

2015

Subnational joint cooperation in marine environmental protection: scalar narratives from the Gulf of Thailand

Shaun Lin
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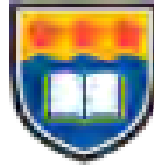
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Lin, Shaun, Subnational joint cooperation in marine environmental protection: scalar narratives from the Gulf of Thailand, Doctor of Philosophy thesis, Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, 2015. <https://ro.uow.edu.au/theses/4700>

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**UNIVERSITY OF
WOLLONGONG**
AUSTRALIA



**SUBNATIONAL JOINT COOPERATION IN MARINE
ENVIRONMENTAL PROTECTION: SCALAR NARRATIVES FROM
THE GULF OF THAILAND**

A thesis submitted in fulfilment of the requirements
for the award of the degree

Doctor of Philosophy
from
University of Wollongong

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September 2015

CERTIFICATION

I, **Shaun Lin**, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Australian National Centre for Ocean Resources and Security (ANCORS), Faculty of Law, Humanities and the Arts, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Shaun Lin

17 September 2015

ABSTRACT

There are several well recognized, if broad, scales of joint cooperation in the protection of the marine environment, ranging from global, to regional and national collaboration. As well as these three scales, joint cooperation may also occur at of a subnational scale (between provinces of two different countries) too. This thesis examines cooperative efforts towards the protection of the marine environment via the United Nations Global Environmental Facility Project entitled “Reversing environmental degradation trends in the South China Sea and Gulf of Thailand” (UNEP/GEF SCS Project) at the subnational spatial scale with the eastern part of the Gulf of Thailand as the empirical case study. Using the conceptual framework of scale in its spatial and political aspects, the thesis investigates via qualitative fieldwork how different actors such as UNEP, central and provincial governments, and local villagers utilise scale in the process of cooperation on the management of transboundary coastal ecosystems between Cambodia, Thailand and Vietnam. In particular, the thesis focuses on two aspects of the UNEP/GEF SCS Project, namely, the strengthening of institutional arrangements for the management of natural resources and the marine environment, and enhancement of public awareness of marine conservation and sustainable resource use.

The collective responses from UNEP personnel, central and provincial governments, and local villagers are then analysed along with the secondary data from UNEP working documents and academic literature. It is uncovered that the transboundary marine environmental collaboration between Kampot province (Cambodia) and Kien Giang province (Vietnam) enjoyed a fruitful partnership and capitalised on UNEP’s technical expertise to develop a Memorandum of Agreement and a plan of cooperation in fisheries management. On the other hand, transboundary marine environmental collaboration between Koh Kong province (Cambodia) and Trat province (Thailand) was fraught with difficulties as poor bilateral relations and coordination restricted cooperative measures. The key outcomes of the thesis, therefore, formulate new rapprochements of academic knowledge in the relevant fields of environmental politics of scale and joint cooperation in marine environmental protection, and offer potential marine environmental protection policies particularly on the subnational scale.

ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to the following people for their support in the completion of this thesis:

My principal supervisor, Prof Clive Schofield has been generous with his advice, guidance and support to me for the past 3.5 years. I could not have asked for a better supervisor who places great faith in my abilities and has made me an overall better scholar. My secondary supervisor, Robin Warner has taught me through her incisive and constructive comments on the intricacies of international law. Her constant kind encouragement is much appreciated.

Members of ANCORS: Myree Mitchell has showered much care and concern upon me, and provided reliable administrative support whenever I needed it. Mary Ann has helped to conceptualise and refined my research aims of the thesis. Lowell has been generous in his time in helping me to format the thesis and sharing useful tips of his own Ph.D. experience. Andi Arsana's assistance in creating excellent maps (Figures 1 and 2) in this thesis is much appreciated. I also thank Carole, Daisy and Harriett for their friendship in my Ph.D. journey. HDR Room 3 holds special memories for me.

All my interview respondents: Thank you for all the hospitality shown, and for the precious time that was generously given to me throughout the fieldwork process. It has truly been a pleasure and honour to meet and learn from each and every one of you.

Friends back in Singapore and NUS Department of Geography: Thank you for your unwavering support for the past 3.5 years.

Family: Thank you for your immense faith in me! I dedicate this thesis to my mother, my pillar of support!

