571?OpenDocument>>, accessed July 25, 2012.

⁴⁸ For details relating to different initiatives of the United Nations, see Emre İşeri, "A Comparative Assessment of the United Nations and European Union's Roles in the Resolution of the Cyprus Conflict: the Scale of Partiality-Impartiality" (2004) 9 *Turkish Review of Balkan Studies* 125 and Meltem Muftuler-Bac, *supra* note 42 at 559. See also "the Annan Plan" in Kennedy, *supra* note 42, C4 at 44.

⁴⁹ The most recent United Nations' good office mission ended in April 2012 with no "sufficient progress on core issues that would provide a basis for calling an international conference", see *Transcript of Remarks by Special Advisor of the Secretary-General Alexander Downer following his meeting with the Secretary-General. Ledra Palace Hotel, Nicosia, 27 April 2012*, online: United Nations Good Offices Mission <http://www.uncyprstalks.org/nqcontent.cfm?a_id=2466>, accessed July 25, 2012.

⁵⁰ International Crisis Group, "Aphrodite's Gift: Can Cypriot Gas Power a New Dialogue" (April 2, 2012) Europe Report N°216 at 11. For details of the agreements signed between the Republic of Cyprus with Egypt and Israel, see *Agreement between the Republic of Cyprus and the Arab Republic of Egypt on the Delimitation of the Exclusive Economic Zone*, 17 February 2003, online: Division of Ocean Affairs and the Law of the Sea of the United Nations <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/CYP.htm>>, accessed July 24, 2012; *Agreement between the Government of the State of Israel and the Government of the Republic of Cyprus on the Delimitation of the Exclusive Economic Zone*, 17 December, 2010, online: Division of Ocean Affairs and the Law of the Sea of the United Nations <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/CYP.htm>>, accessed July 24, 2012. For a map of the exclusive economic zone between Cyprus and Lebanon, see *Hydrocarbon Exploration: Legal and Regulatory Framework*, online: Ministry of Commerce, Industry and Tourism of the Republic of Cyprus <<http://www.mcit.gov.cy/mcit/mcit.nsf/All/A6D222B09D72E659C2257441002EE9BE?OpenDocument>>, accessed July 24, 2012.

zone,⁵¹ going as far as deploying naval ships near the drilling area and threatening to blacklist companies that would take part in it.⁵² In turn, the Republic of Cyprus has protested⁵³ against the continental shelf delimitation agreement between Turkey and the Turkish Republic of North Cyprus⁵⁴ and their cooperative offshore exploration activities, which also overlap Greek Cypriot maritime areas.⁵⁵

6.2 Regional Cooperation for the Protection of Marine Environment and Living Resources in the Mediterranean

This section reviews the current status of regional cooperation to protect the marine environment and the living resources of the Mediterranean. The primary objective here is to provide the cooperative, legal and institutional context in which the regional network of MPAs has been developing. Another objective is to analyze the differences in the nature of cooperation for the protection of the marine environment and living resources between the Mediterranean and the SCS, which could affect the transferability of the lessons to build a network of MPAs from one to another.

⁵¹ See *Press Release Regarding the Greek Cypriot Administration's Gas Exploration Activities in the Eastern Mediterranean* (August 5, 2011) No.181 online: Ministry of Foreign Affairs of the Republic of Turkey <http://www.mfa.gov.tr/no_-181_-5-august-2011_-press-release-regarding-the-greek-cypriot-administration_s-gas-exploration-activities-in-the-eastern-mediterranean.en.mfa>, accessed July 24, 2012 and *Press Release Regarding the Second International Tender for Off-Shore Hydrocarbon Exploration Called by the Greek Cypriot Administration* (February 15, 2012) No.43 online: Ministry of Foreign Affairs of the Republic of Turkey <http://www.mfa.gov.tr/no_-43_-15-february-2012_-second-international-tender-for-off_shore-hydrocarbon-exploration-called-by-the-greek-cypriot-administration-_gca_.en.mfa>, accessed July 24, 2012.

⁵² International Crisis Group, *supra* note 50 at 5.

⁵³ *Letter dated 15 June 2012 from the Permanent Representative of Cyprus to the United Nations addressed to the Secretary-General*, UNGA OR 66th session, Agenda item 76 (2012).

⁵⁴ See *Press Statement on the Continental Shelf Delimitation Agreement Signed between Turkey and the TRNC* (September 21, 2011) No.216 online: Ministry of Foreign Affairs of the Republic of Turkey <http://www.mfa.gov.tr/no_-216_-21-september-2011_-press-statement-on-the-continental-shelf-delimitation-agreement-signed-between-turkey-and-the-trnc.en.mfa>, accessed July 26, 2012.

⁵⁵ “Turkey Seeks Oil, Gas in North Cyprus” (April 26, 2012) online: The Washington Times <<http://www.washingtontimes.com/news/2012/apr/26/turkey-seeks-oil-gas-in-north-cyprus/>>, accessed July 26, 2012; “Protest as Turkey Drills for Oil in Northern Cyprus” (April 26, 2012) online: BBC News <<http://www.bbc.co.uk/news/world-europe-17852182>>, accessed July 26, 2012 and International Crisis Group, *supra* note 50 at 6.

Two regional mechanisms for the protection of the marine environment and the conservation of fishery resources in the Mediterranean are discussed. These are the MAP process and the General Fisheries Commission for the Mediterranean (GFCM). This is followed by an analysis of differences in the nature of regional cooperation between the Mediterranean and the SCS.

6.2.1 The Mediterranean Action Plan Process

The MAP process is the legal and institutional regional arrangement development to govern the protection of the marine environment of the Mediterranean. It has developed through the implementation of two Action Plans, namely the Mediterranean Action of Plan of 1974 and the Action Plan for the Protection of the Marine Environment and Sustainable Development of the Coastal Areas of the Mediterranean Process of 1995. The MAP is supported by legal instruments often known as the Barcelona Convention system. This sub-section discusses the two above-mentioned Action Plans and the institutional and financial arrangement for the implementation.

6.2.1.1 The Mediterranean Action Plan of 1975

The MAP is the very first Regional Seas Programme Action Plan adopted by UNEP. Initiated in late 1974, the MAP was adopted in an Intergovernmental Meeting on the Protection of the Marine Environment, convened by UNEP in January 1975 in Barcelona, Spain, with the participation of 16 Mediterranean States⁵⁶ and the former

⁵⁶ Algeria, Egypt, France, Greece, Israel, Italy, Lebanon, Libyan Arab Republic, Malta, Monaco, Morocco, Spain, Syrian Arab Republic, Tunisia, Turkey and Yugoslavia.

European Community (now EU).⁵⁷ The objective of this Plan was to provide a framework for the protection and continued development of the Mediterranean ecoregion.⁵⁸ The MAP of 1975 had three important components: an integrated planning program for the management and development of resources, a coordinated pollution monitoring and research program and a legal component with a framework Convention and related Protocols on cooperation to protect the marine environment.⁵⁹

The first MPA led to the development of the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols.⁶⁰ The Framework Convention⁶¹ and two Protocols⁶² were adopted at a Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region on the Protection of the Mediterranean Sea,

⁵⁷ *The Action Plan*, online: UNEP MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001001002>>, accessed August 8, 2012 and “10 Years After: A Regional Seas Programme Overview” (1985) 1 *MedWaves* 8 and *Report of the Intergovernmental Meeting on the Protection of the Mediterranean*, Barcelona, January 28-February 4, 1975, Doc. UNEP/WG. 2/5(1975) Annex. For more details about the history of the MAP, see Aldo E. Chircop, “Cooperative Regimes in Ocean Management: A Study in Mediterranean Regionalism” (J.S.D Thesis, Dalhousie University, 1988) [unpublished], v2 at C5, pp.255-354.

⁵⁸ MEDPOL, *Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MEDPOL-PHASE I). Final Report, 1975-1980*, MAP Technical Reports Series No. 9 (Athens: UNEP/Map, 1986) iii.

⁵⁹ *Action Plan for the Mediterranean*, adopted at the Intergovernmental Meeting on the Protection of the Mediterranean, Barcelona, January 28- February 4, 1975 at 1.

⁶⁰ The drafting process started few months after the Barcelona meeting in 1975, see *Report of the Working Group on Draft Legal Instruments for the Protection of the Mediterranean*, Working Group on Draft Legal Instruments for the Protection of the Mediterranean, Geneva, April 7-11, 1975, Doc. UNEP/WG. 3/2 (1975).

⁶¹ *Convention for the Protection of the Mediterranean Sea against Pollution*, 16 February 1976, online: UNEP MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001004>>, accessed August 9, 2012 (entered into force in 1978).

⁶² *Protocol for the Prevention of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft*, 16 February 1976, online: UNEP MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 9, 2012 (entered into force in 1978) [Dumping Protocol] and *Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency*, 16 February 1976, online: UNEP MAP

<http://www.unepmap.org/index.php?module=content2&catid=001001001>, accessed August 9, 2012 (entered into force in 1978) [Prevention and Emergency Protocol].

convened by UNEP in February 1976, in Barcelona, Spain.⁶³ Before the start of MAP Phase II in 1995, three additional Protocols were adopted.⁶⁴

The first two components of MAP also led to the creation of three programs which are still active, namely the Coordinated Mediterranean Research and Monitoring Programme,⁶⁵ the Blue Plan Programme for Action in the Mediterranean⁶⁶ and the Priority Actions Programme.⁶⁷

6.2.1.2 The Action Plan for the Protection of the Marine Environment and Sustainable Development of the Coastal Areas of the Mediterranean, 1995

In light of the development at the Rio Conference in 1992,⁶⁸ revision of the MAP, the Framework Convention and its Protocols was decided at the 8th Meeting of the Contracting Parties to the Barcelona Convention in 1993.⁶⁹ As a result, a new Action Plan titled, “Action Plan for the Protection of the Marine Environment and the

⁶³ *Final Act and Resolutions Adopted by the Conference*, Conference of Plenipotentiaries of the Coastal States of the Mediterranean Sea, Barcelona, February 2-13, 1976, Doc. UNEP/CONF. 1/Final Act (1976).

⁶⁴ These are the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources, the Protocol concerning Mediterranean Specially Protected Areas and the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, see *Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources*, 17 May 1980, online: UNEP/MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 9, 2012 (entered into force in 1983) [LBS Protocol]; *Protocol concerning Mediterranean Specially Protected Areas*, 3 April 1982, online: UNEP/MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001001000>>, accessed August 9, 2012 (entered into force in 1986) [SPA Protocol]; *Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil*, 14 October 1994, online: UNEP/MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 9th 2012 (entered into force in 2011) [Offshore Protocol].

⁶⁵ For more details about the Coordinated Mediterranean Research and Monitoring Programme, see *MED POL*, online: Mediterranean Action Plan

<<http://www.unepmap.org/index.php?module=content2&catid=001017003>>, accessed December 19, 2012.

⁶⁶ On the Blue Plan Programme for Action in the Mediterranean, see online: Plan Bleu-Regional Activity Centre <<http://www.planbleu.org/indexUK.html>>, accessed December 19, 2012.

⁶⁷ For details about the Priority Actions Programme, see online: Priority Actions Programme-the Coastal Management Centre <<http://www.pap-thecoastcentre.org/>>, accessed December 19, 2012.

⁶⁸ “The Spirit of Barcelona lives on” in (1995) 32 *MedWaves* 12. On the Rio Conference, see above 3.2.1.2 United Nations Conference on Environment and Development, 1992.

⁶⁹ *Report of the 8th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Antalya, October 12-15, 1993, Doc. UNEP(OCA)/MED IG.3/5 (1993) Annex IV at 23.

Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)” or MAP of 1995 was adopted at a Conference of Plenipotentiaries in 1995.⁷⁰ The MAP of 1995 made two amendments to the MAP of 1975. It added a sustainable development dimension to existing commitments and amended the legal component of MAP of 1976.⁷¹

Relating to sustainable development, the Action Plan of 1995 has led to the implementation of many regional activities, projects and programs to promote this approach in the Mediterranean. These initiatives include the support for the establishment of national strategies on sustainable development, implementation of relevant studies and promotion of sustainable development practices.⁷² In particular, a Mediterranean Strategy for Sustainable Development was adopted in 2005,⁷³ providing a framework strategy to adapt international commitments to regional conditions, guide national sustainable development strategies and initiate partnership between countries.⁷⁴

⁷⁰ “Barcelona Resolution”, adopted at the Conference of Plenipotentiaries on the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols, Barcelona, June 9-10, 1995, Doc. UNEP(OCA)/MED IG.6/8 (1995), Annex at 97. Compared to the Intergovernmental Meeting on the Protection of the Marine Environment in 1975, the number of participants at the Conference in 1995 was two more States because of the dissolution of Yugoslavia. The new participants were Bosnia and Herzegovina, Croatia and Slovenia (18 States in total plus the European Union).

⁷¹ *Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)*, adopted at the Conference of Plenipotentiaries on the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols, Barcelona, June 9-10, 1995, Doc. UNEP(OCA)/MED IG.6/8 (1995), Appendix I, pp.15-128.

⁷² See *Report by the Secretariat for the 14th Meeting of the MCSD Steering Committee*, Athens, Greece, March 2, 2011, Doc. UNEP(DEPI)/MED WG. 354/2 (2011).

⁷³ It was adopted by the 10th Meeting of the Mediterranean Commission on Sustainable Development in 2005, see *Mediterranean Strategy for Sustainable Development: A Framework for Environmental Sustainability and Shared Prosperity*, 10th Meeting of the MCSD, June 20-22, 2005, Athens, Greece and it was endorsed by the 14th Meeting of the Contracting Parties of the Barcelona Convention, see *Report of the 14th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols*, Portoroz, Slovenia, November 8-11, 2005, Doc. UNEP(DEC)/MED IG. 16/13 (2005) Annex III at 27 [Mediterranean Strategy for Sustainable Development].

⁷⁴ Mediterranean Strategy for Sustainable Development, *ibid.*, Annex I at 1. See also *the Mediterranean Strategy for Sustainable Development*, online: UNEP MAP <<http://www.unepmap.org/index.php?module=content2&catid=001017002001>>, accessed August 24, 2012.

In regard to the legal component, the MAP of 1995 amended the instruments adopted in the 1970s and 1980s⁷⁵ leading to signature of a number of new Protocols.⁷⁶ A Protocol on Integrated Coastal Zone Management in the Mediterranean was also adopted in 2008 and entered into force in 2012.⁷⁷

6.2.1.3 Institutional and Financial Arrangements for the Implementation of the MAPs

A well-developed institutional mechanism has been set up for the implementation of the MAPs. The implementation of the Barcelona Convention and its related Protocols is governed by the Meetings of the Contracting Parties and the Meetings of the Parties respectively.⁷⁸ The function of secretariat and coordination of the MAP is assumed by UNEP.⁷⁹ To perform this function, a MAP Coordinating Unit was set up in Athens,

⁷⁵ For details, see *Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean*, 10 June 1995, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001004>>, accessed August 24, 2012 [Barcelona Convention (amended)]; *Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea*, 10 June 1995, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 24, 2012 [Dumping Protocol (amended)] and *Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities*, 7 March 1996, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001004>>, accessed August 24, 2012 [LBS Protocol (amended)].

⁷⁶ These are the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, adopted in 1995 and the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal, or Hazardous Waste Protocol, adopted in 1996, see *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean*, 10 June 1995, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 24, 2012 [SPA and Biodiversity Protocol] and *Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal*, 1 October 1996, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed August 24, 2012 [Hazardous Wastes Protocol].

⁷⁷ *Final Act*, Conference of Plenipotentiaries on the Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean, Madrid, January 20-21 2008, Doc. UNEP(OCA)/MED IG. 18/4 Final Act (2008) [ICZM Protocol].

⁷⁸ Barcelona Convention (amended), *supra* note 75, art. 18; LBS Protocol (amended), *supra* note 75, art.13; SPA and Biodiversity Protocol, *supra* note 76, art. 26; Dumping Protocol (amended), *supra* note 75, art.14; Prevention and Emergency Protocol (amended), *supra* note 62, art.18; Offshore Protocol, *supra* note 64, art.30; Hazardous Wastes Protocol, *supra* note 76, art.15 and ICZM Protocol, *supra* note 77, art.33.

⁷⁹ Barcelona Convention (amended), *supra* note 75, art.17.

Greece in 1982.⁸⁰ There are also six Regional Activity Centres under the MAP,⁸¹ each of which offers a specific area of expertise to assist Contracting Parties to fulfill their obligations and commitments under different regional instruments and to take action under different components of the MAP.⁸² A compliance mechanism, along with a Compliance Committee, was set up by the Contracting Parties to the Barcelona Convention at their 15th meeting in 2008 to facilitate and promote compliance with obligations under the Barcelona Convention and its Protocols.⁸³

With regards to funding, a Mediterranean Trust Fund for the Protection of the Mediterranean Sea against Pollution (Mediterranean Trust Fund) was established by the Contracting Parties to the Barcelona Convention at their 1st meeting in 1981.⁸⁴ The Mediterranean Trust Fund could receive contributions from Contracting Parties, Mediterranean States not Contracting Parties and NGOs to cover the expenditures for the activities directly derived from the Barcelona Convention and its Protocols and other activities agreed as part of the MAP.⁸⁵ The administration of the fund was entrusted to

⁸⁰ *Structure*, online: UNEP MAP

<http://www.unepmap.org/index.php?module=content2&catid=001017&ocat_id=001017>, accessed October 2, 2012.

⁸¹ Namely the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea, Blue Plan Regional Activity Centre, Priority Actions Programme Regional Activity Centre, Specially Protected Areas Regional Activity Centre (SPA/RAC), Regional Activity Centre for Information and Communication and Cleaner Production Regional Activity Centre.

⁸² For the mandate of these Regional Activity Centres, see *Report of the 16th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols*, Marrakesh, Morocco, November 3-5, 2009, Doc. UNEP(DEC)/MED IG. 19/8 (2009), Annex II.

⁸³ “Decision IG 17/2”, *Report of the 15th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Almeria (Spain), January 15-18, 2008, Doc. UNEP(DEC)/MED IG. 17/10 (2008), Annex V at 21.

⁸⁴ *Report of the Intergovernmental Review Meeting of Mediterranean Coastal States and First Meeting of the Contracting Parties to the Barcelona Convention*, Cannes/Geneva, February 5-10, 1979, Doc. UNEP/IG. 14/4 (1979), para. 68 at 16.

⁸⁵ “Terms of Reference for the Administration of the Mediterranean Regional Trust Fund for the Protection of the Mediterranean Sea against Pollution”, *Report of the Intergovernmental Review Meeting of Mediterranean Coastal States and First Meeting of the Contracting Parties to the Barcelona Convention*, *ibid.*, Annex IX at 1.

the Executive Direction of UNEP and it is managed in accordance with its financial rules.⁸⁶ Currently, with a total amount of about 13 million Euros for the biennium 2012-2013, the Mediterranean Trust Fund represents about 90 percent of the ordinary income and 70 percent of the total current income of MAP.⁸⁷

The discussion now turns to the General Fisheries Commission for the Mediterranean.

6.2.2 The General Fisheries Commission for the Mediterranean

The General Fisheries Commission for the Mediterranean (GFCM) was established by the Agreement for the Establishment of the General Fisheries Commission for the Mediterranean. Signed in 1949, it entered into force in 1952 and has been amended in 1963, 1976 and 1997.⁸⁸ The purpose of GFCM is to promote the development, conservation, rational management and optimum utilization of the living marine resources and the sustainable development of aquaculture in the Mediterranean, Black Sea and connecting waters.⁸⁹ The membership of the Commission is open to coastal States in both sea regions, to States whose vessels fish in those waters and to

⁸⁶ *Report of the Intergovernmental Review Meeting of Mediterranean Coastal States and First Meeting of the Contracting Parties to the Barcelona Convention*, *ibid.* at 16; *Report of 2nd Meeting of the Contracting Parties to the Barcelona Convention*, Cannes, March 2-7, 1981, Doc. UNEP/IG. 23/11 (1981), para. 6.4 at 18; “Action Plan for the Protection of the Marine Environment and Sustainable Development of the Coastal Areas of the Mediterranean”, *Report of the 9th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Barcelona, Spain, June 5-8, 1995, Doc. UNEP(OCA)/MED IG.5/16 (1995), Annex IX at 25.

⁸⁷ “Overview of Income and Commitments” *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Paris, France, February 8-10, 2012, Doc. UNEP(DEPI)/MED IG. 20/8 (2012), Annex II.

⁸⁸ *Agreement for the Establishment of the General Fisheries Commission for the Mediterranean*, 24 September 1949, online: GFCM <<http://www.gfcm.org/gfcm/about/en#Org-LegalFoundation>>, accessed September 2, 2012 [GFCM Agreement]. See also *General Fisheries Commission of the Mediterranean*, online: GFCM <<http://www.gfcm.org/gfcm/about/en>>, accessed September 2, 2012. For details about the history of the GFCM, see Chircop, *supra* note 57, v2 at C6, pp.373-482.