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LIST OF ACRONYMS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BSAP	Baltic Sea Action Plan
BSSSC	Baltic Sea States Sub-regional Cooperation
CBD	Convention on Biological Diversity
COBSEA	Coordinating Body on the Seas of East Asia
DPM	Deputy Prime Minister
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
GEF	Global Environmental Facility
HELCOM	Helsinki Commission
ILC	International Law Commission
IOC	Intergovernmental Oceanographic Commission
IUCN	International Union for Conservation and Nature
JCA	Joint Comprehensive Environmental Action Programme
JDA	Joint Development Area
JDZ	Joint Development Zone
JFC	Joint Fisheries Committee
JPOI	Johannesburg Plan of Implementation
LOSC	United Nations Convention on the Law of the Sea
LMEs	Large Marine Ecosystems
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MEAs	Multilateral Environmental Agreements
NGOs	Non-governmental Organisations
PEMSEA	Partnership in Environmental Management for the Seas of East Asia
PKWS	Peam Krasop Wildlife Sanctuary
RSTC	Regional Scientific and Technical Committee
SAP	Strategic Action Programme
RSP	Regional Seas Programme
SEAs	Specialised Executing Agencies
SCS	South China Sea
TDA	Transboundary Diagnostic Analysis
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WESTPAC	Sub-Commission for the Western Pacific
WSSD	World Summit on Sustainable Development

Chapter 1 INTRODUCTION

1.1 Protecting the Oceans: Joint Cooperation and Scale

The oceans dominate the globe spatially, covering approximately 72 percent of its surface area. These extensive marine spaces are critical to the global environment and human survival in numerous ways- they are vital to the global nutrient cycling, represent a key repository and supporter of biological diversity on a world scale, and play a fundamental role in driving the global atmospheric system. Moreover, the oceans continue to provide a critical source of food through fisheries and aquaculture, are an increasingly significant source of energy resources, and underpin the global economy through sea-borne trade.¹

The significance of oceans for the world's population on earth is clearly captured by the key facts contained in the quote above. The oceans are, therefore, crucial to life on earth.² However, despite the immense value of the oceans, the global community and coastal States particularly face serious challenges to sustain the oceans' significance. These serious challenges come in the form of marine environmental degradation, where depletion of natural resources, loss of marine biodiversity, and marine pollution take place. A few examples highlight this point. The increase in CO₂ due to human activities such as fossil fuel use and terrestrial land-use changes has contributed to the acidification of the global oceans, hampering the living ability of marine organisms (especially those organisms whose skeletons or shells contain calcium carbonate), which, in turn, affects all marine ecosystems because many other marine species depend on such marine organisms for food and habitat.³

Simultaneously the oceans are warming and this is similarly having serious adverse consequences not only for coral ecosystems but for the range and distortion of valuable species such as commercial fish stock.⁴ In this context it can be observed that world per capita fish consumption increased from an average of 9.9 kg in the 1960s to 11.5 kg in the 1970s, 12.6 kg in the 1980s, 14.4 kg in the 1990s, 17.0 kg in the 2000s and reached 18.4 kg in 2009.⁵ These trends point towards further increases in fish consumption in the coming

¹ Robin Warner and Clive Schofield, "Climate Change and the Oceans: Legal and Policy Portents for the Asia Pacific Region and Beyond," in Robin Warner and Clive Schofield (eds.), *Climate Change and the Oceans: Gauging the Legal and Policy Currents in the Asia Pacific and Beyond*, (Cheltenham: Edward Elgar Publishing Limited, 2012), page 1.

² See, for example, Robert Costanza, "The Ecological, Economic, and Social importance of the Oceans," *Ecological Economics* 31(1999), page 200; RIO + 20 United Nations Conference on Sustainable Development, *Issues Briefs No. 4- Oceans*, Rio de Janeiro, Brazil, 20-22 June 2012, page 1

³ Mike Carlowicz, "The Oceans Are Also Feeling the Effects of Acid Rain," *Oceanus* 46 (2008), page 10; Haruko Kurihara, "Effects of CO₂ -driven Ocean Acidification on the Early Developmental Stages of Invertebrates," *Marine Ecology Progress Series* 373 (2008): 275-284.

⁴ Ove Hoegh-Guldberg, "Implications of Climate Change for Asian-Pacific Coastal and Oceanic Environments," in Robin Warner and Clive Schofield (eds.), *Climate Change and the Oceans: Gauging the Legal and Policy Currents in the Asia Pacific and Beyond*, (Cheltenham: Edward Elgar Publishing Limited, 2012): 21-50.

⁵ "The State of World Fisheries and Aquaculture 2012," *Food and Agriculture Organisation (FAO) Report* (2012), page 84.

years. With the continuing environmental degradation in ocean and coastal areas, Johnston and Vanderzwaag describe the marine environment protection situation as a ‘sinking’ feeling at the start of the new millennium.⁶

As a consequence of these adverse influences and activities, the oceans can be described as being in a vulnerable condition. To seek insight into the challenges posed by these problems, this dissertation focuses on the conceptual framework of scale. Scale, like level, is understood as allowing us to declare one event or process a national one and another a global or regional one.⁷ More broadly, scale must also be understood from the perspectives of two wide fields of research. In her study of interdisciplinary resource management, Jennifer Silver first notes that “scale is a concept used by natural scientists to describe the temporal and/or spatial range and magnitude of a process or observation”.⁸ Second, Silver argues that “scale is a concept used by social scientists⁹ to describe social organization and the interactions between those levels of organization”.¹⁰ These considerations of scale in both its spatial and political senses are central to the focus of this thesis on joint cooperation in marine environmental protection as will be explored below.

The transboundary nature of oceans also means more than a single state faces issues of declining marine resources and marine pollution. Recognising this inherently international and transboundary context, the current framework for international oceans governance places considerable emphasis on the protection of the marine environment to ensure that the oceans continue to provide resources and other ecosystem services for humankind. Some of the key international instruments to manage and protect the global marine environment are the 1982 United Nations Convention on the Law of the Sea (LOSC),¹¹ the 1992 Convention on Biological Diversity (CBD),¹² and the Oceans Chapter (Chapter 17) of Agenda 21.¹³ It is

⁶ Douglas M. Johnston and David L. VanderZwaag, “The Ocean and International Environmental Law: Swimming, Sinking, and Treading Water at the Millennium,” *Ocean and Coastal Management* 43 (2000), page 143.

⁷ Andrew Herod, “*Scale*,” (London and New York: Routledge, 2012).

⁸ Jennifer Silver, “Weighing in on Scale: Synthesizing Disciplinary Approaches to Scale in the Context of Building Interdisciplinary Resource Management,” *Society and Natural Resources* 21 (2008), page 922. See also, for other examples, Simon A. Levin, “The Problem of Pattern and Scale in Ecology: The Robert H. MacArthur Award Lecture,” *Ecology* 73 (1992): 1943-1967; Robert V. O’Neill and Anthony W. King, “Homage to St. Michael; Or, Why There are So Many Books on Scale?,” in David L. Peterson and Thomas. V Parker, (eds.), *Ecological Scale*, (New York: Columbia University Press, 1998): 1-15; Nathan F. Sayre, “Ecological and Geographical Scale: Parallels and Potential for Integration,” *Progress in Human Geography* 29 (2005): 276-290; Graeme S. Cumming, David H. Cumming and Charles L. Redman, “Scale Mismatches in Social-Ecological Systems: Causes, Consequences, and Solutions,” *Ecology and Society* 11(1) (2006): 164-183.

⁹ Valverde refers to scale as a “prominent feature in much contemporary social theory, not only in critical geography but across the whole spectrum of critical interdisciplinarity”. See, Mariana Valverde, “Jurisdiction and Scale: Legal ‘Technicalities’ as Resources for Theory,” *Social and Legal Studies* 18 (2009), page 140.

¹⁰ Silver, above n 8, page 229. See also, for other examples, Christopher Brown and Mark Purcell, “There’s Nothing Inherent about Scale: Political Ecology, the Local Trap, and the Politics of Development in the Brazilian Amazon,” *Geoforum* 36 (2005): 607-624; Roderick P. Neumann, “Political Ecology: Theorizing Scale,” *Progress in Human Geography* 33 (2009): 398-406.

¹¹ *United Nations Convention on Law of the Sea*, hereinafter referred to as LOSC, Montego Bay, Jamaica, 4 December 1982. The framework provided by LOSC has achieved broad acceptance among States- 166 State Parties (including the European Union) at the point of writing.

¹² *Convention on Biological Diversity*, hereinafter referred to as CBD, Rio de Janeiro, Brazil, 5 June 1992.

crucial to recognise that the relevant provisions of these international instruments on marine environmental protection are interlinked. For example, Alexander Yankov takes the view that LOSC and Chapter 17 of Agenda 21 share a close association in the development of the international law of the environment in ocean-related matters.¹⁴

In particular, the mechanisms mentioned above in protecting the transboundary marine environment require joint cooperation among States. Under the provision of LOSC on the protection and preservation of the marine environment (Part XII), Article 197 obligates States to cooperate on a global or regional basis:

States shall cooperate on a global basis and, 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.

Similarly, in the CBD, Article 5 also stresses a joint effort, particularly for areas beyond national jurisdiction:

Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity.