⁸⁹ *Ibid.*, art. III(1).

relevant regional organizations.⁹⁰ For the exercise of its function, the GFCM can formulate and recommend measures for the conservation and rational management of living marine resources, including the regulation of fishing methods and fishing gear, prescription of minimum sizes for individuals and specific species, establishment of fisheries closures, the regulation and distribution of catch and fishing effort.⁹¹

To date, 23 countries plus the EU have become Members of the Commission.⁹² The GFCM holds at least one session per year in the Headquarters of the FAO in Rome, Italy and extraordinary sessions could be convened if necessary.⁹³ The last meeting of the Commission was held in May, 2013.⁹⁴

The regional cooperation to protect the marine environment and living resources in the Mediterranean States has achieved many important results. As noted earlier, differences in the nature of regional cooperation to protect the marine environment and living resources between the Mediterranean and the SCS could influence lessons that the latter could learn from the former in the establishment of MPAs and development of a network of MPAs. This issue is now considered.

⁹⁰ *Ibid.*, art. I(2).

⁹¹ *Ibid.*, arts III.

⁹² Namely, Albania, Algeria, Albania, Bulgaria, Cyprus, Egypt, France, Greece, Israel, Italy, Japan, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Rumania, Slovenia, Spain, Syria, Tunisia and Turkey, see *Status of Acceptance of the GFCM Agreement*, online: GFCM <<http://www.gfcm.org/gfcm/about/en>>, accessed September 2, 2012.

⁹³ GFCM Agreement, *supra* note 88, art II(10) and *General Fisheries Commission of the Mediterranean's Rules of Procedures*, online: GFCM <<http://www.gfcm.org/gfcm/about/en>>, accessed September 2, 2012, Rules II and *General Fisheries Commission of the Mediterranean*, *supra* note 88.

⁹⁴ For details see *Report of the 37th session of the General Fisheries Commission of the Mediterranean*, Split, Croatia, May 13-17, 2013.

6.2.3 The Nature of Regional Cooperation to Protect of the Marine Environment and Living Resources: Differences between the Mediterranean and the South China Sea

Mediterranean States seem to have a more “mature” experience in regional cooperation to protect the marine environment and living resources than the SCS States. Despite national differences and unresolved maritime disputes, they have been able to adopt deep commitments and make substantial attention to deal with a variety of environmental issues, some of which would be considered complex and sensitive elsewhere such as fishery regulation, prevention of land-based pollution and prevention of pollution from offshore installations. In addition, the Mediterranean States have also been able to build a robust and well-developed regional institutional infrastructure to facilitate their cooperation in relevant issues-areas. These elements would definitely help them to be readier to cooperate in regard to complex initiatives, such as developing a regional network of MPAs.

If regional cooperation in the SCS has used mostly soft-law instruments and projects, the process in the Mediterranean region could be considered as embracing a “hard-law approach”. A total of eight regional treaties have been adopted under the framework of the MAP, including two Protocols relating to the development of MPAs: SPA Protocol of 1982 and SPA and Biodiversity Protocol of 1995. This important difference should be taken into consideration in the application to the SCS of MAP process lessons to establishing MPAs and a network of MPAs in the SCS.

While the MAP is the only official mechanism at the Mediterranean-wide level dedicated to the protection of its marine environment, there is no mechanism devoted to the protection of the marine environment in the SCS yet. All regional mechanisms discussed in Chapter III are either not focused solely on marine environmental protection

or do not apply specifically to the SCS. This fact could have two implications. First, it means that the MAP process would receive more attention (from the States in the region, and from regional and multilateral donors) intended for the protection of the marine environment of the Mediterranean than would any of the mechanisms that has a competence relevant to the protection of the marine environment in the SCS. Second, MAP could concentrate all its available resources on the very purpose of protecting the marine environment of the Mediterranean, while relevant mechanisms in the SCS must share their resources with other tasks and/or other marine regions.

Though half of Mediterranean States are developing countries, most of the funding for activities under the MAP comes from internal sources, in particular from its participating States. Meanwhile, the funding of activities under COBSEA and PEMSEA, regional mechanisms that are functionally most relevant to the protection of the marine environment of the SCS, has relied heavily on external sources. The best example is the SCS Project of which implementation was funded by GEF and its follow-up proposals have been waiting for external funding to be developed. The implication is that Mediterranean States would have more freedom to develop and implement regional activities than SCS States.

While the Mediterranean epistemic community⁹⁵ is said to play an important role in the development of MAP, at least during its first phase,⁹⁶ the SCS epistemic community seems to have had little political influence on regional cooperation for the

⁹⁵ An epistemic community is defined by Peter Haas as “a network of professionals with recognised expertise and competence in a particular issue”, see Peter Haas, “Introduction: Epistemic Community and International Policy Coordination” (1992) 46 *International Organization* 1 at 3.

⁹⁶ Peter Haas, “Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control” (1989) 43 *International Organization* 337 at 384 and Moira L. McConnell, “The Relationship between Science and Politics in Environmental Negotiations” in Evangelos Raftopoulos and Moira L. McConnell (eds), *Contributions to International Environmental Negotiation in the Mediterranean Context* (Athens: Ant. N. Sakkoulas Publishers, 2004) 81.

protection of its marine environment thus far. This is not to say that professional experts, scientists and officials in marine affairs in SCS countries have not discussed relevant issues under various regional *fora*. However, they do not seem to facilitate any policy change by their national governments.⁹⁷ This may be because there is little respect and recognition for regional expertise among high-level SCS decision makers and this is recognized by the SAP for the SCS.⁹⁸

Finally, with regards to the protection of fishery resources, so far despite having more important fisheries than the Mediterranean, there is no regional fishery regulatory body in the SCS similar to the GFCM in the Mediterranean. The AFPIC only operates as a consultative forum. It can provide advice, coordinate activities and act as an information broker to increase knowledge⁹⁹ but cannot distribute fishing quotas, regulate fishing methods, prescribe minimum fish size and establish fisheries closures like the GFCM. So again, while there is a regional framework for fishery regulation in the Mediterranean, there is nothing similar in the SCS.

6.3 The Developments relating to Marine Protected Areas and Networks of Marine Protected Areas under the Mediterranean Action Plan Process

This section focuses on the main subject of study of this Chapter: the development of MPAs and networks of MPAs under the MAP. It discusses the regime of Specially Protected Areas (SPAs) and Specially Protected Areas of Mediterranean Importance (SPAMIs), commitments under MAP towards the establishment of MPAs and networks of MPAs and measures implemented at the regional level by the Meetings

⁹⁷ Hai Dang Vu, “Towards a Regional MPA Network in the South China Sea: General Perspectives and Specific Challenges” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell, *Ocean Yearbook 26* (Leiden: Martinus Nijhoff Publishers, 2012) 291 at 312.

⁹⁸ UNEP, *Strategic Action Programme for the South China Sea*, UNEP/GEF/SCS Technical publication No.16 (2008) at 61.

⁹⁹ See above 4.4.1.2 .

of the Contracting Parties to support the establishment and management of MPAs and networks of MPAs. It also provides information on the general situation regarding the establishment of SPAs and SPAMIs in the Mediterranean.

6.3.1 Regime of SPAs and SPAMIs

The regime of SPAs and SPAMIs is defined in the SPA Protocol of 1982 and SPA and Biodiversity Protocol of 1995 and complemented by measures adopted by the Contracting Parties to the Barcelona Convention. Relevant stipulations under the two instruments and under the Contracting Parties to the Barcelona Convention are now discussed in turn.

6.3.1.1 SPA Protocol and SPA and Biodiversity Protocol

SPAs

The regime of special protected areas was first established by the SPA Protocol of 1982 and it received little modification under the SPA and Biodiversity Protocol of 1995. Neither Protocol provides a general definition of what a SPA is. Instead they list which features it aims to protect.¹⁰⁰ In this connection, both Protocols contain “without prejudice” clauses to safeguard States’ rights and claims relating to the law of the sea to be established, which may, otherwise, arise when a SPA is designated.¹⁰¹ However,

¹⁰⁰ For instance, pursuant to the SPA Protocol, a SPA should be established to safeguard sites of biological and ecological value; the genetic biodiversity of species and their breeding grounds and habitats; representative types of ecosystems, as well as ecological processes; and sites of particular importance because of their scientific, aesthetic, historical, archeological, cultural or educational interest. The SPA and Biodiversity Protocol, states that the objectives of a SPA are to protect representative types of coastal and marine ecosystems; habitats in danger of disappearing or having a reduced natural area of distribution; habitats critical to the survival, reproduction and recovery of endangered, threatened or endemic species of flora or fauna; and sites of particular interest, see SPA Protocol, *supra* note 64, art. 3 and SPA and Biodiversity Protocol, *supra* note 76, art.4.

¹⁰¹ For instance, they stipulate that the establishment of a SPA could not prejudice the rights, present and future claims or legal views of any State relating to the law of the sea, and constitute grounds for claiming contending or disputing any claim to national sovereignty or jurisdiction, SPA Protocol, *ibid.*, art. I(2) and SPA and Biodiversity Protocol, *ibid.*, art. 2 (2) and (3).

while the SPA Protocol limits SPAs to be established within the limit of the territorial seas of the Parties, the SPA and Biodiversity Protocol expands their establishment to areas under their jurisdictions.¹⁰² The two Protocols ask parties to cooperate in transboundary management where a SPA is established in the frontier area, including the frontier area between a Party and a Non-Party.¹⁰³

Various measures of protection that Parties should undertake are stipulated in the SPA and SPA and Biodiversity Protocols for the conservation and preservation of SPAs. For instance, they should, *inter alia*, prohibit the dumping or discharge of waste, regulate the operation of ships, regulate the exploitation of living resources, prohibit the introduction of exotic species, regulate the exploitation of the seabed and subsoil, and regulate the trade in protected species.¹⁰⁴ The SPA and Biodiversity Protocol details the planning, management, supervision and monitoring measures for the specially protected areas that Parties should adopt, such as the development and adoption of a management plan, continuous monitoring, involvement of local communities and populations in the management of protected areas, and adoption of mechanisms for financing the promotion and management of specially protected areas.¹⁰⁵

The two Protocols require Parties to respect a number of requirements when establishing and managing SPAs. They must give appropriate publicity to the establishment of SPAs, respect traditional activities in the adoption of protective measures, encourage and develop scientific and technical research, educate the public and cooperate at the international and regional levels to implement appropriate

¹⁰² SPA Protocol, *ibid.*, art.2 and SPA and Biodiversity Protocol, *ibid.*, art. 5(1).

¹⁰³ SPA and Biodiversity Protocol, *ibid.*, art. 5 (2) and (3).

¹⁰⁴ SPA Protocol, *supra* note 64, art.7 and SPA and Biodiversity Protocol, *ibid.*, art.6.

¹⁰⁵ SPA and Biodiversity Protocol, *ibid.*, art.7.

measures.¹⁰⁶ Additional requirements under the SPA and Biodiversity Protocol include the compilation of inventories of important areas, development of guidelines for the establishment and management of SPAs, and implementation of environmental impact assessments.¹⁰⁷

The stipulations relating to SPAs in the two Protocols show that they actually cover all types of protected areas, including MPAs established or to be established by Mediterranean States.

SPAMIs

The category of SPAMIs was established by the Protocol on Specially Protected Areas and Biodiversity of 1995. The Protocol stipulates that to promote cooperation in the management and conservation of natural areas, a “List of Specially Protected Areas of Mediterranean Importance” must be established by Parties and may include sites which:

- are of importance for conserving the components of biological diversity in the Mediterranean;
- contain ecosystems specific to the Mediterranean area or the habitats of endangered species;
- are of special interest at the scientific, aesthetic, cultural or educational levels.¹⁰⁸

SPAMIs can be established in an area subject to the sovereignty or jurisdiction of the Parties to the Protocol or in an area partly or wholly on the high sea. In case where

¹⁰⁶ SPA Protocol, *supra* note 64, arts 8, 9, 10, 11, 12, 13, and 15; and SPA and Biodiversity Protocol, *ibid.*, arts 18, 20, 21, and 22.

¹⁰⁷ SPA and Biodiversity Protocol, *ibid.*, arts 15, 16, and 17.

¹⁰⁸ SPA and Biodiversity Protocol, *ibid.*, art.8

the area is located in a zone already delimited, the proposal for its inclusion in the List must be submitted by the Party concerned. But where it is located in an undelimited zone or partly or wholly on the high sea, the Parties concerned must submit the proposal for inclusion on the List. The procedure for inclusion requires that the Party or Parties identify the National Focal Point(s). It also requires that a proposal must contain an introductory report with all relevant information relating to the area¹⁰⁹ and a statement justifying its Mediterranean importance to the RAC/SPA. The said statement must demonstrate the conformity of the proposal with agreed guidelines and criteria for designating SPAMIs. All these documents must then be transmitted to the Secretariat. If the proposal concerns an area located in a delimited zone, the Secretariat informs the meeting of Parties to the Protocol which will then decide to include it in the SPAMI List or not. If the proposal concerns an undelimited area or an area located partly or wholly on the high sea, the decision for inclusion is taken by consensus by the Contracting Parties to the Barcelona Convention.¹¹⁰

Annex I of the Protocol adds more details relating to general principles, criteria for evaluation and further requirements that guide considerations to include an area into in the SPAMIs List.¹¹¹ For instance, the area must be accorded a legal status guaranteeing its effective long-term protection. Protection, planning and management measures adopted for the area must be adequate to achieve the site's objectives, based on

¹⁰⁹ Namely the area's geographical location, its physical and ecological characteristics, its legal status, its management plans and the means for their implementation, see SPA and Biodiversity Protocol, *ibid.*, art.9 (3).

¹¹⁰ SPA and Biodiversity Protocol, *ibid.*, art. 9 (3) and (4).

¹¹¹ SPA and Biodiversity Protocol, *ibid.*, Annex I.

an adequate knowledge of different elements of the area. Implementation and management of the objectives must be entrusted to a clearly defined administration.¹¹²

6.3.1.2 Stipulations Adopted by the Contracting Parties to the Barcelona Convention

A number of stipulations relating to SPAs and SPAMIs have also been adopted by the Meetings of the Contracting Parties to the Barcelona Convention, namely the procedure for the revision of the areas included in the SPAMIs List and inventories of sites of conservation interest.

Procedure for the revision of the areas included in the SPAMIs List

The procedure for the revision of the areas included in the SPAMIs List was adopted by the 15th Meeting of the Contracting Parties to the Barcelona Convention to examine whether an area meets criteria listed by Annex I of the Protocol of 1995.¹¹³ For this purpose, two types of procedures were developed, namely the ordinary review and the extraordinary review. The ordinary review procedure demands two different sources of information about the status of a SPAMI: a Periodic Review, entrusted every six years to a mixed national/independent Technical Advisory Commission and the biannual National Reports from the National Focal Point of Specially Protected Areas.¹¹⁴

An extraordinary review is initiated when there is an important threat to a SPAMI or a change in its legal, management and ecological status. In this case, the Executive Secretary of MAP may appoint an independent expert to assess, in the company of a representative of Specially Protected Areas Regional Activity Centre (SPA/RAC), the reality and seriousness of the threat to the objectives of the SPAMI. Based on the results

¹¹² SPA and Biodiversity Protocol, *ibid.*, Annex I, C and D (5).

¹¹³ *Report of the 15th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 83, at 11 and Annex V at 295.

¹¹⁴ *Ibid.*, Annex V, Section I at 295.

of the assessment, the Executive Secretary may recommend to the National Focal Point to proceed with a detailed appraisal. The National Focal Point may recommend to the Meeting of Parties to request the responsible authorities to take appropriate corrective measures while the SPAMI enters into a provisional period of three years during which the necessary recommendations and measures must be taken and implemented.¹¹⁵

A SPAMI may remain provisional for a maximum of six years. Before the end of the sixth year, an extraordinary review must be done. If it concludes that recommended measures were implemented and that legal protection or the ecological status of the site has improved, the SPAMI will be moved from a provisional status into the regular review process. Where the extraordinary review concludes that damage is irremediable or that necessary measures were not implemented, the Parties may suggest to the Party concerned to remove the SPAMI from the List. If the concerned Party does not agree, the withdrawal decision shall be taken by a vote of the Meeting of the Parties and passed by a two-third majority.¹¹⁶

Inventories of sites of conservation interest

As stated earlier, one of the obligations of the Parties under both Protocols is to compile inventories of sites of conservation interest in the Mediterranean. A number of measures have been adopted by the Meetings of Contracting Parties to help the Parties fulfill this obligation.

When the Protocol of 1982 was in force, the Contracting Parties at their 5th Meeting asked the RAC/SPA to establish a Directory of Marine and Coastal Protected Areas of the Mediterranean Region containing information on established protected areas

¹¹⁵ *Ibid.*, Annex V, Section II at 297.

¹¹⁶ *Ibid.*, Annex V, Section III at 298.

or those under consideration by relevant governments.¹¹⁷ Such a Directory was established by the Centre, containing basic information such as location, features, area, governing legislation, and administration of 74 sites of biological and ecological value in the Mediterranean.¹¹⁸ A second part of the Directory concerning sites of scientific, aesthetic, historical, archeological, cultural or educational value was also requested to be compiled by the 7th Meeting of the Contracting Parties;¹¹⁹ this has never been accomplished.¹²⁰

After the adoption of the Protocol of 1995, measures were adopted to support the drawing up of inventories of natural sites of conservation interest. The 10th Meeting of the Contracting Parties to the Barcelona Convention adopted the criteria for the preparation of national inventories of natural sites of conservation interest.¹²¹ The presence within a site of a significant sample of characteristic elements of Mediterranean biological diversity is the basic criterion for its inclusion in the inventory. Criteria for the assessment of the significance of a site for a given habitat type or a given species are also provided. Established criteria shall be reviewed and updated within five years. A model format of information concerning the sites included in the national inventories was also

¹¹⁷ *Report of the 5th Meeting of the Contracting Parties to the Barcelona Convention*, Athens, Greece, September 7-11, 1987, Doc. UNEP/IG. 74/5 (1987) 63.

¹¹⁸ UNEP and IUCN, *Directory of Marine and Coastal Protected Areas in the Mediterranean Region: Part I-Sites of Biological and Ecological Value*, MAP Technical Report Series No. 26 (Athens: UNEP, 1989). This Directory was revised to comprise information on 124 sites, see *Report of the Meeting of the National Focal Points for Specially Protected Areas in the Mediterranean including Joint Consultation concerning the Conservation of Cetaceans in the Mediterranean and the Black Sea*, Athens, Greece, October 26-30, 1992, Doc. UNEP(OCA)/MED WG. 36/7 (1992) 4.

¹¹⁹ *Report of the 7th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Cairo, Egypt, October 8-11, 1991, Doc. UNEP(OCA)/MED IG. 2/4 (1991) Annex IV at 14.

¹²⁰ The RAC/SPA actually developed proposals relating to the definition of the sites that could be inscribed under those categories, model for data of sites to be described in the Directory and outline of the Directory, see *Report of the Meeting of the National Focal Points for Specially Protected Areas in the Mediterranean including Joint Consultation concerning the Conservation of Cetaceans in the Mediterranean and the Black Sea*, Athens, Greece, October 26-27, 1992, Doc. UNEP(OCA)/MED WG. 36/7 (1992) 5.

¹²¹ *Report of the 10th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Tunis, Tunisia, November 18-21, 1997, Doc. UNEP(OCA)/MED IG. 11/10 (1997) 26 and Appendix IV.

attached. The Meeting further requested the SPA/RAC to elaborate a model classification of marine coastal habitat types for the Mediterranean region, a reference list of habitat types and species and a standard form for the compilation of information concerning the sites included in the national inventories.¹²²

The SPA/RAC developed a Reference List for Classification of Marine Habitat Types for the Mediterranean Region and a Standard Data Form for National Inventories of Natural Sites of Conservation Interest which are included in the Appendices as a Reference List of Habitat Types and a Reference List of Species. The former lists a total of five types of marine habitats in the Mediterranean (supralittoral, mediolittoral, infralittoral, circalittoral and bathyal) with a number of sub-divisions.¹²³ The latter provides detailed information concerning all the fields required in a model format of information concerning the sites included in the national inventories.¹²⁴ Both tools were adopted by the 11th Meeting of the Contracting Parties to the Barcelona Convention.¹²⁵ The Centre also elaborated a Reference List for Classification of Coastal (Terrestrial and Wetland) Habitat Types for the Mediterranean Region which was adopted by the 13th Meeting of the Contracting Parties in 2003.¹²⁶ The List classifies the coastal Mediterranean habitats into eight types with different sub-classifications.¹²⁷

¹²² *Ibid.* note 121, Annex IV at 10.

¹²³ For more details, see *Report of the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Malta, October 27-30, 1999, Doc. UNEP(OCA)/MED IG. 12/9 (1999) Appendix VII.

¹²⁴ For details, see *Standard Data-Entry Form for National Inventories of Natural Sites of Conservation Interest* (Tunis: RAC/SPA, 2002).

¹²⁵ *Report of the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 123, Annex IV at 10.

¹²⁶ *Report of the 13th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Catania, Italy, November 11-14, 2003, Doc. UNEP(DEC)/MED IG. 15/11 (2003) Annex III at 12.

¹²⁷ Namely Coastal and Halophytic Communities, Non-Marine Waters, Scrub and Grassland, Forest, Bogs and Marshes, Inland Rocks, Scree and Sands, Deserts, Non-Natural Coastal Habitats; see *Report of the 6th Meeting of National Focal Points for SPAs*, Marseilles, June 17-20, 2003, Doc. UNEP(DEC)/MED WG. 232/13 (2003) Annex IX.

6.3.2 Commitments to Establish Marine Protected Areas and a Network of Marine Protected Areas

The general commitment to establish MPAs and networks of MPAs under the MAP are provided in the Declarations of the Meetings of the Contracting Parties to the Barcelona Convention. More specific commitments relating to the establishment of MPAs and networks of MPAs, such as those for the protection of a specific species, are provided in its Action Plans. Both relevant general and specific commitments are now discussed.

6.3.2.1 General Commitments

The general commitment to establish MPAs and a network of MPAs in the Mediterranean appears in numerous Declarations adopted by the Meetings of the Contracting Parties to the Barcelona Convention such as the Genoa Declaration,¹²⁸ the Almeria Declaration,¹²⁹ the Marrakesh Declaration¹³⁰ and the Paris Declaration.¹³¹ The Genoa Declaration adopted in 1985 set as target to be achieved during the 2nd decade of the MAP (1985-1995), the identification and protection of at least 50 new marine and coastal sites or reserves of Mediterranean interest.¹³² The Almeria Declaration, adopted in 2008 and the Marrakesh Declaration, adopted in 2009, “regionalize” the international commitment relating to the development of networks of MPAs adopted by the

¹²⁸ “Genoa Declaration on the Second Mediterranean Decade” in *Report of the 4th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Genoa, Italy, September 9-13, 1985, Doc. UNEP/IG. 56/5 (1985) 21.

¹²⁹ “Almeria Declaration” in *Report of 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Monaco, November 14-17, 2001, Doc. UNEP(DEC)/MED IG. 13/8 (2001), Annex III.

¹³⁰ “Marrakesh Declaration” in *Report of the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Marrakesh, Morocco, November 3-5, 2009, Doc. UNEP(DEC)/MED IG. 19/3 (2009), Annex I.

¹³¹ “Paris Declaration” in *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 87, Annex I.

¹³² “Genoa Declaration on the Second Mediterranean Decade” in *Report of the 4th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 128, para 17(h).

programme of work on protected areas under the Convention on Biological Diversity.¹³³

In the most recently adopted Paris Declaration in 2012, they reaffirmed the commitments adopted at the 10th meeting of the COP of the CBD in 2010 by pledging to develop a coherent, well-managed network of coastal and MPAs in the Mediterranean to meet the target of 10 percent of MPAs in the Mediterranean by 2020.¹³⁴

6.3.2.2 Commitments to Establish Marine Protected Areas and Networks of Marine Protected Areas to Protect Specific Species

The commitment to establish MPAs and networks of MPAs to protect specific species in the Mediterranean has been mentioned in a number of Action Plans adopted under the framework of the Barcelona Convention to protect endangered or threatened species in the Mediterranean. They are: the Action Plan for the Management of the Mediterranean Monk Seal adopted in 1987, Action Plan for the Conservation of Mediterranean Marine Turtles adopted in 1989, Action Plan for the Conservation of Cetaceans in the Mediterranean Sea adopted in 1991, Action Plan for the Conservation of the Marine Vegetation in the Mediterranean Sea adopted in 1999, Action Plan for the Conservation of Bird Species listed in Annex II of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and Action Plan for the Conservation of Cartilaginous Fishes (*Condrichthyans*) in the Mediterranean Sea, both

¹³³ For instance, in the Almeria Declaration, the Contracting Parties to the Barcelona Convention committed to “promote measures for the establishment of a comprehensive and coherent Mediterranean network of coastal and marine protected areas by 2012”, see “Almeria Declaration” in *Report of 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 129, Annex III at 3. In the Marrakesh Declaration, States are called to continue the establishment of MPAs and pursue the protection of biodiversity for the establishment by 2012 of a network of MPAs, see “Marrakesh Declaration” in *Report of the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 130, Annex I at 4. On the CBD’s programme of work on protected areas, see above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

¹³⁴ “Paris Declaration” in *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 131, Annex I at 3.

adopted in 2003.¹³⁵ In all these Action Plans, Contracting Parties are asked, among other things, to establish MPAs and/or to develop a network of MPAs to protect habitats and sites which are critical for the survival of concerned species such as mating, breeding, feeding, spawning and wintering areas as well as migration passages.¹³⁶

6.3.3 Measures to Support the Establishment and Management of Marine Protected Areas and a Network of Marine Protected Areas in the Mediterranean

The Contracting Parties to the Barcelona Convention have adopted numerous measures to support the establishment and management of MPAs and a network of MPAs in the Mediterranean, mostly through regional programs, action plans and projects. They are: the Programme for the 100 Coastal Historic Sites of Common Mediterranean Interest; the Mediterranean Diploma for Specially Protected Areas of Mediterranean Importance; the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region; the Regional Project for the Development of Marine and Coastal Protected Areas in the Mediterranean Region; the Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean including the High Sea; the implementation of the ecosystem approach

¹³⁵ See *Report of the International Conference on Monk Seal Conservation*, Antalya, Turkey, September 17-19, 2006 at 3; *Report of the 6th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note Athens, October 3-6, 1989, Doc. UNEP(OCA)/MED IG. 1/5 (1989) at 13; *Report of the 7th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 119, Annex IV at 14; *Report of the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 123, Annex IV at 12; and *Report of the 13th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 126, Annex III at 14.

¹³⁶ For details, see *Action Plan for the Managing of the Monk Seal in the Mediterranean* (1990), online: RAC/SPA <<http://rac-spa.org/publications#en4>>, accessed September 19, 2012, paras 13-16; *Action Plan for the Conservation of Cetaceans in the Mediterranean Sea* (2001), online: RAC/SPA <<http://rac-spa.org/publications#en4>>, accessed September 19, 2012 at 9; RAC/SPA, *Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea* (Tunis: RAC/SPA, 2003) 8; RAC/SPA, *Action Plan for the Conservation of Bird Species Registered in Annex II of the SPA/BD Protocol in the Mediterranean* (Tunis: RAC/SPA, 2003) 12; RAC/SPA, *Action Plan for the Conservation of Mediterranean Marine Turtles* (Athens: UNEP/MAP, 2007) 10; RAC/SPA, *Action Plan for the Conservation of the Coralligenous and other Calcareous Bio-concretions in the Mediterranean Sea* (Tunis: FAC/SPA, 2008) 20; and RAC/SPA, *Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea* (Tunis: RAC/SPA, 2012) 11.

and measures supporting the establishment of MPAs in areas beyond national jurisdiction. These measures are now discussed in details

6.3.3.1 The Programme for the 100 Coastal Historic Sites of Common Mediterranean Interest

The Programme for the 100 Coastal Historic Sites of Common Mediterranean Interest (100 Historic Sites Programme) sought to protect historic sites of common Mediterranean interest. It was initiated by the Genoa Declaration, in which the Contracting Parties committed to identify and protect at least 100 coastal historic sites of common interest.¹³⁷ The Programme was carried out from 1987 to 2003.

According to the selection criteria adopted at the 5th Meeting of the Contracting Parties, to be listed as a coastal historic site of common Mediterranean interest, a cultural good¹³⁸ must be located in the coastal or island region and must fulfill one of the predetermined conditions.¹³⁹ The decision relating to which site would be included in the list is taken by the Meeting of Contracting of Parties.¹⁴⁰ From an initial list of 100 sites in 1987,¹⁴¹ the number of listed sites grew to 122 in 2001.¹⁴²

¹³⁷ “Genoa Declaration”, *Report of the 4th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 128, 22.

¹³⁸ Which include monuments, natural areas and landscapes.

¹³⁹ Namely illustrating one of the great civilizations or an autochthonous culture specific to the Mediterranean area; having, during a determined period, a considerable influence on the development of architecture or the arts in a specific Mediterranean region; playing a major role in the history of trans-Mediterranean relations; and directly and materially associated with a major event of Mediterranean of Mediterranean history (this criterion is used only in conjunction with at least one of the other ones); see “Recommendations concerning the list of coastal historic sites of common Mediterranean interest” in *Report of the 5th Meeting of the Contracting Parties to the Barcelona Convention*, Athens, September 7-11, 1987, Doc. UNEP/IG. 74/5 (1987) 43 at 45 and “Report of the Evaluation of 100 Historic Sites”, Report of the 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, *supra* note 129.

¹⁴⁰ *Safeguarding cultural heritage*, online: UNEP/MAP

<<http://www.unepmap.org/index.php?module=content2&catid=001003>>, accessed September 22, 2012.

See also *Report of the 8th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 69, Annex IV at 16.

¹⁴¹ “Initial List of Selected Coastal Historic Sites of Common Mediterranean Interest” in *Report of the 5th Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 139 at 47.

¹⁴² “Report of the Evaluation of 100 Historic Sites” in *Report of the 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 129, Annex 1 at 55.

The Secretariat of the 100 Historic Sites Programme was entrusted to the *Atelier du Patrimoine* (literally, Workshop of Patrimony),¹⁴³ a service under the General Secretariat of the City of Marseille (France) in charge of planning and advice on archeology and architecture of the city.¹⁴⁴ This Secretariat was responsible for all the scientific and substantive aspects of MPA activities relating to historic sites and settlements. The SPA/RAC would seek scientific support from *Atelier du Patrimoine* in to implement the SPA Protocol.¹⁴⁵

Activities implemented under the 100 Historic Sites Programme have included assistance to States to protect and safeguard historic sites and historic settlements, organization of workshops and training courses on management tools and methods applicable to historic sites and settlements, and promotion of exchange links between decision-makers for the 100 historic sites.¹⁴⁶

Based on the conclusions of an evaluation in 1995,¹⁴⁷ the Contracting Parties at their 12th Meeting decided to integrate the 100 Historic Sites Programme into the Mediterranean Commission on Sustainable Development (MCSD) as a component of

¹⁴³ *Report of the 6th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 135, Annex V at 18.

¹⁴⁴ See “Report of the Evaluation of 100 Historic Sites”, *supra* note 142 at 4 and *L’Atelier du Patrimoine of the city of Marseille*, online: City of Marseille <http://www.marseille.fr/sitevdm/document?id=1952&id_attribute=48> [in French].

¹⁴⁵ *Report of the Meeting of the Bureau of the Contracting Parties to the Barcelona Convention*, Cairo, March 1-2, 1993, Doc. UNEP/BUR/42/3 (1993) Annex II at 2.

¹⁴⁶ See *Report of the 8th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 69, Annex IV at 16 and *Report of the 9th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Barcelona, June 5-8, 1995, Doc. UNEP(OCA)/MED IG.5/16 (1995) at 8. See also “Report of the Evaluation of 100 Historic Sites”, *supra* note 142 at 8.

¹⁴⁷ This evaluation, requested by the Contracting Parties to the Barcelona Convention in 1999, was very critical of the 100 Historic Sites Programme. In particular, it reproached that the Programme relied on a confused concept, lacked a clear content, failed to establish a network between listed sites. It then proposed to change the Programme fundamentally by refocusing its working approach and reorganizing its institutional structure, see “Report of the Evaluation of 100 Historic Sites”, *supra* note 144 and *Report of the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 123, Annex IV at 2.

sustainable development.¹⁴⁸ At their 13th Meeting, based on the proposal of the MCSD, the Contracting Parties decided to transform it into a program for Mediterranean cultural heritage and sustainable development.¹⁴⁹ The implementation of this transformation, entrusted to France and Tunisia, is ongoing.¹⁵⁰

In the newly entered into force ICZM Protocol,¹⁵¹ the issue of cultural heritage was mentioned in article 13. It requires Parties to adopt all appropriate measures to preserve and protect the cultural, in particular archaeological and historical heritage of coastal zones with preservation *in situ* as the first option.¹⁵² This would provide a legal framework for the development of the new program for Mediterranean heritage and sustainable development. However, this program was not mentioned at all in the reports of expert meetings for drafting the ICZM Protocol.¹⁵³

¹⁴⁸ *Report of 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 129, Annex IV at 3.

¹⁴⁹ *Report of the 13th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 126, Annex III at 3.

¹⁵⁰ *Ibid.*, Annex III at 3.

¹⁵¹ It was entered into force in 2011, see *Protocols*, online: UNEP/MAP <<http://www.unepmap.org/index.php?module=content2&catid=001001001>>, accessed September 22, 2012.

¹⁵² ICZM Protocol, *supra* note 77, art. 13 (1) and (2).

¹⁵³ See *Report of the 1st Meeting of the Working Group of Experts designated by the Contracting Parties on the Draft Protocol on Integrated Coastal Zone Management in the Mediterranean*, Split, Croatia, April 27-29, 2006, Doc. UNEP(DEPI)/MED WG.287/4 (2006); *Report of the 2nd Meeting of the Working Group on the Integrated Coastal Zone Management Protocol*, Loutraki, September 6-9 2006, Doc. UNEP(DEPI)/MED WG.298/4 (2006); *Report of the 3rd Meeting of the Working Group of experts designated by the Contracting Parties on the Draft Protocol on Integrated Coastal Zone Management in the Mediterranean*, Loutraki, February 12-15, 2007, Doc. UNEP(DEPI)/MED WG 305/4 (2007); *Report of the 4th Meeting of the Working Group of Experts designated by the Contracting Parties on the Draft Protocol on Integrated Coastal Zone Management in the Mediterranean*, Split, June 13-16, 2007, Doc. UNEP(DEPI)/MED WG.318/4 (2007); and *Report of the 5th Meeting of the Working Group of Experts designated by the Contracting Parties on the Draft Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean*, Loutraki, December 10-11, 2007, Doc. UNEP(DEPI)/MED WG.324/4 (2007).

6.3.3.2 The Mediterranean Diploma for Specially Protected Areas of Mediterranean Importance

The Mediterranean Diploma for SPAMI (or Mediterranean Diploma) was envisaged by the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean-MAP Phase II for awarding a SPAMI distinguished by the implementation of specific and concrete activities in the field of management and conservation of the Mediterranean natural heritage.¹⁵⁴ Developed by SPA/RAC, the criteria and procedure for awarding the Diploma was adopted by the 13th Meeting of the Contracting of the Parties of the Barcelona Convention in 2003.¹⁵⁵ It may be awarded on a four-year basis to SPAMIs that are adequately protected from the point of view of the conservation of the components of Mediterranean biological diversity, of ecosystems specific to the Mediterranean area, of the habitats of endangered species and of sites of special scientific, aesthetic, cultural or educational interest.¹⁵⁶

The Mediterranean Diploma is awarded by the Meeting of the Parties of the Barcelona Convention, based on proposals from the National Focal Points for SPAs.¹⁵⁷ The decision to award a Diploma is taken by the Contracting Parties in their Ordinary Meetings by a two-third majority after examination of the application by the RAC/SPA.¹⁵⁸ To be awarded with the Diploma, an applicant SPAMI should fulfill a number of requirements such as assurance of an appropriate protection for representative

¹⁵⁴ *Draft Criteria and Procedures of Awarding the "Mediterranean Diploma" for Specially Protected Areas of Mediterranean Importance (SPAMIs) Distinguished by the Implementation of Specific and Concrete Activities in the Field of Management and Conservation of the Mediterranean Natural Heritage*, Meeting of MAP National Focal Points, Athens, September 15-18, 2003, Doc. UNEP(DEC)/MED WG. 228/Inf. 14 (2003) 1 [Procedures of Awarding Mediterranean Diploma].

¹⁵⁵ *Report of the 13th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 126, Annex III at 15.

¹⁵⁶ Procedures of Awarding the Mediterranean Diploma, *supra* note 154, art. 1.

¹⁵⁷ *Ibid.*, art. 4.

¹⁵⁸ *Ibid.*, arts 6 and 8 (1).

coastal and marine ecosystems in danger, record of tangible results concerning recovery of endangered species, and not be the object of any controversy for its SPAMI or other status.¹⁵⁹

6.3.3.3 The Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region

The Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (or SAP BIO) was adopted by the 13th Meeting of the Contracting Parties to the Barcelona Convention in 2003 following an assessment and consultation process in 2001-2003.¹⁶⁰

The principal objectives of SAP BIO are to establish a logical base for implementing the SPA and Biodiversity Protocol of 1995 and providing all actors involved in the protection and management of the Mediterranean environment with principles, measures and actions at different levels for the conservation of marine and coastal biodiversity.¹⁶¹ SAP BIO defines seven priorities for the protection of the marine and coastal biodiversity of the Mediterranean. These are inventorying, mapping and monitoring Mediterranean coastal and marine biodiversity; conserving sensitive habitats, species and sites; assessing and mitigating the impact of threats on biodiversity; developing research to compete knowledge and fill in gaps on biodiversity; capacity building to ensure coordination and technical support, information and participation and

¹⁵⁹ *Ibid.*, art. 3.

¹⁶⁰ *Report of the 13th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 126, Annex III at 16. For details about the process, see “A Strategy to Conserve Marine and Coastal Biodiversity” in (2004) 50 *MedWaves: Mediterranean Environmental Summit in Catania* 4 and “A Key Step for Mediterranean Biodiversity” (2004) 51 *MedWaves: Catania Declaration* 13.

¹⁶¹ UNEP/MAP and RAC/SPA, *Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region* (Tunis: RAC/SPA, 2003) 6.

awareness-raising.¹⁶² Under each priority, SAP BIO set a number of targets, objectives and specific actions to be implemented.

Two of the above-mentioned priorities could support the establishment and management of MPAs in the Mediterranean, namely inventorying, mapping and monitoring Mediterranean coastal and marine biodiversity and conserving of sensitive habitats, species and sites. For the former, specific activities were planned to, *inter alia*, make a complete and integrated inventory of Mediterranean coastal, wetland, and marine sensitive habitats and to promote the adequate monitoring and survey of the effectiveness of marine and coastal protected areas.¹⁶³ For the latter, the objectives set for specific activities include developing and coordinating protection actions for priority sites and areas; identifying new areas deserving protection measures and setting up new MPAs in the south and eastern Mediterranean; enhancing the management of existing protected areas; and establishing and supporting networks of protected area.¹⁶⁴

At their 16th Meeting in 2005, the Contracting Parties to the Barcelona Convention requested the SPA/RAC to further integrate the SAP BIO into its program of activities and prepare project proposals and seek funding, in particular from GEF for its implementation.¹⁶⁵ Thus, the implementation of the SAP BIO has become one of the objectives of a GEF-funded Project in the Mediterranean, the “Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem”.¹⁶⁶ This Project is reviewed next.

¹⁶² *Ibid.* at 29.

¹⁶³ *Ibid.*, pp. 38-39.

¹⁶⁴ *Ibid.*, pp. 43-44.

¹⁶⁵ *Report of the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, supra* note 130, Annex III at 23.

¹⁶⁶ *News*, online: RAC/SPA <<http://sapbio.rac-spa.org/>>, accessed September 20, 2012.

6.3.3.4 The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem

The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (or MedPartnership) is meant for the protection of the environmental resources of the Mediterranean. The project is led by UNEP and World Bank and co-funded by GEF with the participation of other international institutions such as FAO, UNESCO and WWF.¹⁶⁷ Approved by GEF in 2004,¹⁶⁸ the project aims at stimulating and further enhancing the implementation, at the Mediterranean level, of global instruments relating to marine environmental protection as well as regional and national action plans and programs. MedPartnership has two components: a regional component to implement agreed actions, led by UNEP/MAP and a financial component to establish an Investment Fund for the implementation of the project, led by the World Bank.¹⁶⁹ This following discussion focuses on the first component of the project.

The regional component of MedPartnership has four smaller aspects under which specific activities are to be implemented.¹⁷⁰ Among them, conservation of biological

¹⁶⁷ GEF, *Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem-Regional Component: Implementation of Agreed Actions for the Protection of the Environmental Resources of the Mediterranean Sea and Its Coastal Areas*, Project Document, online: MedPartnership <<http://www.themedpartnership.org/med/pfpublish/p/doc/097574c2ef8c0afd68d389f3153fdeab>>, accessed September 20, 2012 at 2.

¹⁶⁸ *Details of GEF Project No. 2600*, online: GEF <http://www.thegef.org/gef/project_detail?projID=2600>, accessed September 20, 2012.

¹⁶⁹ GEF, *supra* note 167 at 2 and *What is MedPartnership*, online: MedPartnership <<http://www.themedpartnership.org/med/pfpublish/p/doc/a1065725d8f8cebc4b8e54d29a9c8ceb>>, accessed September 20, 2012.

¹⁷⁰ These are integrated approaches to the implementation of the strategic action programs and national action programs integrated coastal zone management, integrated water resources management and management of coastal aquifer; pollution from land-based activities, including POPs: implementation of the Strategic Action Programme to Address Pollution from Land-Based Activities in the Mediterranean Region and related national action plans; conservation of biological diversity: implementation of SAP BIO and related national action plans; and project management, co-ordination, communication and replication strategies and monitoring and evaluation; see GEF, *supra* note 167 at 26. The Strategic Action Programme to Address Pollution from Land-Based Activities was adopted by the 10th Meeting of the Contracting Parties to the Barcelona Convention in 1997 to facilitate the implementation of the LBS Protocol. For more details, see *Report of the 10th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 121, Annex IV at 1 and Appendix II.

diversity is accompanied by activities relating to MPAs. This too is divided into two parts, one of which is conservation of coastal and marine diversity through the development of a Mediterranean network of MPAs. The activities for this include, *inter alia*, the establishment of a coordination mechanism for regional MPA management, identification and planning of new MPAs to extend the regional network and enhance its ecological comprehensiveness and improved management of MPAs.¹⁷¹ This aspect has been implemented by RAC/SPA and WWF-Mediterranean Programme Office¹⁷² from 2008 to 2012.¹⁷³

So far, achievements under the MedPartnership project include the development of a number of guidelines on MPAs establishment and management;¹⁷⁴ establishment of new management plans for a number of national MPAs and strengthening of the management of others; characterization of priority marine sites suitable to become protected areas in various locations; and the organization of training workshops for MPA managers.¹⁷⁵

6.3.3.5 The Regional Project for the Development of Marine and Coastal Protected Areas in the Mediterranean Region

Funded mostly by the EU, the Regional Project for the Development of Marine and Coastal Protected Areas in the Mediterranean (or MedMPA) was carried out by the RAC/SPA to implement a recommendation of the 11th Meeting of the Contracting Parties

¹⁷¹ *Ibid.* at 37.