These statements were crafted with laudable intentions, but need careful reflection on how they are actually followed and implemented in reality considering they are essentially overarching framework provisions which leave considerable discretion to States Parties in relation to implementation. The terms “global basis”, “regional basis” and “international organisations” indicate cooperative actions taken to prevent and reduce environmental degradation of the oceans at several political and spatial scales of consideration.

1.1.1 Subnational Scale of Joint Cooperation: Looking at the Gulf of Thailand

Joint cooperation in marine environmental protection comes in the form of global, regional and national collaboration. Joint cooperation may also take place at the subnational scale, where provinces in different countries cooperate to manage their transboundary marine environment in their shared waters. The subnational joint cooperation in marine environmental protection differs from multilateral and regional marine environmental protection agreements in the sense that provinces take the lead in the day-to-day operations of transboundary collaboration. It is important to address the subnational scale for a number of reasons. First, because existing forms of bilateral or regional joint cooperation in the

¹³ United Nations Conference on Environment and Development (UNCED), Agenda 21, Chapter 17, *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 Resources*, hereinafter referred to as Agenda 21, Rio de Janeiro, Brazil, 3-14 June 1992.

¹⁴ Alexander Yankov, “The Law of the Sea Convention and Agenda 21: Marine Environmental Implications,” in Alan Boyle and David Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges*, (New York: Oxford University Press, 1999), page 272.

protection of the marine environment tend to witness a development process that frequently consists of a legal framework led by central government officials with little engagement and knowledge of local coastal communities' actual concerns.¹⁵ Second, even when local coastal communities are involved in the consultation and implementation of marine environmental protection schemes, this frequently tends to be restricted to a single country and is often not transboundary in nature.¹⁶

This thesis examines cooperative efforts towards the protection of the marine environment at the subnational spatial scale with the eastern part of the Gulf of Thailand as the empirical case study. A key aspect of this case study was consideration of a major project that encompassed the area of study on the part of the United Nations Global Environmental Facility (GEF). This GEF project, entitled "Reversing environmental degradation trends in the South China Sea and Gulf of Thailand" (UNEP/GEF SCS Project) commenced implementation in January 2002 (although planning started in 1996). In October 1996, UNEP, as an implementing agency of the GEF, approached the GEF Secretariat with a proposal to develop a GEF-funded project encompassing the South China Sea that forms only part of the geographic coverage of the Coordinating Body for the Seas of East Asia (COBSEA). This approach was based on a request from the member governments of COBSEA¹⁷ that a GEF project be developed for the region to address regional environmental management. Pernetta and Bewers note at that time "the GEF was unwilling to fund activities of the Regional Seas Programme of UNEP directly as it did not wish to be seen as funding the activities of regional seas conventions and action plans".¹⁸ Accordingly, UNEP, through its then coordinating office for the GEF, developed a proposal for a GEF project in the South China Sea, including the Gulf of Thailand.¹⁹ This proposal conformed to the GEF approach to funding activities addressing environmental problems in large marine ecosystems (LMEs).²⁰

¹⁵ The Torres Strait Treaty between Australia and Papua New Guinea is one good example. See, Stuart Kaye, "The Torres Strait Treaty: A Decade in Perspective," *The International Journal of Marine and Coastal Law* 9 (1994), pages 328-330.

¹⁶ See, for examples, Edward J. Hind, Malcolm C. Hiponia and Tim S. Gray, "From Community-based to Centralised National Management- A Wrong Turning for the Governance of the Marine Protected Area in Apo Island, Philippines?," *Marine Policy* 34 (2010): 54-62; Nadine Heck and Philip Dearden, "Local Expectations for Future Marine Protected Area Performance: A Case Study of the Proposed National Marine Conservation Area in the Southern Strait of Georgia, Canada," *Coastal Management* 40 (2012): 577-593; Madeline Davey and Josephine Gillespie, "The Great Barrier Reef World Heritage Marine Protected Area: Valuing Local Perspectives in Environmental Protection," *Australian Geographer* 45 (2014): 131-145; Robert E. Katikiro, Edison D. Macusi, K.H.M Ashoka Deepananda, "Challenges Facing Local Communities in Tanzania in Realising Locally-Managed Marine Areas," *Marine Policy* 51 (2015): 220-229.

¹⁷ In 1981, Indonesia, Malaysia, Philippines, Singapore and Thailand, the original five members of the Association of Southeast Nations (ASEAN) approved an action plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region (the East Asian Seas Action Plan) was approved stimulated by concerns on the effects and sources of marine pollution arising from rapid economic development. In 1994, the action plan was revised to include Australia, Cambodia, China, South Korea and Vietnam. Australia is no longer a participating country.