¹⁷² MedPartnership, *2010 Annual Report* (Athens: UNEP/MAP, 2011) 23.

¹⁷³ GEF, *supra* note 167, Annex D at D-5.

¹⁷⁴ Such as the Guidelines for setting up and managing SPAs for marine turtles in the Mediterranean and Guidelines for the establishment and management of MPAs for cetaceans

¹⁷⁵ For details see MedPartnership, *supra* note 172 at 31; MedPartnership, *2011 Annual Report* (Athens: UNEP/MAP, 2010) 23 and “Conserving biodiversity through the MedPartnership” (2010) 59 *MedWaves: Focus on Biodiversity* 8.

to the Barcelona Convention.¹⁷⁶ The overall goal of the Project is to promote and improve the management of marine and coastal protected areas in Morocco, Algeria, Tunisia, Malta, Cyprus, Israel and Syria and hence, strengthen their capacity building for marine conservation, biodiversity and sustainable development. The total eligible cost of the operation was about 2 million Euros. It was implemented within four years from 2002 to 2005.¹⁷⁷

The activities planned under the Regional Project for the Development of Marine and Coastal Protected Areas in the Mediterranean included:

- Elaboration of management plans for six areas;¹⁷⁸
- Identification of sites of conservation interest with a view to elaborating national plans for the development of protected areas along the coasts of Cyprus and Syria;
- Organization of national training workshops relating to different aspects of MPA management in Morocco, Israel, Algeria, and Tunisia and a regional training seminar on MPAs management planning.¹⁷⁹

By 2005, all these activities were accomplished (some with certain delays).¹⁸⁰

According to its Final Report, the MedMPA project was assessed as a successful pilot

¹⁷⁶ At their 11th Meeting in 1999, the Contracting Parties to the Barcelona Convention invited the RAC/SPA to assist the Mediterranean countries in establishing new SPAs to protect sensitive, threatened or rare marine habitats and to improve the management of marine sites already protected in that area, see *Report of the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 123, Annex IV at 13.

¹⁷⁷ RAC/SPA, *Final Report of the Regional Project for the Development of Marine and Coastal Protected Areas in the Mediterranean Region* (2005), online: MedMPA <[http://medmpa.rac-spa.org/pdf/Rapports/Autres/MedMPA%20final%20Report%20\(26.05.05\).pdf](http://medmpa.rac-spa.org/pdf/Rapports/Autres/MedMPA%20final%20Report%20(26.05.05).pdf)>, accessed September 26, 2012 at 3.

¹⁷⁸ Namely the National Park of Al Hoceima, Morocco, the proposed Protected Area of Rdim Mjiessa-Ras ir-Raheb, Malta, the National Park of Zembra and Zembretta, Tunisia, the Nature Reserve of Rosh Hanikra, Israel, the proposed Protected Area of Oum Toyour, Syria, and the National Park of El Kala, *ibid.* at 2.

¹⁷⁹ *Ibid.* at 4.

demonstrative project. It helped the countries involved to identify conservation objectives for relevant areas, describe their natural, ecological, biological characteristics, assess socio-economic impacts and existing threats to their species and habitats and to monitor data. It also enabled other States in the Mediterranean to launch and promote conservation policies in the future through the management of MPAs.¹⁸¹

6.3.3.6 The Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean including the High Seas

At their 14th meeting in Portoroz, Slovenia in 2005, the Contracting Parties to the Barcelona Convention invited the RAC/SPA to elaborate a regional working programme for the coastal and MPAs in the Mediterranean including the High Sea to help Mediterranean countries develop before 2012 a representative network of MPAs.¹⁸² Such a programme was developed by the Centre and adopted by the 16th Meeting of the Contracting Parties in 2009.¹⁸³ It identifies four elements to aid in the development of a representative network of MPAs in the Mediterranean Sea and proposes activities to achieve them.¹⁸⁴

The elements identified by the regional programme of work and proposed activities to achieve them are as follows:

¹⁸⁰ *Ibid.* at 11. See also Achievements, online: MedMPA <<http://medmpa.rac-spa.org/en/Download.htm>>, accessed September 26, 2012.

¹⁸¹ *Ibid.* at 35.

¹⁸² *Report of the 14th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 73, Annex III at 22.

¹⁸³ “Decision IG.19/13 regarding a regional working programme for the coastal and marine protected areas in the Mediterranean including the High Sea”, *Report by the Secretariat for the 16th Meeting of the Contracting Parties*, 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, *supra* note 130, Annex II at 99.

¹⁸⁴ “Proposal regarding a regional working programme for the Coastal and Marine Protected Areas in the Mediterranean Sea”, *Report by the Secretariat for the 16th Meeting of the Contracting Parties*, *ibid.* note 183, Annex II at 100.

- *Assessment of the representativity and effectiveness of the existing Mediterranean network of marine and coastal protected areas*: Three activities were proposed to achieve this element, namely evaluation at national level of the status, representativity and effectiveness of the marine and coastal protected areas; compilation of these information into a regional synthesis; and organization of a regional experts meeting on the representativity of the Mediterranean network of MPAs.

- *Making the Mediterranean network of marine and coastal protected areas more comprehensive and representative of the ecological features of the region*: Under this element preliminary priority conservation areas would be identified, on the results of which would be based the creation of new protected areas and appropriate existing ones extended to strengthen the Mediterranean network of coastal and marine protected areas.

- *Improvement of the management of Mediterranean marine and coastal protected areas*: Activities for this element include evaluation of the management of each Mediterranean marine and coastal protected area, training of MPA managers and staff, elaboration of a regional strategy for early warning, mitigation of climate change and invasive species in Mediterranean MPAs, and establishment of a framework for exchange between MPA managers in the Mediterranean.

- *Strengthening the protected area governance system and further adapting them to national and regional contexts*: Activities to be implemented are the evaluation of existing protected area governance types in Mediterranean countries and identification of opportunities for Mediterranean marine and coastal protected

areas to contribute to social and economic development at local and national levels.

Currently, assessments are being undertaken with regards to the situation of MPAs in the Mediterranean.¹⁸⁵

6.3.3.7 Implementation of the Ecosystem Approach

At their 15th Meeting in 2008, the Contracting Parties to the Barcelona Convention decided to apply the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment to promote sustainable development. A process to gradually apply the ecosystem approach was also initiated, prescribing seven steps to be followed for the purpose.¹⁸⁶ The second step, titled “Setting of common Mediterranean strategic goals”, has a goal which could support the establishment of MPAs. That goal is to protect, allow recovery and, where practicable, restore the structure and function of marine and coastal ecosystems.¹⁸⁷

At the end of 2008, a project was adopted to be implemented by the UNEP/MAP with funding from EU to support the implementation of the ecosystem approach under the framework of the Barcelona Convention. The project is titled “Support to the Barcelona Convention for the Implementation of the Ecosystem Approach, Including the Establishment of MPAs in Open Seas Areas, Including the Deep Sea”.¹⁸⁸ One of its objectives is to promote and enhance the implementation of the Ecosystem Approach

¹⁸⁵ *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 131, Annex II, theme II.

¹⁸⁶ This is also called the Ecosystem Approach roadmap.

¹⁸⁷ “Decision IG 17/6”, *Report of the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 130, Annex V at 179.

¹⁸⁸ UNEP/MAP, *Support to the Barcelona Convention for the Implementation of the Ecosystem Approach, Including the Establishment of MPAs in Open Seas Areas, Including Deep Sea* (April 2012), Final Report, Contribution Agreement N°21.0401/2008/519114/SUB/D2 at 5.

roadmap in regard to the management of human activities in the Mediterranean. The Project was implemented from January 2003 to December 2011.¹⁸⁹

The Project contained two components supplemented by key actions. The first component was to further implement the ecosystem approach within the Barcelona Convention. Key actions to be implemented under this component include the identification of important ecosystem properties and assessment of ecological status and pressures, undertaking of a socio-economics analysis of ecosystem goods and services and development of a set of ecological and operational objectives with indicators and target levels. Under this component, an Integrated Assessment of the Mediterranean Ecosystem was prepared and a total of 11 Ecological Objectives and corresponding 28 Operational Objectives and 61 Indicators were determined.¹⁹⁰

The 17th Meeting of the Contracting Parties to the Barcelona Convention in 2012 endorsed the main findings and priorities of the Integrated Assessment of the Mediterranean Ecosystem, adopted the Ecological Objectives with Operational Objectives and Indicators and the timeline and projected outputs of the Ecosystem Approach roadmap implementation.¹⁹¹ According to the timeline of the Ecosystem Approach roadmap implementation, it will continue until 2019.¹⁹² Projected outputs relating to MPAs include updating SAP BIO as appropriate, adjusting management plans of SPAs and SPAMIs and establishing new SPAs.¹⁹³ The review cycle for the integrated

¹⁸⁹ *Ibid.* note 188 at 1.

¹⁹⁰ “Ecological Objectives associated with Operational Objectives and Indicators” in *Ibid.* note 188, Annex 1.

¹⁹¹ An expected outcome under the Project “Support to the Barcelona Convention for the Implementation of the Ecosystem Approach, Including the Establishment of MPAS in Open Seas Areas, Including Deep Sea” was achieved, see *Ibid.* note 188 at 15.

¹⁹² “Decision IG.20/4” in *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 131, Annex II at 39.

¹⁹³ *Ibid.*, Annex II at 61.

assessment of the Ecosystem Approach roadmap implementation is six years.¹⁹⁴ The Contracting Parties also established an Ecosystem Approach Coordination Group to oversee the implementation of the ecosystem approach.¹⁹⁵

6.3.3.8 Measures Supporting the Establishment of Marine Protected Areas beyond National Jurisdiction

Most Mediterranean countries have not yet declared EEZs.¹⁹⁶ This means most of its waters are still regarded as high seas or areas beyond national jurisdiction. Measures have been taken under the framework of the MAP process to support the establishment of MPAs in those areas.

The second objective of the “Support to the Barcelona Convention for the Implementation of the Ecosystem Approach, Including the Establishment of MPAs in Open Seas Areas, Including the Deep Sea” project, is to facilitate the establishment by the Contracting Parties of SPAMIs to protect habitats of conservation interest located in protected areas in open seas and deep sea habitats.¹⁹⁷ To achieve this objective, one component of the project aims to identify and prepare the nomination of SPAMIs by the Meeting of the Contracting Parties of the Barcelona Convention. Key actions to be implemented under this component include legal analysis of the status of each of the

¹⁹⁴ *Ibid.*, Annex II at 40.

¹⁹⁵ “Decision IG.20/4” in *ibid.*, Annex II at 41.

¹⁹⁶ Thus far, six Mediterranean countries have declared 200 nautical mile-EEZs: Morocco, Tunisia, Egypt, Cyprus, Lebanon and Syria; Spain and Algeria declared fishery protection zone; Croatia declared an ecological and fishery protection zone and France, an ecological protection zone; see *Mediterranean Sea: Maritime Zones and Maritime Delimitation*, online: Department of Ocean Affairs and the Law of the Sea <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/mediterranean_sea.htm>, accessed October 2nd 2012. See also Juan Luis Suárez de Vivero, *Jurisdictional Waters in the Mediterranean and Black Seas* (December 2009) Study requested by the European Parliament Committee on Fisheries, Map 7 at 35 and Claudiane Chevalier, *Governance in the Mediterranean Sea Legal Regime and Prospectives* (2004) IUCN Centre for Mediterranean Cooperation.

¹⁹⁷ UNEP-MED, *supra* note 188 at 5.

selected areas and data collection, elaboration, review and finalization of the SPAMIs' presentation reports.¹⁹⁸

Many achievements under this Project could help the designation of SPAMIs in areas beyond national jurisdiction in the Mediterranean. For instance, a set of operational criteria for identifying SPAMIs in the open seas, including the deep sea, were elaborated by the RAC/SPA based on the common criteria for selecting SPAMIs under the SPA and Biodiversity Protocol, criteria to identify marine areas of ecological or biological importance under the CBD and criteria to identify habitats of importance for Mediterranean fishing under the GFCM.¹⁹⁹ A list of 13 Marine Ecologically or Biologically Significant Areas was also established as priority conservation areas likely to contain sites that could be candidates for the SPAMI List.²⁰⁰ This list was intended to be agreed upon by the Contracting Parties to the Barcelona Convention and to be presented to the CBD for inclusion in the CBD depository.²⁰¹ Data collection, including field surveys, has also been implemented in a number of areas beyond national jurisdiction in the Mediterranean such as the Gulf of Lions and the Alboran Sea for the purpose of elaborating presentation reports. These reports could be used to support the national consultation process for the designation of these areas as SPAMIs by relevant

¹⁹⁸ *Ibid.* at 5.

¹⁹⁹ *Identification of Potential Sites in Open Seas Including the Deep Sea that May Satisfy SPAMI Criteria*, Extraordinary Meeting of the Focal Points for SPAs, Istanbul, Turkey, June 1, 2010, Doc. UNEP(DEPI)/MED WG.348/3 rev.1 (2010) 6 and Annex 1 at 18.

²⁰⁰ These are Alborán Seamounts, Southern Balearic, Gulf of Lions shelf and slope, Central Tyrrhenian, Northern Strait of Sicily (including Adventure and nearby banks), Southern Strait of Sicily, Northern and Central Adriatic, Santa Maria di Leuca, Northeastern Ionian, Thracian Sea, Northeastern Levantine Sea and Rhodes Gyre, Eratosthenes Seamount and Nile Delta Region, see "List of Priority Conservation Areas Lying in the Open Seas, including the Deep Sea, likely to Contain Sites that Could be Candidates for the SPAMI List", *ibid.*, Annex III at 18.

²⁰¹ For more details see UNEP-MED, *supra* note 188 at 6.

coastal countries (France and Spain for the Gulf of Lions and Morocco and Algeria for the Alboran Sea).²⁰²

At their 17th Meeting, the Contracting Parties requested the Secretariat to contact the CBD Secretariat and present the work carried out regarding the identification of Marine Ecologically or Biologically Significant areas in the Mediterranean.²⁰³

6.3.4 Development of Specially Protected Areas in the Mediterranean: General Situation and Summary

According to an assessment of the RAC/SPA in 2010,²⁰⁴ there are a total of 750 SPAs in the Mediterranean covering a surface of 144.000 km², of which two thirds are MPAs. Another inventory published in 2012 by RAC/SPA and the Network of Managers of Marine Protected Areas in the Mediterranean (MedPAN)²⁰⁵ identified 677 MPAs²⁰⁶ in the Mediterranean.²⁰⁷ Both reports emphasized the unequal distribution of MPAs in the MPAs with the large majority located in the western basin surrounded by Mediterranean European States (Spain, France, Greece, Italy, Malta, Monaco and Slovenia). Besides they are mainly designated in coastal areas.²⁰⁸ The surface covered by these MPAs represents about 4.6 percent of the Mediterranean.²⁰⁹ Though this number is still far from

²⁰² *Ibid.* at 21.

²⁰³ “Decision IG.20/7” in *Report of the 17th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 131, Annex II at 75.

²⁰⁴ RAC/SPA, *Specially Protected Areas in the Mediterranean: Assessment and Perspective* (Tunis: RAC/SPA, 2010).

²⁰⁵ *Infra* note 247.

²⁰⁶ It seems that the term “MPA” used in this report includes also SPAs.

²⁰⁷ Catherine Gabrié *et al.*, *The Status of the Marine Protected Areas in the Mediterranean Sea* (Marseille: MedPan Collection, 2012) 30. None of these MPAs seem to be located in disputed areas such as in the Aegean Sea and it is not possible to know whether Turkey raised any protest when the Republic of Cyprus designated its MPA (The Lara Toxeftra nature reserve, designated in 1989).

²⁰⁸ *Ibid.* note 207 at 30 and RAC/SPA, *supra* note 204 at 18.

²⁰⁹ Gabrié *et al.*, *supra* note 207 at 30.

the 10 percent objective set under the CBD,²¹⁰ it is much more advanced than what has been done in the SCS.²¹¹

Up to July 2013, a total of 32 SPAs located in 8 countries (Algeria, France, Italy, Lebanon, Morocco, Spain, Tunisia and Monaco) have been included on the SPAMI List. Italy has the highest number of SPAMIs so far with 9 SPAs registered.²¹²

The representativity of existing MPAs in the Mediterranean still needs to be improved. According to the 2012 report of the RAC/SPA and MedPAN, less than three percent of six out of seven ecoregions that make up the Mediterranean is covered by MPAs, leaving out many important habitats and species.²¹³ Another study carried out by the SPA/RAC in 2009²¹⁴ concluded that while 80 percent of the species listed by the SPA and Biodiversity Protocol as endangered or threatened species²¹⁵ were recorded in those MPAs, only about 10 percent of the types of Mediterranean habitats referenced under the Contracting Parties to the Barcelona Convention were recorded in those MPAs.²¹⁶ David Mouillot *et al.* also stated a study in 2011 that the current system of MPAs in the Mediterranean is spatially congruent with the hot spots of total species richness, of endemic species in the Mediterranean and of species on the IUCN Red List. However, it misses completely hot spots of functional (or traits) diversity and partly

²¹⁰ See above 3.1.2.2 Relevant Decisions adopted by the COP of the CBD.

²¹¹ See above 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea.

²¹² SPAMIs, online: RAC/SPA <<http://rac-spa.org/spami>>, accessed July 11, 2013.

²¹³ Gabrié *et al.*, *supra* note 207 at 30.

²¹⁴ *Regional Synthesis on the Representativity of Mediterranean Marine Protected Areas*, 9th Meeting of Focal Points for SPAs, Floriana, Malta, June 3-6, 2009, Doc. UNEP(DEPI)/MED WG.331/Inf.4 (2009).

²¹⁵ SPA and Biodiversity Protocol, *supra* note 76, Annex 2.

²¹⁶ *Regional Synthesis on the Representativity of Mediterranean Marine Protected Areas*, *supra* note 214 at 5 and 13.

those of phylogenetic (or lineage)²¹⁷ diversity.²¹⁸ Besides, many MPAs in the Mediterranean still do not have a management plan.²¹⁹

So far, only one SPA has been established in an area beyond national jurisdiction in the Mediterranean, the Pelagos Sanctuary. The sanctuary was established by the Agreement on the Creation in the Mediterranean Sea of a Sanctuary for Marine Mammals concluded between France, Italy and Monaco in 1999.²²⁰ It covers an area of over 96,000 km², inhabited by a number of whale species regularly found in the Mediterranean.²²¹ From a jurisdictional perspective, this area includes internal waters, territorial seas, ecological zones of the three countries and partly the high seas.²²² At their 12th Meeting in 2001, the Contracting Parties to the Barcelona Convention approved the inclusion of the Pelagos Sanctuary on the SPAMI List.²²³

To summarize, the process of developing regional cooperation relating to MPAs and a network of MPAs under the MAP has resulted in many important accomplishments. From a regime theory perspective, it could be said that a strong and robust regional regime has been developed and operationalized under the MAP. This

²¹⁷ Phylogenesis is the evolutionary development and diversification of a species or group of organisms, or of a particular feature of organism, see *Phylogenesis*, online: Oxford Dictionary <http://oxforddictionaries.com/definition/english/phylogenesis?q=phylogenetic#phylogenesis__2>, accessed September 30, 2012.

²¹⁸ For details see David Mouillot *et al.*, “Protected and Threatened Components of Fish Biodiversity in the Mediterranean Sea” (June 21, 2011) 21 *Current Biology* 1044.

²¹⁹ *A New Practical Tool to Evaluate Marine Protected Areas Management in the Mediterranean* (July 3, 2013) online: IUCN <http://www.iucn.org/about/work/programmes/marine/marine_news/?13285/A-new-practical-tool-to-evaluate-Marine-Protected-Areas-management-in-the-Mediterranean>, accessed July 8, 2013.

²²⁰ See *Agreement on the Creation of a Mediterranean Sanctuary for Marine Mammals*, 25 November 1999, online: Tethys Research Institute <<http://www.tethys.org/sanctuary.htm>>, accessed September 30, 2012.

²²¹ Tullio Scovazzi, “New International Instruments for Marine Protected Areas in the Mediterranean Sea” in Anastasia Strati, Maria Gavouneli and Nikolaos Skourtos (eds), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (Leiden: Martinus Nijhoff Publishers, 2006) 109 at 115.

²²² *Ibid.* at 116.

²²³ *Report of 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, *supra* note 129, Annex IV at 15.

process could provide valuable lessons to SCS countries and for the use of current regional mechanisms dealing with the protection of the marine environment and living resources in the SCS to enhance their cooperative efforts towards creating a regional network of MPAs. The last next and section of this Chapter analyzes the specific concrete lessons that the SCS could learn from the process of developing cooperation relating to MPAs and a network of MPAs under the MAP.

6.3 Lessons for the South China Sea in Developing Regional Cooperation with Regards to Marine Protected Areas

The lessons that the SCS could draw from the development of regional cooperation relating to MPAs and a network of MPAs from the MAP, are analyzed via a functionalist approach to international law.²²⁴ The idea is that there are certain best practices in regional cooperation for establishing MPAs and a network of MPAs notwithstanding the dominant approach which is used: hard-law or soft-law based. As well, to the extent that formal and robust regimes for the protection of the marine environment and resources make sense in the Mediterranean, so can the functions they perform be carried out through different, perhaps less formal structures and processes in the SCS. In light of this, the relevant concrete lessons to be learned include the following:

Providing Rationales for a Regional Instrument for Marine Protected Areas: In a report prepared by the Legal Office of FAO in response to the request of the 1st Meeting of the Contracting Parties to the Barcelona Convention in 1980, a number of rationales for the development of a Protocol concerning Mediterranean protected areas

²²⁴ For details about this approach, see Douglas Johnston, "Functionalism in the Theory of International Law" (1988) 26 Canadian Yearbook of International Law 3 at 24 and Douglas M. Johnston, *Consent and Commitment in the World Community: the Classification and Analysis of International Instruments* (Irvington-on-Hudson, N.Y.: Transnational Publishers, 1997) 57 and 106.

were explained.²²⁵ Most of these rationales could be used to justify the adoption of a regional instrument for MPAs in the SCS, more so as the report also pointed out that with regards to the form of the instrument, a Protocol is not the only option.²²⁶ Among others, an instrument would help to implement relevant obligations under international law, and persuade States to enact co-ordinated national legal obligations and provide a framework for the exchange of scientific information and also foster joint scientific research and monitoring among the SCS States.²²⁷

Adopting an Instrument Including Protected Areas (rather than an Instrument about Protected Areas): The Mediterranean SPA Protocol of 1982 and its SPA and Biodiversity Protocol of 1995 also offer examples of two approaches for a regional framework relating to MPAs. The content of the SPA Protocol of 1982 is specifically about protected areas while the SPA and Biodiversity Protocol of 1995 cover protected areas and the protection of species in addition to the general obligation relating to the conservation and sustainable use of biodiversity. This change reflects the adaptation of the instrument to the evolution of international law at the time, particularly the adoption of the CBD in 1992. A survey of equivalent instruments adopted in the framework of other regional seas programmes show that almost all of them cover a broader topic than just protected areas.²²⁸ Consequently, it would be more up-to-date if the SCS region

²²⁵ For details, see *Guidelines Proposed for a Protocol concerning Mediterranean Marine and Coastal Protected Areas*, Intergovernmental Meeting on Mediterranean Specially Protected Areas, Athens, Greece, October 13-17, 1980, Doc. UNEP/IG. 20/4 (1980).

²²⁶ *Ibid.* at 1.

²²⁷ *Ibid.*, pp.1-4.

²²⁸ The only exception is the Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South East Pacific, see *Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South East Pacific*, 21 September 1989, online: Permanent Commission for the South Pacific <<http://www.cpps-int.org/index.php/cpps-overview/legal.html>>, accessed October 30, 2012 [in Spanish]. An English version of the Protocol can be found online: Ecolex <<http://www.ecolex.org/server2.php/libcat/docs/TRE/Multilateral/En/TRE001085.txt>>, accessed October 30, 2012.

develops a regional instrument covering a broader scope relating to biodiversity with stipulations about protected areas than an instrument specifically about protected area.

Providing Examples of the Content of a Regional Framework Instrument relating to MPAs: The SPA Protocol of 1982 and SPA and Biodiversity Protocol of 1995 provide examples for the content of a regional framework instrument for cooperation relating to the establishment of MPAs and a network of MPAs. Their main provisions include the definition of an MPA, protection measures adopted within the area and requirements relating to its establishment and management. They thus constitute sources for elements to be included in a potential regional instrument for the establishment of MPAs and a network of MPAs that may be adopted by SCS countries.

Showing the Importance of an Operational Regional Unit for Action in the Development of MPAs: The task of developing and implementing of regional policies under the Mediterranean Action Plan process is undertaken by the Regional Activity Centres, of which the RAC/SPA is in charge of measures relating to MPAs. This model seems to be quite effective, at least in the area of development of MPAs as most relevant regional programs of actions, plans of actions and projects have been developed and implemented by the RAC/SPA. Relating to the SCS, an operational regional unit relevant to biodiversity in general and MPAs in particular exists under the framework of ASEAN, namely the ASEAN Centre of Biodiversity.²²⁹ A new SCS-wide regional centre could be established for activities relating to the development of MPAs or an arrangement could be made so that the ASEAN Centre could take up such a responsibility.

Showing the Importance of Soft-Law Instruments for the Development of Networks of MPAs: Even though Mediterranean countries have adopted overall a hard-

²²⁹ See above 4.2.1.1 Regime of ASEAN Heritage Parks.

law approach for their regional cooperation in the protection of the marine environment, many regional action plans, programs of actions and projects have also been adopted. Regarding the establishment of MPAs and networks of MPAs, soft-law instruments have played an important role as operational tools. While the SPA Protocol and the SPA and Biodiversity Protocol only stipulate general requirements for Mediterranean States with regards to the establishment of SPAs and SPAMIs,²³⁰ more specific commitments²³¹ are provided in relevant Declarations and Actions Plans under MAP. Regional programs of action and projects have also been used to support national efforts in establishing MPAs.

The use of soft-law instruments, with the adoption of many regional Declarations, Plans of Action and Projects in establishing MPAs and networks of MPAs could be a suitable strategy for the SCS region which has considerable experience in using soft-law texts for regional cooperation.

Providing Cumulative Protection for Areas of General and Regional Importance: Under the SPA and Biodiversity Protocol, Mediterranean countries should establish two categories of MPAs, namely SPAs and SPAMIs. The “Specially Protected Areas” are actually a general category of protected areas that the Mediterranean countries should establish to protect any site with a certain biological and ecological value. The “SPAMIs” are the regional category of protected areas that should be established to protect areas that have special value for the Mediterranean. This cumulative approach ensures that the use of protected areas for protection would cover as

²³⁰ For instance, the SPA Protocol of 1982 asked the Parties to “[...] to extent possible, establish protected areas and shall endeavour to undertake the action necessary in order to protect those areas and, as appropriate, restore them, as rapidly as possible”. The SPA and biodiversity Protocol of 1995 is even more general, requiring States only to consider using SPA to protect areas of important ecological or cultural value; see SPA Protocol, *supra* note 64, art. 3(1) and SPA and Biodiversity Protocol, *supra* note 76, art. 3(1)(a).

²³¹ Such as the establishment of a specific number of protected areas, the 10 percent-target of networks of MPAs and the establishment of MPAs to protect a specific species.

many important areas and sites as possible while at the same time put emphasis on those areas and sites which are of special importance for the region. Thus, SCS States could create a category of protected areas of SCS importance to protect special features or places of the SCS. These “protected areas of SCS importance” could be designated from existing MPAs to provide an additional layer of protection for the marine region.

Providing an Example of a Review Procedure for Established MPAs: The Meetings of the Contracting Parties to the Barcelona Convention have two review procedures that check the status of listed SPAMIs by independent experts, namely the periodic review and extraordinary review.²³² These review procedures would allow Contracting Parties to detect threats to the SPAMIs or changes in their status. Any future initiative to establish a list of important MPAs for the SCS region could also be accompanied by review procedures to ensure responsible management of MPAs already listed and avoid the problem of the areas being reduced to “paper parks”.²³³

Providing the Example of a “Stick and the Carrot” Policy to Ensure Effective Management of MPAs: Under MAP, both reward and penalization exist to ensure effective management of MPAs. The reward is to confer the Mediterranean Diploma on a SPAMI distinguished by the implementation of specific and concrete activities in the field of management and conservation of the Mediterranean natural heritage.²³⁴ Penalization is the risk of seeing the area removed from the SPAMI List if there is a change in its legal, management and ecological status.²³⁵

²³² See above 6.3.1.2 Stipulations Adopted by the Contracting Parties to the Barcelona Convention.

²³³ Term designates those protected areas which exist in maps and legislation but offer little real protection on the ground, see for example “Paper Parks: Why They Happen, and What Can Be Done to Change Them” (June 2001) 2:11 MPA News 1.

²³⁴ See above 6.3.3.2 The Mediterranean Diploma for Specially Protected Areas of Mediterranean Importance

²³⁵ See above 6.3.1.2 Stipulations Adopted by the Contracting Parties to the Barcelona Convention.

Among the mechanisms in the SCS discussed in Chapter III, only ASEAN has a List of ASEAN Heritage Parks but the Association does not have any procedure to reward a Park that displays effective management nor one to remove a Park from the List for poor management.²³⁶ Such procedures could be used to promote effective management of an established MPA.

Establishing Permanent and Coordinated Assessment and Monitoring Mechanisms: A substantial part of the works implemented under MAP is scientific research, assessment and monitoring of the status of the marine environment of the Mediterranean and implementation of programs such as the MED POL and Priority Actions Programme. This is not to deny that most of the works completed so far concern the status of pollution of the Mediterranean. Under relevant SCS mechanisms, there is no permanent research program and assessment and monitoring are implemented through fragmented projects. As assessment and monitoring are indispensable tasks in the development of networks of MPAs,²³⁷ having coordinated and continuous regional assessment and monitoring programs like in the Mediterranean would certainly provide SCS countries with more available and updated information to help them make necessary decisions in this area.

Establishing a Regional Compliance Mechanism: A Compliance Mechanism was also set up under the framework of the Coordinating Unit for MAP to support compliance with obligations under the Barcelona Convention and its Protocol.²³⁸ In the SCS region, there is no compliance mechanism under any of the regional arrangements discussed. This could be explained by the fact that there is non-legally binding

²³⁶ See above 4.2.1.1 Regime of ASEAN Heritage Parks.

²³⁷ See above 2.2.2 Steps for the Development of a Network of Marine Protected Areas.

²³⁸ See above 6.2.1.3 Institutional and Financial Arrangements for the Implementation of the MAPs.

instruments relating to the protection of the marine environment and resources in the SCS and that SCS States are influenced by the “ASEAN way” or tradition, so they do not wish to compel compliance.²³⁹ However, it does not change the point that having such a mechanism would help promote better compliance by coastal States with commonly accepted regional commitments, including those relating to the development of regional networks of MPAs. Besides, the compliance procedures of the Coordinating Unit of MAP are non-confrontational and aim, essentially, to help the concerned Party to comply with the relevant obligations. Adopting similar procedures in the SCS would suit the “ASEAN way” tradition, and encourage non-compliant States to take action without “losing face”.

Establishing MPAs in Disputed Areas and Areas beyond National Jurisdiction:

Though not enough data have been found relating to the establishment of MPAs in disputed areas in the Mediterranean,²⁴⁰ existing information offer some sense of how the presence of undelimited areas and areas beyond national jurisdiction have been dealt with in the process of establishing MPAs and a network of MPAs under MAP. Many stipulations under the SPA and SPA and Biodiversity Protocols and measures adopted by the Meetings of the Contracting Parties to the Barcelona Convention facilitate the establishment of MPAs in disputed areas and in areas beyond national jurisdiction. For instance, both the SPA and SPA and Biodiversity Protocols contain “without prejudice” clauses to safeguard States’ rights and claims relating to the law of the sea. They both require cooperation for transboundary management in a case where an SPA is established in a frontier area and as to the agreement of States concerned for the

²³⁹ See above 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea.

²⁴⁰ *Supra* note 208.

inclusion in the SPAMI List of an area located in a disputed area or on the high sea. At the regional level, operational criteria for identifying SPAMIs in open sea areas were elaborated, and a list of marine ecologically or biologically significant areas have been identified. As well, data collection, including field surveys in a number of areas beyond national jurisdiction, has been done to support the designation of those areas as SPAMIs by relevant countries.

Though it is not certain that there would be an agreed high seas area in the SCS due to the extent of the Chinese claim,²⁴¹ these stipulations and measures could apply to cooperative initiatives involving some less sensitive disputed areas, such as the mouth of the Gulf of Tonkin²⁴² and the Gulf of Thailand.²⁴³ In fact, the “without prejudice” clause has already appeared in the SAP of the SCS.²⁴⁴ Besides, its method of enforcement in the Pelagos Sanctuary Agreement could be a model for the establishment and management of transboundary MPAs in the SCS.²⁴⁵

Using a Gradual Approach in Dealing with the Territorial Scope of Regional Cooperation in Offshore Areas: The SPA Protocol of 1982 limited its application to the territorial waters of the Parties. It is unknown whether this limitation was adopted due to territorial concerns but it would have been a cautious move to facilitate the beginning of cooperation in a region where most of the waters beyond the territorial sea have

²⁴¹ See above 5.1 China and the SCS.

²⁴² See below 7.1.2.2 “Agreed” Disputed Areas.

²⁴³ *Ibid.*

²⁴⁴ See above 4.5 The GEF/UNEP Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”.

²⁴⁵ The Agreement states that in the part of the Sanctuary located in waters under national jurisdiction, each relevant State is responsible for its enforcement while in the part of the Sanctuary located in the high seas, the relevant State is responsible for its enforcement with respect to ships flying its flag and those flying the flags of third parties, see *Agreement on the Creation of a Mediterranean Sanctuary for Marine Mammals*, 25 November 1999, online: Tethys Research Institute <<http://www.tethys.org/sanctuary.htm>>, accessed September 30th 2012, art. 4 [unofficial version].

remained undelimited which the Mediterranean is. Later, during the drafting process of the SPA and Biodiversity Protocol, though territorial concerns were still present, in particular from Greece and Turkey, no one seems to have opposed the extension of the scope of application of the new Protocol to more offshore areas for more effective protection of species.²⁴⁶

Gradual cooperation could also be applied to the process of developing a regional network of MPAs in the SCS. Regional States could start to cooperate in more near-shore waters and then depending on the political and cooperative context, move into more offshore areas. This is also totally in line with the “ASEAN way” tradition according to which States would focus efforts in easy, non-sensitive areas first and gradually approach more difficult ones.

Having Support from a Social Network of MPA Managers: The establishment of MPAs and a network of MPAs in the Mediterranean could also benefit from the support of MedPAN. This is an association established under French Law grouping entities managing or interested in MPAs in the Mediterranean, including the SPA/RAC.²⁴⁷ Though it lacks decision-making power, the Network plays an important role in supporting the establishment of MPAs and a network of MPAs in the

²⁴⁶ Those two countries seem to be more concerned with the “without prejudice” clause of the new Protocol than the extension of its application to more offshore areas, see *Report of the Meeting of Legal and Technical Experts to Examine Amendments to the Barcelona Convention and its Related Protocols and the Mediterranean Action Plan (MAP)*, Barcelona, November 14-18 1994, Doc. UNEP(OCA)/MED WG. 82/4 (1994) 9 and *Report of the Meeting of Legal and Technical Experts to Examine Amendments to the Barcelona Convention, the Dumping Protocol and the Specially Protected Areas Protocol*, Barcelona, February 7-11, 1995, Doc. UNEP(OCA)MED WG.91/7 (1995) 6.

²⁴⁷ *Charter for the MEDPAN Association*, online: MEDPAN <<http://www.medpan.org/?arbo=reseau>>, accessed October 31, 2012, art. 5 and *MedPAN Members and Partners*, online: MEDPAN <<http://www.medpan.org/?arbo=partenaires>>, accessed October 31, 2012.

Mediterranean by promoting networking and exchanges between actors interested in MPAs in the region.²⁴⁸

Efforts to build a social network relevant to MPAs in the SCS has been implemented in various projects under COBSEA, PEMSEA and in the SCS Project.²⁴⁹ The MedPAN in the Mediterranean can serve as model for the SCS to build a permanent regional social network relating to MPAs, which could play an effective role to generate and sustain support for measures adopted under regional governmental bodies relevant to the development of a network of MPAs.

²⁴⁸ *Activities*, online: MedPAN <<http://www.medpan.org/?arbo=activites>>, accessed October 22, 2012 and Charter for the MEDPAN Association, *ibid.*, art. 5.

²⁴⁹ See above 4.1.1 The Coordinating Body for the Seas of East Asia; Demonstration and Scaling-Up of ICM and 4.5.1.2 Establishment of a Network of Demonstration Sites.

Conclusion

The discussion of the developments relating to MPAs and a network of MPAs under the MAP and the lessons identified as useful and applicable to the development of regional cooperation in the SCS can be reiterated as follows: the need for support of a social network of MPA managers; using a gradual approach to deal with the territorial implications of regional cooperation in offshore areas; establishing MPAs in disputed areas and in areas beyond national jurisdiction; establishing a non-confrontational regional compliance mechanism; establishing a mechanism for permanent and coordinated assessment and monitoring; and offering a “stick and carrot” policy to push for effective management of MPAs. Also relevant to the SCS from the performance of MAP is the need to establish motivating review procedures for established MPAs; to assure cumulative protection of areas of general and regional importance. The instrumentality of soft-law instruments in the development of networks of MPAs and the need for an operational regional unit to coordinate action in this regard are also good lessons for the SCS.

Overall, it can be said, in light of the analysis, that the lessons offered by the Mediterranean experience and precedent highlight the possibility for successful cooperative initiatives toward the establishment of a network of MPAs in the SCS. That the Mediterranean has been able to achieve so much despite its complicated disputes is positive encouragement that is possible in the SCS. The next Chapter of this dissertation discusses some perspectives on how the SCS can move forward with this endeavour.

Chapter VII. Options to Move Forward for a Network of Marine Protected Areas in the South China Sea

The aim of this Chapter of the dissertation is to suggest measures to implement in an effort to engage in the development of a network of MPAs in the SCS. One way to go is to establish a regional regime on MPAs at the SCS-level. This regime-building approach is supported by the regime theory which claims that an international regime facilitates cooperation between States.¹ The successful experience from the Mediterranean discussed in the last Chapter demonstrates this. Due to the context of the SCS discussed in previous Chapters, in particular, regional challenges in developing a network of MPAs, the current state of cooperation relating to MPAs, the development and operationalization of a regional regime for MPAs in the SCS could take a lot of time.

In fact, a “sketch” of a regional regime for the protection of the marine environment of the SCS was drafted in the SAP for the SCS under the component of “Regional Cooperation” which proposed the establishment of a framework for cooperation in the management of the region’s marine environment.² To achieve this goal, the “Zero Order Draft of the Main Text of the South China Sea Project to Implement the Strategic Action Programme” scheduled the drafting and adoption of a regional framework agreement.³ If this agreement is adopted, it would be the first important step toward the establishment of a regional regime for the protection of the marine environment in the SCS. As can be seen in other regional seas, particularly the Mediterranean, a regional regime for the protection of the marine environment in general could serve as the framework for the development of a regional regime on MPAs.

¹ See above 1.2.1.4 International Regime.

² See above 4.5 The GEF/UNEP Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”.

³ *Ibid.*

In addition to building a regional regime on MPAs, there are other options which could help develop a network of MPAs in a regional sea. For instance, José Guerreiro *et al.* suggested five diplomatic and management options for transboundary (or sub-regional) marine conservation involving the development of a network of MPAs in East Africa based on the study of existing models of transboundary conservation.⁴ These options are: independent establishment and management MPAs guided by common objectives; independent establishment and management of MPAs within a regime of management cooperation founded information exchange; coordinated establishment and management of MPAs; joint establishment of transboundary MPAs; and trilateral sub-regional diplomatic and management agreement. They can be considered either as alternative courses of action or as a stepped approach to reaching the highest degree of transboundary marine conservation at the sub-regional level.⁵ David VanderZwaag has also argued for a “fragmented incrementalism” approach to develop actions at the regional level in analyzing the nature of the protection of the marine environment in the Gulf of Maine and the Arctic.⁶ According to this approach, actions could be developed from fragmented and most of the time, informal initiatives under different frameworks, the sum of which could lead to the improvement of the common environment.

⁴ José Guerreiro *et al.*, “Establishing a Transboundary Network of Marine Protected Areas: Diplomatic and Management Options for the East African Context” 2010 Marine Policy 1 at 8.

⁵ *Ibid.* at 10.

⁶ See David VanderZwaag, “Transboundary Challenges and Cooperation in the Gulf of Maine Region: Riding a Restless Sea toward Misty Shores” in Harry N. Sheiber (ed.), *Law of the Sea: The Common Heritage and Emerging Challenges Link* (The Hague: Kluwer Law International, 2000) C11 and David VanderZwaag, “Land-Based Marine Pollution and the Arctic: Polarities between Principles and Practice” in Davor Vidas, *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention* (Cambridge: Cambridge University Press, 2000) 175 at 197. See also Charles Norchi, “Introduction: Twenty-Five Years of the Gulf of Maine Judgement” (2010) 15:2 Ocean and Coastal Law Journal 117 at 181 and Kristin Molstad, *The Arctic Shipping Regime: Regulating Vessel-Source Pollution in Arctic Waters* (Norwegian University of Life Sciences: Master Thesis, 2012) 133.

Inspired by these various approaches, this Chapter suggests a roadmap for the development of a regional network of MPAs in the SCS. This roadmap contains a set of optional actions available for working toward the development of a network of MPAs in the SCS. They can be ranged into three broad categories: focusing on national actions, enhancement of regional cooperation and building a regional regime for MPAs. The first two categories of options are of an *ad hoc* nature and do not require a higher level of commitments from SCS States than the current one. The last one implies a high degree of regional integration and the possibility of developing inter-related measures under a single regional cooperative framework. These actions could be carried out alternatively or step-by-step, depending on the evolution of the political situation in the SCS. The three categories of options are subsequently discussed.

7.1 Focusing on National Actions

This first category of actions focuses on national efforts to establish MPAs and networks of MPAs in the SCS. For this to materialize, SCS States should establish MPAs at the national level taking into account regional conservation targets. They should also consider establishing transboundary MPAs in frontier areas or areas where there are overlapping claims. As well, existing regional mechanisms must promote and support coastal States to implement regional conservation targets which must be regularly updated to better guide national actions. These actions are now discussed in detail.

7.1.1 Establishing National Marine Protected Areas in Consideration of Regional Conservation Targets

This is also the first option identified by Guerreiro *et al.* in their suggestion for the development of a regional network of MPAs in the East African region.⁷ Accordingly, coastal States can independently establish MPAs in their claimed maritime areas, guided by common ecosystem objectives. The advantage in taking this option in the SCS is that all three States discussed, China, Philippines and Vietnam, have national legislation providing for the establishment and management of MPAs. Furthermore, common conservation targets for the SCS have also been agreed upon, in particular in the SAP for the SCS.⁸

As the legal regimes of MPAs in these States are relatively similar, one can expect that their current and future MPAs in the SCS would have harmonized protection rules and thus complement each other. This might lead to a *de facto* regional network of MPAs that, while not having any formal or institutional coordination, could still be linked to each other by the fact that they contribute to the achievement of common ecosystem objectives. In addition to the establishment of more MPAs, coastal countries should also develop other conservation measures that could further improve the protection of those areas. Other conservation measures might include integrated coastal management, marine spatial planning, fishery management, prevention of both marine pollution and introduction of alien species into the SCS.

To protect ecosystems that straddle national jurisdictions, generally, transboundary MPAs could be established. However in the SCS, the possibility of establishing transboundary MPAs is hindered by the fact that there are unresolved

⁷ Guerreiro *et al.*, *supra* note 4 at 9.

⁸ See above 4.5.1.3 Determination of Targets for the Management and Conservation of Habitats.

boundary disputes. The concern is further complicated by the fact that there are some areas under overlapping claims but the disputed status is contested by at least one claimant. It is suggested that this challenge can be dealt with by the next optional action, which is to establish, manage and enforce MPAs in border areas, in disputed areas and in areas with overlapping claims but the disputed status is contested by at least one claimant.

7.1.2 Establishing Transboundary Marine Protected Areas

As stated earlier, cooperation between relevant coastal States in the SCS for the establishment MPAs is needed in three areas: border areas where a boundary has been agreed upon,⁹ “agreed” disputed areas and areas under overlapping claims but the disputed status is contested by at least one claimant. For each type of area, a suitable arrangement should be developed.¹⁰ The arrangement for each type of area is subsequently discussed.

⁹ For a definition of frontier areas, see above 2.2.4.1 Transboundary Protected Areas between States.

¹⁰ The suggestions in this section also appear in Hai Dang Vu, “A Bilateral Network of MPAs between Vietnam and China: An Alternative to the Chinese Unilateral Fishing Ban in the North-Western Part of the South China Sea?” (2013) 44:2 Ocean Development and International Law 145.

7.1.2.1 Border Areas with an Agreed Boundary

A number of maritime boundaries have been agreed upon between SCS States.¹¹ For the protection of ecosystems located in those areas and straddling the boundary, the relevant States should establish transboundary MPAs. These could comprise two or more MPAs on each side of the boundary or an MPA on one side and other conservation measures on the others.¹² Cooperative measures such as exchange of information, coordinated planning and harmonization of protection measures could be agreed upon and carried out in those areas. Enforcement could be taken on the by relevant authorities in each State within the portion of the transboundary MPA under their respective sovereignty or jurisdiction.

7.1.2.2 “Agreed” Disputed Areas

An “Agreed” disputed area in this dissertation refers to those areas in regard to which all the States that have a claim agree that a dispute exists (according to the idiom “we agree to disagree”) but agree also to cooperate to protect the area. Areas in the SCS which fall into this category include the mouth of the Gulf of Tonkin (disputed by

¹¹ Such as the maritime boundary between Vietnam and China in the Gulf of Tonkin, see *Agreement between the Socialist Republic of Vietnam and the People’s Republic of China relating to the Delimitation of the Territorial Sea, Exclusive Economic Zone and Continental Shelf in the Tonkin Gulf*, 15 December 2000, online: National Boundary Committee-Ministry of Foreign Affairs of Vietnam <<http://biengioilanhtho.gov.vn/vie/hiepdinhhoptacongheca-nd-e6a9f6ac.aspx>>, accessed November 17, 2012; the boundary of the territorial seas between Malaysia and Thailand in the Gulf of Thailand, see *Treaty between Kingdom of Thailand and Malaysia relating to the Delimitation of the Territorial Seas of the Two Countries*, 24 October 1979, online: The United Nations Department of Ocean Affairs of the Law of the Sea <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/MYS.htm>>, accessed November 17, 2012; and the boundary of the territorial sea between Malaysia and Indonesia in the Strait of Malacca, see *Treaty between the Republic of Indonesia and Malaysia Relating to the delimitation of the Territorial Seas of the Two Countries in the Strait of Malacca*, 17 March 1970, online: The United Nations Department of Ocean Affairs of the Law of the Sea <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/IDN.htm>>, accessed November 17, 2012.

¹² See above 2.2.4.1 Transboundary Protected Areas between States.

Vietnam and China),¹³ the Spratlys islands¹⁴ and the historic waters between Vietnam and Cambodia in the Gulf of Thailand.¹⁵ For the protection of ecosystems located in those areas, all States that have claims in any of these areas could consider establishing joint transboundary MPAs there. For their management, they could agree on the conservation measures to adopt and implement. The enforcement of these measures could be ensured by relevant authorities of the various claimant States. If necessary, MPAs and other conservation measures could also be established in non-disputed areas under the national sovereignty or jurisdiction of claiming States that are adjacent to the transboundary MPA to facilitate and ensure coordinated management.

7.1.2.3 Areas under Overlapping Claims but the Disputed Status is Contested by at Least One Claimant

There are, in the SCS, areas under overlapping claims but the disputed status is contested by at least one claimant. As already pointed out, they include the Parcel Islands claimed by China and Vietnam,¹⁶ Sabah or North Borneo, under Malaysia's

¹³ Currently this area is under negotiations between the two countries for delimitation and joint development, see Xuan Linh, "Vietnam-China will jointly survey the South China Sea" (January 7, 2009), online: *Dân Trí* <<http://dantri.com.vn/c36/s20-301933/viet-trung-se-cung-khao-sat-cua-vinh-bac-bo.htm>> accessed September 18, 2011 [in Vietnamese].

¹⁴ See above 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea. However, it should be noted that the limit of the Spratlys islands is also subject to disagreement between relevant claimants.

¹⁵ There is an undelimited marine area between Vietnam and Cambodia in the Gulf of Thailand. The two countries agreed to jointly administrate this area until a delimitation agreement could be reached; for more details, see *Agreement on Historic Waters between the Socialist Republic of Vietnam and the People's Republic of Cambodia*, 7 July 1972, online: Committee on National Boundary, Ministry of Foreign Affairs of Vietnam <<http://biengioilanhtho.gov.vn/vie/biengioibien-nc-a84f2f41.aspx>>, accessed April 12, 2013.

¹⁶ The disputed status of the Paracels is contested by China, which considers that "there is nothing to negotiate" with regards to the islands, see Greg Torrode and Minnie Chan, "China stands firm on Paracels in negotiations with Vietnam," *South China Morning Post* (December 12 2010). For details about the Paracels dispute between China and Vietnam, see Stein Tønnesson, "The Paracels: The 'Other' South China Sea Dispute," (2002) *Asian Perspectives*: 145; and Monique Chemillier-Gendreau, *Sovereignty over the Paracels and Spratly Islands* (The Hague: Kluwer Law International, 2000).

jurisdiction but also claimed by Philippines¹⁷ and in particular, the portions of the 200-nautical mile EEZ of other SCS coastal States which overlap China's nine-dotted line.¹⁸ The Sabah is a special case but as earlier discussed, despite their differences, Malaysia and Philippines have successfully established a bilateral network of MPAs there.¹⁹

Other than Sabah, other areas of overlapping claims but with the disputed status contested by at least one claimant represent a big challenge to international cooperation in the SCS. Any cooperative initiative could potentially be interpreted as an indirect recognition of the claim of a claimant, and this is why those areas remain disputed as to their status. A legal solution is for relevant claimants to go before international tribunals, such as the International Court of Justice, International Tribunal for the Law of the Sea or international arbitration, to determine whether a determined area in the SCS is

¹⁷ Philippines also claimed the territory based on historical title but the claim has never been recognized by Malaysia. There is a boundary line between Sabah and Philippines' Sulu islands, but Philippines has insisted that this is a national territorial boundary and not an international one; for more details about the overlapping claims, see Ma Reymunda Carmen R. Balasbas, "National Territory of the Philippines: A Brief Study" (1974) 49: 4 Philippine Law Journal 505 at 524 and Catarina Grilo, "The Impact of Maritime Boundaries on Cooperation in the Creation of Transboundary Marine Protected Areas: Insights from Three Cases" (2010) 24 Ocean Yearbook 115 at 134.

¹⁸ At least three of the concerned countries (Vietnam, Philippines and Indonesia) have expressed their positions on this issue: for Vietnam's position see *Press Conference on Chinese maritime Surveillance Vessel's Cutting Exploration Cable of PetroVietnam Seismic Vessel* (June 9, 2011), online: Ministry of Foreign Affairs of Vietnam <http://www.mofa.gov.vn/en/tt_baochi/pbnfn/ns110610100618#T4dVoWFIwqCg>, accessed November 17, 2011; For Philippines' position, see *Note Verbale* No.000228 of the Permanent Mission of the Republic of Philippines to the United Nations, April 5, 2011; for Indonesia's position, see *Note Verbale of the Permanent Mission of the Republic of Indonesia to the United Nations*, No. 480/POL-703/VII/10, dated July 8, 2010, online: United Nations Commission of Limits of the Continental Shelf <http://www.un.org/depts/los/clcs_new/submissions_files/submission_vnm_37_2009.htm>, accessed November 17, 2012. Outside the region, the United States Senate seems to express a similar view as in a resolution adopted on June 27th 2011 relating to an incident in which a survey ship commissioned by Vietnam was harassed by Chinese ships in an area located about 120 miles from the Vietnamese coast. The resolution recognized that Vietnam is entitled to its 200-mile exclusive economic zone, see United States Senate, "U.S. Senate Unanimously "Deplores" China's Use of Force in South China Sea" (27 June 2011) *Press Release*, online: United States Senate <<http://webb.senate.gov/>>, accessed September 3, 2012. For more details about the Chinese nine-dotted line claim, see above 2.1.3 Rationales for a Network of Marine Protected Areas in the South China Sea.

¹⁹ See above 4.4.5 Sub-Regional and Bilateral Mechanisms.

disputed or not.²⁰ However, this will not work, at least for the time being, due to the refusal of China, holder of the most extensive claim in the SCS, to use international dispute settlement mechanisms to solve disputes relating to this marine region.²¹ Thus, a political alternative to the establishment of MPAs in areas under overlapping claims but the disputed status is contested by at least one claimant, which could be acceptable to all claimants, should be found.

There is an alternative to establish MPAs in those areas without undermining the position of relevant claimants. The prerequisite condition for it to be feasible is that relevant States have harmonized conservation rules relating to the MPA to be designated in the area. Then, each interested State could establish an MPA under its national law at the same location in this area. Since their relevant national laws are harmonized, the same conservation measures would be applied in these MPAs. They should also not enforce their national laws on each other's vessels, though they all have jurisdiction over the vessels from third parties.

For instance, if an MPA is needed to protect the Paracels, Vietnam and China can both establish an MPA in the same location under their respective national laws. Vietnam can do this under its Fisheries Law of 2003²² and China can establish a marine nature reserve based on its Regulation on Nature Reserves of 1994.²³ As analyzed earlier, since conservation rules under these two legislative texts are similar, the same protection measures would be applied to, *inter alia*, users of the area from both States. The only

²⁰ The International Court of Justice has, on various occasions, decided whether a dispute exists, see for example *Land and Maritime Boundary between (Cameroon v. Nigeria)*, Preliminary Objections, [1998] I.C. J. Rep. 275 at 314, para.87 and *East Timor (Portugal v. Australia)*, [1995] I.C.J. Rep. 90 at 99, para.22.

²¹ See above 2.1.3.3 Marine Protected Areas as a Mechanism to Promote Cooperation and Peace in the South China Sea.

²² See above 5.3.2.2 MPAs.

²³ See above 5.2.1.1 Regulations on Nature Reserves, 1994.

restraint would be for both States not to apply their national laws against each other's vessels, while they are both entitled to exercise jurisdiction over vessels flying the flags of third States.²⁴ This enforcement restraint does not need to be absolute; instead, it could be implemented in a flexible manner to avoid the misunderstanding that one State would abandon its jurisdiction or recognize the claim of the other in this area.²⁵

Experience for this type of arrangement can be drawn from the "grey zone" or "light grey zone" fisheries agreements. In those agreements, each participating State agrees to refrain from enforcing its fishery law or regulations against vessels flying the flag or licensed by the other, and both States have jurisdiction over third-party vessels.²⁶ The difference between these two types of agreements is that the former²⁷ have well-

²⁴ This is what actually happened in the Scarborough reef where both China and Philippines imposed fishing closures around the same period of time in 2012 after a stand-off between the law enforcement authorities of the two States in this area, see Christine O. Avendaño and Tina G. Santos, "Philippine-China standoff at Scarborough" (April 12th 2012) Philippine Daily Inquirer online: Asia News Network <<http://www.asianewsnet.net/home/news.php?id=29560>>, accessed April 29th 2012. It is not publicly known whether it is a coordinated move, but these bans have a *de facto* effect to decrease tension between the two States, for more details, see Terry Wing, "China, Philippines Fishing Ban Defuses Tensions," (May 15, 2012) online: VOA News <http://www.voanews.com/content/china_philippines_not_fishing_in_south_china_sea/666640.html>, accessed May 22, 2012.

²⁵ For instance, during the Scarborough crisis, the Philippines, while issuing a fishing closure in the Scarborough area, said that it would adopt a persuasion-first approach in its enforcement. It means that they would first "remind fishers venturing into Philippine waters about the closure"; see "BFAR Adopts Persuasion-First Approach in Fishing Ban: No Arrests Yet" (May 17, 2012), online: GMA News <<http://www.gmanetwork.com/news/story/258466/news/nation/bfar-adopts-persuasion-first-approach-in-fishing-ban-no-arrests-yet>>, assessed May 23, 2012. Vietnam has also advocated for a humane treatment of fishermen, which could be the basis for more lenient measures of law enforcement towards them. For instance, Lieutenant-General Pham Duc Linh, Head of the Vietnam Marine Police Force, at the 7th Meeting of Heads of Asia Coast Guard Agencies in Hanoi, 2011, called upon participating countries to treat fishermen at sea in a humane manner; see for example, Trà Phương, "Fishermen Should be Treated Humanely at Sea" (27/10/2011) *Ho Chi Minh City Legal Affairs Magazine* [in Vietnamese].

²⁶ For more details about the different types of fishery agreements, including "grey zone" and "light grey zone" ones, see Sun Pyo Kim, *Maritime Delimitation and Interim Arrangements in North East Asia* (Leiden: Martinus Nijhoff Publishers, 2004) 107 and Thang Nguyen-Dang, "Fisheries Cooperation in the South China Sea and the (Ir)Relevance of the Sovereignty Question" (2012) 2:1 *Asian Journal of International Law* 59 at 77.

²⁷ For example, the *Agreement of 11 January 1978 between Norway and the Soviet Union on a Temporary Practical Arrangement for Fishing in an Adjacent Area in the Barents Sea, with Attached Protocol on a Temporary Arrangement for Fishing in an Adjacent Area in the Barents Sea, Norway and Soviet Union, Overenskomst med Fremmede Stater* [Norwegian Treaty Series] (1978), 436.

defined areas of application while the latter²⁸ do not have such clearly determined areas. In the areas under overlapping claims but the disputed status is contested by at least one claimant in the SCS, most parties have not clearly indicated the extents of their claims yet.²⁹ As such, a “light grey zone” agreement might be suitable.

The limit of this kind of arrangement is that it does not preserve the exclusive jurisdiction of any State over the area.³⁰ However, it allows safeguarding of the position and interests of all relevant claimants while they wait for a definitive solution to the disagreement. Most importantly, it would help to avoid conflicts caused by the impasse resulting from differing nature of claims. At the same time, the functional scope of application of this arrangement should be limited to facilitate cooperation to protect the marine environment of the area.³¹

7.1.3 Promoting and Supporting National Efforts to Achieve Regional Targets

A natural adjunct to the suggestion that SCS States could promote the development of a network of MPAs in this marine region through establishing national MPAs that implement regional objectives, is to promote and support the national initiatives to realize set regional goals. Indeed, most regional conservation targets

²⁸ For example *Convention between Canada and the United States for Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea*, Canada and the United States, 2 March 1953, 222 U.N.T.S. 77, modified by *Protocol amending the Convention between Canada and the United States of America for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea, Canada and the United States*, 29 March 1979, Can TS 1980 No.44.

²⁹ China has not yet provided the coordinates of its nine-dotted line claim in the SCS. As well, all claimants of the Paracels and Spratlys have not clearly articulated their positions relating to the limits of the appurtenant waters of those islands or their features.

³⁰ Exclusive jurisdiction over natural resources is an attribute of the sovereignty of a State over a territory, see Tim Hillier, *Sourcebook on Public International Law* (London: Cavendish Publishing Limited, 1998) C7 at 223 and Rebecca M. M. Wallace, *International Law*, 4th ed. (London: Sweet and Maxell, 2002) 56. For more about the concept of exclusivity, see “The Idea of Exclusivity” in Thang Nguyen-Dang, *The Functions of Joint Zones from the Perspective of Maritime Delimitation* (University of Cambridge: PhD Thesis, 2013) [unpublished] C1 at 3.

³¹ See above 2.1.3.3 Marine Protected Areas as a Mechanism to Promote Cooperation and Peace in the South China Sea.

relating to the SCS have so far been adopted under a non-binding framework. As such, it is difficult for regional mechanisms to pressure SCS States to comply with them. The most effective way to make this happen is to provide incentives and support the States in doing so. Incentives and support measures could include financial aid, technical assistance, capacity-building, monitoring the results of implementation activities and enhancing awareness.

One advantage that the SCS has in this regard is that its regional mechanisms seem to have a lot of experience in developing and implementing activities to support national efforts in marine conservation. These experiences come from running demonstration projects, workshops, training and joint scientific research. The implementation of these activities also continues to provide opportunities for MPA managers from SCS States to meet and share learning experiences, particularly through demonstration projects that pair up and network established MPAs. Currently, there is no permanent venue for MPAs managers in the SCS States to meet and talk. As such, these projects could constitute an alternative to the formation of a formal social network of MPA managers.³² Consequently, more projects to support national efforts to achieve regional conservation objectives should be encouraged, planned and carried out, especially those that promote interactions between MPA managers in the region.

7.1.4 Regularly Updating Regional Conservation Targets

The most concrete regional conservation targets relating to the SCS have, so far, been provided in the SAP for the SCS with well-defined numbers and deadlines.³³ The problem is that while waiting for the SAP Implementation Project to be launched, a

³² See above 2.2.2.6 Development of a Social Network of Marine Protected Areas.

³³ See above 4.5.1.3 Determination of Targets for the Management and Conservation of Habitats.

number of target deadlines for 2012 have passed. Some of these relate to the conservation of seagrasses and wetlands. These targets need to be reviewed and updated to reflect more accurately the current state of the marine environment and their conservation status within the SCS. The update of these targets must also consider relevant developments under other regional *fora* such as the adoption of the SDS-EAS Implementation Plan and the IOSEA Network of Sites of Importance for Marine Turtles.³⁴ More generally, regional conservation targets relevant to the SCS should be updated regularly to ensure a timely and effective response to regional marine environment and resources conservation concerns.

This first category of options for the development of a network of MPAs in the SCS focuses on the implementation of actions at the national level by its coastal States. These options require the minimal level of cooperation at the regional level and could be carried out on a national and sub-regional basis. The disadvantage of these options is that they offer little assurance for the achievement of conservation targets at the regional level.

The next category of options could potentially improve cooperation for the establishment of MPAs and a network of MPAs among SCS States at the regional level, and thus increase the chance for regional conservation targets to be achieved.

7.2 Enhancement of Regional Cooperation

The actions here imply a more important role for existing regional arrangements and a higher level of interactions among SCS States as well as other actors such as NGOs at the regional level. They include adopting and implementing the pending SCS

³⁴ See above 4.1.2.1 Relevant Commitments under the Framework of PEMSEA and 4.3.1.2 The IOSEA Network of Sites of Importance for Marine Turtles.

Fisheries *Refugia* project; strengthening the ASEAN Heritage Parks List; designating sites of importance for migratory species in the SCS; developing SCS-wide networks under international processes; designating area-based conservation measures against vessel-source pollution in the SCS; implementing more scientific research projects in support of candidate protected areas in disputed waters where necessary; increasing the participation of Taiwan in regional marine conservation efforts; and increasing the involvement of NGOs in regional cooperation for marine conservation regional cooperation. A detailed discussion of these options follows.

7.2.1 Implementing the South China Sea Fisheries *Refugia* Project

A proposal to operate a network of fisheries *refugia* in the SCS, the Fisheries *Refugia* Project, was formulated in 2008. Apparently, it is still pending execution under UNEP.³⁵ If this Project could be adopted and implemented, it could lead to the first regional network of MPAs at the SCS-wide level. Though the primary goal of fisheries *refugia* is limited to sustainable fisheries and though China is not taking part in this Project, its successful implementation would certainly be an important first step toward more comprehensive network-building efforts. For this reason, this Project should be supported by all coastal States in the SCS, including those who do not participate in it, and UNEP. To this end, every effort should be made to adopt the Project and implement it on schedule in the foreseeable future. China should also be nudged to reconsider its position in regard to joining this Project.

³⁵ See above 4.5.2 Initiatives for the Implementation of the Strategic Action Programme.

7.2.2 Strengthening the ASEAN Heritage Parks List

Among regional mechanisms with a mandate to protect the marine environment and resources with relevance to the SCS, only ASEAN has an operational list of protected areas of transboundary importance.³⁶ the ASEAN Heritage Parks.³⁷ This list could become the nucleus of a network of protected areas in a region that also covers the SCS. However, for this list to become an effective conservation tool, its functional strength needs to be augmented by many important elements. Essentially, concrete steps could be taken to strengthen the list as follows:

- *Development of a More Complete Regime of ASEAN Heritage Parks:*

Compared to the Mediterranean SPAMI List, the ASEAN Heritage Parks list still lacks a number of operational components necessary for its effectiveness as a conservation tool. These components include: a set of principles for the protection, planning and management of those areas which Members must observe; a regional review mechanism for approved Parks; and a procedure to withdraw an approved Park from the List. Without these elements, it would be very difficult for relevant institutions under ASEAN to keep track of developments relating to the Heritage Parks after they have been approved, in particular, to ensure that conservation rules are respected. Examples of these principles could be taken from the Ramsar Convention, the World Heritage Convention, MAB Programme and the Mediterranean SPAMI List.

- *Development of Incentives for Well-Managed Parks:* A mechanism could be established to recognize a well-managed ASEAN Heritage Park. An ASEAN recognition document similar to the Mediterranean Diploma could be granted to the Park in addition

³⁶ In fact, under the SDS-EAS of PEMSEA, participants commit to establish a common management system for MPAs of transboundary importance but no concrete step has been taken yet; see above 4.1.2.1 Relevant Commitments under the Framework of PEMSEA.

³⁷ See above 4.2.1.1 Regime of ASEAN Heritage Parks.

to financial reward for good management. A symbolic recognition document has much greater value than material rewards as the State that owns the recognized Park could use the award to enhance public awareness and advertise the area for tourism purposes.

- *Implementation of Regional Supportive Activities:* A number of activities were planned to support the development of ASEAN Heritage Parks.³⁸ However, to date, not much seems to have been achieved, except for the creation of a Heritage Parks Database.³⁹ More effort needs to be put into the implementation of existing regional measures and to develop others to support and facilitate the identification, designation, planning and protection of ASEAN Heritage Parks. Other measures to support these four purposes could include carrying out collaborative research in Heritage Parks, a call for international support, in particular financial support for their protection, and promotion of the value of the Heritage Parks system in global *fora*.

- *Towards a Joint ASEAN-China Heritage Parks:* China is the only SCS coastal State that is not a member of ASEAN nor a participant in the ASEAN Declaration on Heritage Parks. However, as discussed earlier, the Association has started cooperation with China to protect the environment, including facilitation of the establishment of transboundary natural reserves and bio-corridors in view of the similar ecological

³⁸ Such as the development of regional conservation and management action plans to support national efforts to implement conservation measures in ASEAN Heritage Parks; promotion of a common identity and collective action in terms of education, public awareness and ecotourism; promotion of exchange of information, best practices and management experiences, promotion of training and capacity building, promotion of partnerships with relevant national, regional and international organizations to enhance the conservation and management of protected areas, development and maintenance of an information database on ASEAN Heritage Parks, development of a Regional Work Plan for the ASEAN Heritage Parks, see ASEAN Center for Biodiversity, *The ASEAN Heritage Parks: A Journey to the Natural Wonders of Southeast Asia* (Laguna: ASEAN Center for Biodiversity, 2010) 4.

³⁹ See online: ASEAN Biodiversity Center

<http://chm.aseanbiodiversity.org/index.php?option=com_wrapper&view=wrapper&Itemid=110¤t=110>, accessed November 26, 2012.

environment of Southwest China and the ASEAN region.⁴⁰ A concrete means by which to cooperate in this area could be to establish a joint List of Heritage Parks between ASEAN and China. It would comprise the ASEAN Heritage Parks and those established in provinces in the Southwest of China. Such a List could cover almost all MPAs established in the SCS (except those in the waters controlled by Taiwan).

7.2.3 Designating Sites of Importance for Migratory Species in the South China Sea

As discussed earlier, two regional agreements were concluded under the CMS to protect the migratory species that cover the SCS: the IOSEA-Marine Turtles MOU and the Dugong MOU. A Network of Sites of Importance for Marine Turtles is being established and a similar step could be taken in relation to Dugong.⁴¹ Coastal States of the SCS that are parties of these two instruments could nominate potential sites fulfilling relevant criteria determined under those framework instruments to be included in the Network. For territorially comprehensive networks and a more effective protection for these species, all range States in the SCS should consider joining the two MOUs.

The nomination of sites of importance for migratory species under the CMS in the SCS under relevant regional agreements could have two benefits. It would help SCS States that are parties to those agreements to fulfill their obligations. At the same time, it would add an additional area-based tool for the protection of the marine environment and resources of the SCS.

⁴⁰ See above 4.2.3 ASEAN-China Cooperation in Environmental Protection and Conflicts Prevention in the South China Sea.

⁴¹ See above 4.3.1.2 The IOSEA Network of Sites of Importance for Marine Turtles and 4.3.2

7.2.4 Developing South China Sea-Wide Networks under International Processes

Regional networks have been created to implement the Ramsar Convention and the MAB Programme.⁴² SCS States could develop SCS-wide level networks under these mechanisms or they could do so as a sub-regional component of those global initiatives under an existing regional network.⁴³ The development of SCS-wide networks to implement international area-based conservation measures has two potential advantages. First, it could help SCS States to cooperate regionally, as prescribed under relevant international mechanisms. Second, it would help them to take advantage of international support to protect the marine environment and resources in the SCS and enhance their cooperation in the process.

7.2.5 Designating Area-Based Conservation Measures against Vessel-Source Pollution

Chircop argues that IMO's area-based tools such as special areas and PSSAs could provide an additional layer of protection for the marine environment of the SCS against vessel-source pollution.⁴⁴ In practice, the difference between those two tools is that special areas are, more often than not, designated for an entire marine region (such as the Antarctic, the Black Sea and the Mediterranean) while PSSAs are usually designated for sub-regional areas of various sizes such (as the Great Barrier Reef, Sabana-Camagüey Archipelago and Malpelo Island).⁴⁵ However, the same marine region could be designated both as a special area and a PSSA, such as the Baltic has been.

⁴² See above 3.1.3 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 and 3.2.5 The World Network of Biosphere Reserves.

⁴³ Such as the Partnership for the conservation and sustainable use of sites of international importance for migratory waterbirds in East Asia under the Ramsar Convention and the East Asian Biosphere Reserves Network under the MAB Programme; see *ibid.*

⁴⁴ Aldo Chircop, "Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation" (2010) 41:4 *Ocean Development and International Law* 334 at 347.

⁴⁵ See above 3.1.8 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 and 3.2.7 Particularly Sensitive Sea Areas.

While either special areas or PSSAs have not been used yet in the region, the whole SCS could be designated as a special area and PSSAs could be designated to protect its sub-regional areas such as the Gulf of Tonkin, Gulf of Thailand and Spratly Islands.

In addition to the special area and PSSA, another area-based conservation measure governed by IMO is the routing measures under SOLAS. While not pursuing special areas and PSSAs, SCS States have designated routing measures in various locations in this marine region but mainly for concerns of navigation safety.⁴⁶ Nothing stops them from designating new routing measures for the purpose of marine environmental protection.

No doubt, there are strong arguments for the designation of area-based conservation measures against vessel-source pollution in the SCS. For one thing, it has many sensitive habitats and species which could be affected by the heavy shipping traffic in the region.⁴⁷ A legal argument to support the designation of the SCS as a special area is that most of the regional States (except Brunei) have been parties to MARPOL 73/78, at least, to the two Annexes I and II, which provide the basis for the establishment of special areas for the prevention of pollution from oil and other noxious liquid substances.⁴⁸ Besides, many SCS States are also parties to the Memorandum of Understanding on Port State Control in the Asia-Pacific Region,⁴⁹ which provides for a common system of port State control in the Asia-Pacific for the implementation of a number of IMO Conventions, including MARPOL 73/78. The regional framework for

⁴⁶ See above 3.1.9 International Convention on the Safety of Life at Sea, 1974.

⁴⁷ Chircop, *supra* note 44.

⁴⁸ See above 3.1.10 Membership Status of South China Sea States with Regards to the .

⁴⁹ Memorandum of Understanding on Port State Control in the Asia-Pacific Region, 1 December 1993, online: Tokyo MOU <http://www.tokyo-mou.org/organization/memorandum_of_understanding.php>, accessed March 24, 2013. SCS members of the MOU are China, Hong Kong (China), Indonesia, Malaysia, Philippines, Thailand and Vietnam.

cooperation in the management of the marine environment of the SCS under the SCS Project, if it could be established, would be a suitable forum for the development of relevant initiatives.

An expected challenge to the designation of new area-based conservation measures in the SCS would be the strong opposition of ship operators who have been using the sea-routes in the region and might not want to see their freedom of navigation limited. Another challenge more specific to the designation of special area is that MARPOL 73/78 requires each Party to the Convention that borders the special area to have adequate reception and treatment facilities in its ports and terminals located in the special area.⁵⁰ It would be a heavy financial burden for SCS States, which are developing countries, to meet this requirement.

To avoid these challenges, SCS States could simply and for now adopt routing measures that have little constraint on navigation and/or in marine areas with limited size. The designation of recommended routes or precautionary areas in the Spratlys could be a good start as the islands are both an environmentally sensitive area⁵¹ and a well-known “Dangerous Ground” for navigation⁵².

7.2.6 Implementing More Scientific Research Projects in Support of Candidate Sites in Areas of Overlapping Claims Where Necessary

Marine scientific research, in particular field surveys, is critical for the development of MPAs because it provides information, data and knowledge for decision-

⁵⁰ *International Convention for the Prevention of Pollution from Ships*, 2 November 1973, 1340 U.N.T.S. 184, Annex I, Regulation 10.

⁵¹ See above 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea.

⁵² The Spratlys have been generally regarded as an area hazardous to navigation. Many ship wreckages have occurred on these islands. “Dangerous Ground” was the name of the Spratlys in former British navigational charts of the area, see Clive Schofield, “A Geopolitical Overview of the South China Sea” in Sam Bateman and Ralf Emmers (eds), *Security and International Politics in the South China Sea: Towards a Co-operative Management Regime* (London: Taylor and Francis, 2009) 7 at 8.

making.⁵³ A number of regional institutions with mandates to conduct marine scientific research in the SCS exist and many collaborative research programs which could provide useful data for the establishment of MPAs have been carried out in region. However, few projects have been implemented in areas of overlapping claims⁵⁴ though the projects are considered by SCS claimants as non-sensitive cooperative activities to be promoted.⁵⁵ Their position mirrors a provision of UNCLOS and could support cooperation in marine scientific research in disputed areas. Article 123 provides that these activities cannot constitute a legal basis for any claim to the marine environment and its resources.⁵⁶

More collaborative research projects could be forged and implemented in the overlapping claims areas in the SCS and coordinated through the following *fora*:

- ***The DOC***: As stated earlier, SCS States have agreed to implement cooperative activities in marine scientific research under the DOC. Concrete projects were also agreed to and developed, and Guidelines for Implementation were adopted. So far,

⁵³ See above 2.2.3.3 The Use of the Best Available Knowledge.

⁵⁴ The most recent collaborative initiative conducted in the disputed areas was the Tripartite Agreement for Joint Marine Scientific Research in Certain Areas in the South China Sea between China National Offshore Oil Company, Philippine National Oil Company and Vietnam Oil Company. Signed in 2005 (originally between China and Philippines, Vietnam joined later after protestation), the Agreement aims to implement seismic surveys for the exploration of oil and gas in the Spratlys areas. It was carried out over three years and ended in 2009 with no prospect for follow-up activities; see Ernest Bower, "The JMSU: a Tale of Bilateralism and Secrecy in the South China Sea" (July 27, 2010) I: 23 CSIS-Southeast Asia Program. The Agreement was heavily criticized by public opinion in the Philippines, accusing the government of giving "breathtaking concession" in the Philippine exclusive economic zone and selling out the country's resources in exchange for Chinese money; see Barry Wain, "Manila's Bungle in The South China Sea" (January/February 2008) *Far Eastern Economic Review*.

⁵⁵ Marine scientific research is considered as a cooperative activity that DOC Parties could explore or undertake, see *Declaration on the Conduct of Parties on the South China Sea*, Phnom Penh, 4 November 2002, Online: ASEAN <<http://www.asean.org/asean/external-relations/china/item/declaration-on-the-conduct-of-parties-in-the-south-china-sea>>, accessed January 30, 2013, para. 6(b). Besides in the Vietnam-China Agreement on basic principles guiding the settlement of sea-related issues signed by representatives of both Governments in Beijing in October 2011, the two States also agreed to boost cooperation in less sensitive fields, including marine scientific research, see "Vietnam, China established principles of settling sea issues" (October 12, 2011) *Vietnam News Agency* and "China-Vietnam sign accord on resolving maritime issues" (October 12, 2011) *Xinhua*.

⁵⁶ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 3, art. 123 [UNCLOS].

planned activities are limited to workshops and training sessions. Even so, the Parties could agree to undertake field research projects in the future. An ironic advantage offered by the DOC is that it does not distinguish between disputed and undisputed areas by virtue of its reference to the SCS in general. This detail of the Declaration must be highlighted for maximum effect as it may provide an avenue for scientific research cooperation even in those difficult areas of overlapping claims but the disputed status is contested by at least one claimant.

- *The South China Sea Workshops:* The main cooperative activities implemented under the South China Sea Workshops so far concern marine scientific research, including marine biodiversity studies. In particular, an expedition for biodiversity studies was organized successfully in Indonesian waters.⁵⁷ At the 14th Workshop, participants decided that the studies should continue in the Northeast and Northwest areas of the SCS. They encouraged China, Philippines, Taiwan and Vietnam to consider conducting expeditions in those areas.⁵⁸ Although no relevant project proposal has been developed yet,⁵⁹ according to Yann-huei Song, this consensus provides an opportunity for participants to undertake joint biodiversity studies in the Northeast and Northwest areas of the SCS under the South China Sea Workshop process. Perhaps more significantly, these two areas include all the four disputed islands in the SCS.⁶⁰ Song's optimism is reinforced by the improvement in the cross-strait relationship

⁵⁷ See above 4.4.3 Mechanisms to Prevent Conflicts in the South China S.

⁵⁸ *Statement of the 14th Workshop on Managing Potential Conflicts in the South China Sea*, Batan, November 24-26, 2004, para. 32.

⁵⁹ The Statement of the 22nd South China Sea Workshop in 2012 said that it expected a relevant project proposal to be submitted in the following workshop, see *Statement of the 22nd Workshop on Managing Potential Conflicts in the South China Sea*, Bangdung, Indonesia, November 23-24 2012, line 17.

⁶⁰ Yann-Huei Song, "A Marine Biodiversity Project in the South China Sea: Joint Efforts Made in the SCS Workshop Process" (2011) 26 *International Journal on Marine and Coastal Law* 119 at 138.

between China and Taiwan which has been translated into the joint implementation of a common project from 2010.⁶¹

The advantage offered by the South China Sea Workshops for the implementation of cooperative marine scientific research activities in disputed areas is two-fold. First, the informal nature of the Workshops provides an extra layer of warranty that those activities will not affect the official positions and claims of the participants. Second, it has the Taiwanese participation, which may allow some activities to be carried out near its waters.

- ***The JOMSRE-SCS:*** At the end of the 1st phase of the JOMSRE-SCS in 2008, Vietnam and Philippines committed to continue the program. Future expeditions would also include China and have an expanded scope both in terms of subject and area.⁶² The participation of China might allow activities to be undertaken without protest and disturbance⁶³ and in the Northern areas of the SCS, including the Paracel Islands.

⁶¹ *Statement of the 20th Workshop on Managing Potential Conflicts in the South China Sea*, Bandung, Indonesia, November 1-3, 2010, para.20. See also Song, *ibid.*, 138.

⁶² Henry S. Bensurto Jr., "Cooperation in the South China Sea: Views on Philippines-Vietnam Cooperation in Maritime and Ocean Concerns," paper presented at the 2nd International Workshop "South China Sea: Cooperation for Regional Security and Development", November 11-12, 2010, Ho Chi Minh City, Vietnam and Nguyen Khoa Son *et al.*, *Proceedings of the Results of the Joint Marine Scientific Research Expeditions in the South China Sea*, March 26-29, 2008, Ha Long, Vietnam (Hanoi: Natural Sciences and Technologies Publishers, 2009).

⁶³ During the implementation of JOMSRE-SCS Phase 1, China protested against the research activities diplomatically and by harassing the survey at sea; for details, see Karsten von Hoesslin, "A View of the South China Sea From Within: Report on the Joint Oceanographic Marine Scientific Research Expedition (III) in the South China Sea" (2005) 7: 1 Culture Mandala 1.

7.2.7 Increasing the Participation of Taiwan in Regional Marine Conservation Efforts

Because of its special situation,⁶⁴ Taiwan has only had very limited participation so far in regional cooperation for the protection of the marine environment and living resources. As discussed earlier, Taiwan's participation is limited to the two informal mechanisms: the South China Sea Workshops and APEC. This is regrettable as Taiwan is a major fisher in the SCS⁶⁵ and has serious issues of marine pollution, in particular from land-based sources.⁶⁶ Moreover, Taiwan seems to be a strong advocate for the protection of the marine environment in the SCS and for the establishment of a transboundary MPA in the Spratlys.⁶⁷ Taiwan also has significant capacity for biodiversity research.⁶⁸

⁶⁴ Taiwan claims itself an independent State but is considered by all other SCS States to be a part of China. For more details about the issue between Taiwan and China, see for example *The One-China Principle and the Taiwan Issue* (February 2000), White Paper issued by the Taiwan Affairs Office and Information Office of the State Council of People's Republic of China, online: Chinese Government's Official Web Portal <http://english.gov.cn/official/2005-07/27/content_17613.htm>, accessed November 29, 2012 and *the Constitution of the Republic of Taiwan*, December 25, 1946, online: Office of the President of the Republic of China (Taiwan) <<http://english.president.gov.tw/Default.aspx?tabid=434>>, accessed November 29, 2012. Not being a member of the United Nations, Taiwan has not been able to take part in any multilateral environmental treaty. However, it takes the position that it intends to abide by all relevant international treaties, see Chircop, *supra* note 44 at 337 and Ben Boer, Ross Ramsay and Donald R. Rothwell, *International Environmental Law in the Asia-Pacific* (London: Kluwer Law International, 1998) 196.

⁶⁵ According to FAO statistics, in 2010 Taiwan captured more than 850 thousand tons of marine fish in the Western Central Pacific Region, which includes the SCS, see *Global Capture Production-Fishery Statistical Collections*, online: FAO <<http://www.fao.org/fishery/statistics/global-capture-production/en>>, accessed November 30, 2012.

⁶⁶ See *The World Fact Book*, Taiwan, online: CIA <<https://www.cia.gov/library/publications/the-world-factbook/geos/tw.html>>, accessed November 30, 2012; *Pollution Prevention*, online: Taiwan Government Entry Point <<http://www.taiwan.gov.tw/ct.asp?xItem=83592&ctNode=1927&mp=999>>, accessed November 30, 2012 and *Taiwan*, online: The Encyclopedia of Earth <<http://www.eoearth.org/article/Taiwan>>, accessed November 30, 2012.

⁶⁷ In 2008, Taiwan announced the "Spratly Initiative" which, *inter alia*, calls for priority consideration for maritime ecological conservation and sustainable development and working with international conservation organizations to establish a marine peace park in Itu Aba island and the Bàn Than/Zhongzhou Reef in the Spratlys to enhance international cooperation and to protect ecological and human cultural resources; see Song, *supra* note 60 at 262.

⁶⁸ John W. McManus, Kwang-Tsao Shao and Szu-Yin Lin, "Toward Establishing a Spratly Islands International Marine Peace Park: Ecological Importance and Supportive Collaborative Activities with an Emphasis on the Role of Taiwan" (2010) 41: 3 *Ocean Development & International Law* 270 at 277.

From this perspective, it would be beneficial for the development of a network of MPAs in the SCS that greater participation by Taiwan in current regional efforts to protect the marine environment of the SCS be allowed. However, this participation must be arranged to avoid affecting the existing position of SCS States with regards to the status of Taiwan. For instance, Taiwan could be allowed to participate as a fishing entity⁶⁹ in APFIC, an observer to COBSEA and a non-country partner to PEMSEA. As well, individual experts, research institutions and local communities in Taiwan should also be invited to participate in the implementation of future regional projects in marine conservation and sustainable development in the SCS.

As the cross-strait relations between China and Taiwan have been improving since 2008,⁷⁰ a larger role for Taiwan without prejudice to the “One-China” policy⁷¹ might not be met with resistance from China.

7.2.8 Increasing the Involvement of Non-Governmental Organizations in Regional Cooperation for Marine Conservation

As stated earlier, NGOs, especially IUCN and WWF, are strong advocates for MPAs. However, they also seem to have limited involvement in the regional arrangements dealing with the protection of the marine environment and resources of the SCS.⁷² Among the mechanisms discussed earlier, neither IUCN nor WWF were present

⁶⁹ “Fishing entity” is the status used by FAO to allow the participation of Taiwan in the organization, see Nien-Tsu Alfred Hu, “Fishing Entities: Their Emergence, Evolution, and Practice from Taiwan’s Perspective” (2006) 37 *Ocean Development and International Law* 149 at 150.

⁷⁰ Michal Roberge and Youkyung Lee, *China-Taiwan Relations* (August 11, 2009) online: Council on Foreign Relations <<http://www.cfr.org/china/china-taiwan-relations/p9223>>, accessed November 20, 2012.

⁷¹ For more details, see Y. Franck Chiang, “One-China Policy and Taiwan” (2004-2005) 28:1 *Fordham International Law Journal* 1.

⁷² See above 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China S.

in the most recent meetings of COBSEA, Dugong MOU and APFIC⁷³ and only IUCN is a Partner under PEMSEA.⁷⁴

An increased involvement of IUCN and WWF in the environmental policy-making process at the regional level could increase their support for MPAs in the SCS. To this end, they should be invited not only to attend, but also to present in regional meetings on issues relating to the protection of the marine environment and living resources. They should also be given opportunities to participate in the implementation of regional projects for the protection of the SCS, so that the region could take advantage of their rich expertise in marine conservation measures design and implementation.

7.3 Regional Regime-Building on Marine Protected Areas

The third category of options focuses on the development of a regional regime for MPAs and a network of MPAs in the SCS. This requires the highest level of commitment of SCS States regarding cooperation for marine conservation. Based on the regime conceptualization and relevant experiences from the Mediterranean, it is suggested that following measures could be carried out toward building a regime to support a regional network of MPAs in the SCS: forming a regional forum for MPA-based experts in the SCS; adopting a regional framework agreement for MPAs; establishing an institutional arrangement for regional cooperation on MPAs; creating a database of MPAs in the SCS; formulating a list of MPAs of SCS importance;

⁷³ See for example “List of Participants” in *Report of the 20th Intergovernmental Meeting of the Coordinating Body on the Seas of East Asia*, November 2-5 2009, Ha Long City (Vietnam), UNEP/DEPI/COBSEA IGM 20/15 (2009) Annex I; “Participants for Second Meeting on Dugong Conservation and Management” in *Report of the Second Meeting on Dugong Conservation and Management*, Bangkok, Thailand, May 15-18, 2006, Annex 2 and “Provisional List of Participants and Observers” in *Report of 28th session of APFIC*, Doc. No. APFIC/04/Inf.2, online: APFIC <<http://www.apfic.org/modules/wfdownloads/singlefile.php?cid=36&lid=9>>, accessed August 5, 2009.

⁷⁴ *No-country Partners*, online: PEMSEA <<http://beta.pemsea.org/non-country-partners>>, accessed December 2, 2012.

establishing a regional monitoring program for existing MPAs; establishing a specialized compliance mechanism; and creating a monitoring mechanism. These measures are discussed hereafter.

7.3.1 Forming a Regional Forum for Marine Protected Area Experts

A SCS regional forum for MPA experts could be established on the model of the Mediterranean MedPAN⁷⁵ to enhance the influence and impact of the SCS epistemic community on the development of MPAs and a network of MPAs. Such a forum would also double as the social network to support regional networking efforts. It would also serve as a framework under which MPA managers, academics and the region's communities could exchange relevant knowledge and experiences. Further, the forum would provide an opportunity for the regional epistemic community to develop and speak with a united voice, and thus have a better chance to be heard by the region's governments.

It would be necessary for the forum to meet regularly, so that the "MPA community" in the SCS can maximize opportunities and occasions to exchange and share ideas and experiences. Its functioning can draw lessons from the South China Sea Workshops experiences, in particular, participants take part in their personal capacity and that the outcome of the forum cannot be used to justify national claims or policies. A permanent secretariat could also be established to coordinate activities between the meetings of the forum.

⁷⁵ See above 6.3 Lessons for the South China Sea in Developing Regional Cooperation with Regards to Marine Protected Areas.

7.3.2 Adopting a Regional Framework Agreement for Marine Protected Areas

Although a regime can be implicit, having its principles, norms, rules and decision-making procedures stated explicitly in an agreement is better. This preference could be explained, primarily, in terms of the technical superiority of treaties over custom in the development of international law.⁷⁶ From a practical perspective, an agreement requires express consent from participating States, and this is necessary, arguably, to lead to the establishment of a negotiated regime. Meanwhile, custom, deriving primarily from State practice, tends to reflect the preferences of the most powerful States, and this may lead to the establishment of an imposed regime.⁷⁷ With this premise, this sub-section suggests the possible form and content for a regional framework instrument for an MPA regime in the SCS.

With regards to the form of the regional framework instrument, it must reflect the tradition of using political instruments for regime-building in the SCS region. To this end, it would be more acceptable for coastal States that the agreement is a soft law text, such as an MOU or a Declaration. What is more, as already noted, most regional seas programs tend to include MPAs in instruments dealing with the more comprehensive topic of the protection of biodiversity. Consequently, SCS States could formulate their MPA regime as an Annex to a more comprehensive agreement on the protection of the marine environment or on marine biodiversity conservation. The potential regional framework agreement for the protection of the marine environment in the SCS under the

⁷⁶ According to different authors, treaties have many advantages compared to custom. For instance, treaties produce rules with different degrees of specificity while custom can only provide general rules. Treaties can generate anticipatory, forward-looking legal regimes (which are essential in the protection of the environment) while custom is always based on existing State practice; see G. M. Danilenko, *Law-Making in the International Community* (Dordrecht: Martinus Nijhoff Publishers, 1993) 133.

⁷⁷ *Ibid.* at 133 and Malcolm N. Shaw, *International Law*, 6th ed. (Cambridge: Cambridge University Press, 2008) 94.

Project to Implement the Strategic Action Programme for the South China Sea offers an opportunity for this to be done.⁷⁸

The content of the agreement could be crafted along the line of the examples offered by the Mediterranean SPA and SPA and Biodiversity Protocols. It should feature non-prejudice clauses, an agreed definition of MPAs, requirements relating to their establishment and management, protective measures to be applied in the area and clear terms on cooperative duties at the regional level. One question to be considered is whether a separate category of regional MPAs should be created like the SPA in the Mediterranean. Rather than creating such a separate tool of area-based management, it would be better for the regional agreement to broadly incorporate all existing area-based tools prescribed under relevant international treaties, regional agreements and in national laws that reflect, to any degree, an MPA. This inclusive approach would avoid the complication of having too many alternative MPA regimes.

In addition, two arrangements could be made to deal with SCS disputes, in particular over areas under overlapping claims but the status is disputed by at least one claimant:

- ***Explicitly Excepting Areas of Overlapping Claims:*** the agreement could explicitly leave out of its application all areas under overlapping claims or all areas under overlapping claims but the status is contested by at least one claimant. The second choice might leave the agreement with a broader territorial scope of application, which includes “agreed” disputed areas. However, neither option seems practical. First, as discussed earlier, it is very difficult to determine what the exact limit of the overlapping claim

⁷⁸ See above 4.5 The GEF/UNEP Project “Reversing the Environmental Degradation Trend in the South China Sea and Gulf of Thailand”.

areas are, mainly because China has not clarified its nine-dotted line claim.⁷⁹ As well, States that contest the disputed status of an area may not want to recognize that there are overlapping claims to such an area.

- *Limiting the scope of application to coastal and near-shore areas:*

Alternatively, the agreement could have a territorial scope of application limited to the coastal and near-shore areas. This is because most areas under overlapping claims but the disputed status is contested by at least one claimant are located more offshore. Based on the current practice of the Chinese Government with regards to the nine-dotted line area, it seems that this claim would stop at around 70-80 nautical miles from the coastline of other affected States. Thus, confining the territorial scope of the agreement to the outer limit of the contiguous zone (24 nautical miles from the baseline for the measuring the breath of the territorial sea)⁸⁰ may be an appropriate arrangement to make it accepted by all coastal States in the SCS.

7.3.3 Institutionalizing Regional Cooperation on Marine Protected Areas

An institutional arrangement should be developed to coordinate regional cooperation relating to MPAs and a network of MPAs. It should comprise at least two organs. First, a decision-making organ set up to supervise the implementation of the regional agreement relating to MPAs. This organ should have the power to make recommendations to Member States, and to adopt and oversee the implementation of regional action plans relating to MPAs. It could function in the form of a regular Meeting

⁷⁹ Nguyễn-Dang Thang and Nguyễn Hồng Thao, 'China's Nine Dotted Lines in the South China Sea: The 2011 Exchange of Diplomatic Notes between the Philippines and China' (2012) 43: 1 Ocean Development & International Law 35.

⁸⁰ UNCLOS, *supra* note 56, article 33.

of the Member States, and because of the importance of building consensus in the SCS; its decisions must be adopted on the basis of unanimity.

Second, an operational unit should be set up to assist Member States in implementing the regional framework instrument. Its mission could be inspired by those of the SPA/RAC,⁸¹ namely developing research on biodiversity; inventorying, mapping and monitoring biodiversity and MPAs; assessing and mitigating threats to biodiversity; assisting States to conserve sensitive habitats; promoting the establishment of MPAs; and contributing to capacity-building, technical support and fund-raising.

The institutional arrangement for cooperation on MPAs in the SCS could be developed at two regional levels and nested within three possible mechanisms: at the SCS-wide level and under the emerging regional framework for cooperation in the management of the marine environment of the SCS; or at the East Asian Seas-level under COBSEA and PEMSEA. The first option is a better choice in terms of territorial relevance as it concerns the SCS directly. However, the initiative to establish this regional framework has remained dormant since 2008 and though the project of Implementation of SAP for the SCS could be carried out, it would take a while before it becomes truly operational. Forging cooperation to establish MPAs and a network of MPAs under COBSEA and PEMSEA has the advantage of relying on mechanisms that currently exist and are operational, but the East Asian Seas could be too broad both in terms of territorial scope and membership to be an effective medium through which to pursue this matter of vital interest to the SCS.

⁸¹ See above 6.2.1.3 Institutional and Financial Arrangements for the Implementation of the MAPs.

7.2.4 Creating an Inventory of Natural Sites of Conservation Interest

Like in the Mediterranean, the preparation of inventories of natural sites of conservation interest could help to collect data useful for the conservation of SCS biodiversity,⁸² in particular for the designation of MPAs.⁸³ The inventory could be generated from information gathered through regional prioritized lists of sites for management intervention under the SCS Project.⁸⁴ These inventories could be prepared at the national level under regionally agreed guidelines and format. They should contain information useful for the conservation and monitoring of each site, such as name, location and area of the site, reasons for inventorying it, threats, conservation status and agency in charge. The established inventories should be reviewed and updated regularly.

7.2.5 Formulating a List of Marine Protected Areas of South China Sea Importance

A list of MPAs of SCS Importance could also be established to cover habitats representative of the SCS ecosystem and areas critical for preserving the ecological processes of the marine region. Procedures for accepting an MPA onto the list, the review of its status and its removal from the list should be set up. Special incentives could also be created to promote the good management and protection of a listed MPA. In accordance with the regional framework agreement, the List should contain initially only MPAs established from the outer edge of the contiguous zone landward and not MPAs established in an area under overlapping claims but the disputed status is disputed by at least one claimant.

⁸² *Report of the 10th Ordinary Meeting of the Contracting Parties to the Barcelona Convention*, Tunis, Tunisia, November 18-21, 1997, Doc. No. UNEP(OCA)/MED IG. 11/10 (1997) Appendix IV at 1.

⁸³ See above 6.3.1.2 Stipulations Adopted by the Contracting Parties to the Barcelona Convention.

⁸⁴ See above 4.5.1.1 Establishment of Regionally Prioritized Lists of Sites for Management Intervention.

A list of MPAs of SCS Importance could overlap with the List of ASEAN Heritage Parks and a possible Joint ASEAN-China List of Heritage Parks so that inter-regional coordination could be carried out to enhance their effectiveness.

7.2.6 Establishing a Regional Monitoring Program for Marine Protected Areas

A regional program could be created to monitor the effectiveness of established MPAs. This would ensure that SCS does not have “paper parks”, and to give the regional network of MPAs a chance not only to achieve the objective of having a good number of MPAs established but also to ensure that they would contribute effectively to the protection of the marine environment of the SCS. The program could be a separate initiative or part of a larger program to monitor the marine environment of the region in its most important aspects (such as biodiversity conservation, pollution prevention and climate change control and adaptation).

The first important task for a regional monitoring program for MPAs is to agree at the regional level on a set of performance indicators to measure the extent to which established MPAs meet their conservation targets. Based on these targets, concrete monitoring works could then be carried out at the national or even local level under the coordination, guidance and technical and financial support of regional institutions. The results yielded from national monitoring works could serve to nourish a synthesis report that would represent the general situation of the network of MPAs of the SCS.

7.2.7 Establishing a Specialized Regional Compliance Mechanism

The usual practice to ensure compliance with regional commitments, not only in the SCS but also in other regions, is through the requirement of reporting what has been done by State Parties to the Conference or Meeting of Parties. This approach has so far

had mixed results in the SCS region. While it seems to have some positive results in PEMSEA and to some extent with the implementation of agreed projects under the framework of the South China Sea Workshops, in other situations, it does not seem to ensure effective compliance.

As discussed earlier, there are actually two mechanisms to ensure compliance with regional commitments with regards to MPAs under the MAP process. The first mechanism is the procedure for the revision of areas included in the SPAMI List⁸⁵ and the second is the Compliance Committee to facilitate and promote compliance with obligations under the Barcelona Convention and its Protocols.⁸⁶ In the context of the SCS, the adoption of procedures for reviewing areas included in the List of MPAs of SCS Importance was also envisioned earlier. The question is whether a mechanism equivalent to the Mediterranean Compliance Committee, should be established to ensure compliance with regional commitments to protect the marine environment in the SCS.

A robust compliance mechanism like that of the Mediterranean region, would certainly put more pressure on Member States to comply with regional commitments, including with regards to MPAs and a network of MPAs. At the same time, it would likely provide them with useful help and assistance to do so. However, even with a non-confrontational procedure, the establishment of a Compliance Committee could be seen by SCS States, which are used to a discretionary and consensus-building compliance

⁸⁵ See above 6.3.1.2 Stipulations Adopted by the Contracting Parties to the Barcelona Convention.

⁸⁶ See above 6.2.1.3 Institutional and Financial Arrangements for the Implementation of the MAPs. For the procedure to deal with non-compliance by the Mediterranean Compliance Committee, see “Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols”, *Report of the 15th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols*, Almeria (Spain), January 15-18, 2008, Doc. No. UNEP(DEC)/MED IG. 17/10 (2008), Annex V.

approach,⁸⁷ as too “pushy”. Besides, this model seems to be more suitable to ensure compliance in the context of a treaty-based regime like in the MPA process. It might not be an adequate choice for a soft law-based regime which is still in its infancy like the emerging regional regime to protect the marine environment in the SCS. Thus, a strong mechanism to ensure compliance with regional commitments to protect the marine environment does not seem to be a suitable option for the SCS, at least for the time being.

A more viable option may be to create a body with a mandate limited to promote compliance with regional requirements in regard to the List of MPAs of SCS Importance. This body could have the responsibility to regularly review an MPA of SCS Importance to help determine whether it still fulfills all agreed requirements to be on the List. In case of non-compliance with the requirements, it could also provide advice, recommendations, assistance and help to the relevant State to redress the situation.

The body in charge of ensuring compliance should not be given power to decide whether an area fulfills the requirements to stay on the List of MPAs of SCS Importance or not. Instead, this decision should belong to the Meetings of Member States⁸⁸ based on review information provided by the body in charge of ensuring compliance. However, this body should have the ability to evaluate the efforts of a State in redressing the situation. This evaluation could serve as basis for the Meetings of Member States to decide whether to remove an MPA from the List of MPA of SCS Importance or not.

⁸⁷ See above 2.2.5 Academic Suggestions for Establishing Transboundary Marine Protected Areas and a Network of Marine Protected Areas in the South China Sea.

⁸⁸ See above 7.3.3 Institutionalizing Regional Cooperation on Marine Protected Areas.

Conclusion

The suggested actions discussed in this Chapter explore options to move forward the development of a network of MPAs in the SCS. These options range from actions at the national level, varying *ad hoc* and fragmented cooperative measures to the establishment of a regional regime on MPAs and a network of MPAs in the SCS. They could be implemented alternatively or by way of a step-by-step approach depending on the evolution of the political situation in the SCS. If properly carried out, none of them would adversely affect the positions and claims of the claimants in the SCS disputes.

Implementing these options or not depends solely on the political will of SCS States. However, these options have been suggested based on the necessity to protect the SCS marine environment and living resources, the implementation of international and regional commitments, and relevant practices in other regions. They are also designed to suit the current political context in this region. Consequently, there are practical, legal and political rationales for implementing these options. In other words, one can argue for their implementation on the basis of *opinio necessitatis*, which means these actions, though optional, should be carried out because they are necessary for the common good of the region.

Finally, in light of the current political reality of the region, the most suitable way to move forward for the development of a network of MPAs in the SCS is to focus on the first two categories of options: national actions and enhancement of regional cooperation. As discussed earlier, regional cooperation to protect the marine environment and living resources in the SCS is still at a very “under-developed” stage. Furthermore, the SCS disputes have recently created lots of tension between the SCS States that are interested claimants (in particular between China and other contestants

such as Philippines and Vietnam). In this context, it may not be a good time for SCS States to engage in cooperative environmental activities requiring a high level of integration. As also analyzed earlier, the complexity of the disputes would substantially limit the territorial scope of a potential regional regime on MPAs in this region.⁸⁹ Consequently, it would be easier for SCS States to carry out actions suggested in the first two categories of options, which do not require deep national commitments. Those activities could play the role of confidence-building measures to enhance regional cooperation, leading potentially to the creation of a political environment favourable for more integrative regional actions.

⁸⁹ See above 7.3.2 Adopting a Regional Framework Agreement for Marine Protected Areas .

Chapter VIII. Conclusion

This dissertation aims to identify legal and political actions to support the development of a network of MPAs in the SCS to protect its marine environment and living resources. These actions must be in accordance with international law and relevant regional commitments, take into consideration the current practice in other regions and be suitable to the context of the SCS region. To achieve this aim, the dissertation has reviewed, analyzed and evaluated varied information and data. They include the benefits of a network of MPAs for the marine environment and living resources of the SCS; stipulations under international law relevant to the development of a network of MPAs; the status of regional cooperation relating to MPAs and a network of MPAs in the SCS; MPAs in the national laws of China, Philippines and Vietnam; and relevant lessons in the development of a network of MPAs from the MAP.

This exercise resulted in a number of findings which suggest actions to support the development of a network of MPAs in the SCS. These findings are summarized as follows.

First, a network of MPAs could be used to safeguard the valuable marine habitats and species of the SCS, which are under alarming threats of degradation and over-exploitation. It could also serve to promote peace and cooperation between its coastal States, in particular those taking part in the SCS disputes.

Second, there is a general duty to establish MPAs and a network of MPAs under the international law. International instruments also provide the basis, tools to facilitate and guidelines for the establishment of MPAs and a network of MPAs.

Third, MPAs and a network of MPAs have been and could be the basis for cooperation under various regional mechanisms having a competence concerning the SCS. Regional mechanisms that have the specific mandate to protect the marine environment and living resources such as COBSEA and PEMSEA could play the leading role of initiating and coordinating the development of a network of MPAs in the SCS. Other mechanisms such as the DOC and South China Sea Workshops could also support and facilitate this process by undertaking activities such as marine scientific research, raising environmental awareness and carrying out demonstration projects.

Fourth, the legal regimes of MPAs in coastal States that have the largest stakes in the SCS ecosystem have many similarities, including the definition of an MPA, conditions for its designation, and its management and protection. These similarities could facilitate their cooperation in the development of a network of MPAs to protect the SCS.

Finally, the development of regional cooperation network of MPAs under the MAP process provides many important lessons to the SCS. These lessons concern issues relevant to the development of a regional network of MPAs such as adopting a regional framework instrument relating to MPAs, establishing measures to support the development of MPAs and dealing with territorial implications of regional cooperation in offshore areas.

Based on these findings, legal and political actions to support the development of a network of MPAs in the SCS have been suggested under the form of an optional roadmap. This roadmap comprises three categories of actions ranging from more nationally focused actions to the actions that require a high level of regional cooperation. They could be carried alternatively or by the way of a step-by-step approach depending

the evolution of the political situation in the SCS. These actions have been designed to provide support to the development of a network of MPAs in the SCS without adversely affecting the interests and positions of claimants in the SCS disputes. It is the hope of the author of this dissertation that this roadmap could be considered by SCS States as an avenue to work towards the achievement of the region's common good: a peaceful and healthy SCS.

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