¹⁸ John C. Pernetta and J. Michael Bewers, "Introduction to the Special Issue of Coastal and Ocean Management Entitled the South China Sea Project: a Multilateral Marine and Coastal Area Management Initiative," *Ocean and Coastal Management* 85B (2013), page 127.

¹⁹ Ibid.

²⁰ Ibid.

The project was completed in December 2008.²¹

Seven participating countries (Cambodia, China, Indonesia, Malaysia, Philippines, Thailand and Vietnam) took part in this large and complex regional UNEP/GEF SCS Project.²² In the Gulf of Thailand, a subnational scale of joint cooperation on the management of transboundary coastal ecosystems emerged between Kampot province of Cambodia and Kien Giang province of Vietnam, and between Koh Kong province of Cambodia and Trat province of Thailand (see Figures 1 and 2).²³

²¹ John C. Pernetta and Si Tuan Vo, “The UNEP/GEF South China Sea Project: Lessons Learnt in Regional Cooperation,” *Ocean and Coastal Management* 53 (2010), page 589. The author does not think it is necessary to give a detailed historical development of the UNEP/GEF SCS project in the thesis. A concise description of the development and negotiation process for the SCS project can be found in Sulan Chen, “Environmental Cooperation in the South China Sea: Factors, Actors and Mechanisms,” *Ocean and Coastal Management* 85B (2013), pages 133-136.

²² Being developed countries, Brunei-Darussalam and Singapore were not eligible for GEF financial support and consequently did not participate in the project despite falling under the biophysical region of the South China Sea.

²³ More background information of the subnational sites are provided in detail in Chapter 2.



Figure 1 UNEP/GEF SCS Project at Kampot-Kien Giang provinces
(adapted from UNEP/GEF SCS Project documents)



Figure 2 UNEP/GEF SCS Project at Koh Kong-Trat provinces
 (adapted from UNEP/GEF SCS project documents)

This existence of a distinct subnational scale of joint cooperation resulted in a Memorandum of Agreement (MoA) signed by Kampot and Kien Giang provinces to strengthen environmental protection and biodiversity conservation in the waters between

them²⁴ and a similar framework designed but not signed by Koh Kong and Trat provinces.²⁵ These developments opens a window of opportunity for the present research to explore scalar politics and practical realities in the implementation of marine environment protection schemes by examining the impacts of this subnational cooperation on the ground through fieldwork.

1.1.2 Politics of Scale and Scalar Narratives

Examining first the political aspect of scale, Brown and Purcell alert us to the ‘politics of scale’ in their study of political development in the Brazilian Amazon, arguing that we should be concerned about the strategies pursued by individuals and groups (actors) and their interactions across different levels of social/political organisation to achieve their particular goals.²⁶ As Adam Moore stresses, the focus for research on scale should be the scalar practices of social actors, not scale itself as an analytical category which directs attention away from the various social actors and practices involved in scale politics.²⁷ Having this recognition of the power of scalar epistemology, Moore further argues that “scale politics deserves greater attention: what people *do* with scale categories, how they utilise them to construct space and social relations for specific political aims”.²⁸ The ‘actor’ or ‘agency’ factor, therefore, cannot be erased in the concept of scale.²⁹

For the politics of scale to be unpacked, it is necessary to investigate the scalar narratives between the different actors/agencies. As defined by Sievanen, Gruby and Campbell in their effort to develop the concept of a scalar narrative to show how social and ecological scales are reworked in the development of an ecosystem-based approach to marine management in Fiji:

Scalar narratives associate places, spaces, and processes at particular social, institutional, and geographical scales to explain events, attract attention and funding, and in the process, shift social relations by enrolling and excluding different forms of knowledge, spaces, and groups of people.³⁰

²⁴ Memorandum of Agreement between The Provincial People’s Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), *Policy Framework for Cooperation in the Management of Coastal Ecosystems and Natural Resources*, Kampot, Cambodia, 27 March 2008. See Appendix 2 for this primary document.

²⁵ *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, UNEP/GEF South China Sea Project, Trat Province, Thailand, (18-20 February 2008). See Appendix 3 for this primary document.

²⁶ Brown and Purcell, above n 10.

²⁷ Adam Moore, “Rethinking Scale as a Geographical Category: from Analysis to Practice,” *Progress in Human Geography* 32 (2008), page 211.

²⁸ *Ibid*, page 217.

²⁹ Helga Leitner and Byron Miller, “Scale and the Limitations of Ontological Debate: A Commentary on Marston, Jones and Woodward,” *Transactions of the Institute of British Geographers* 32 (2007), pages 116-118.

³⁰ Leila Sievanen, Rebecca L. Gruby and Lisa M. Campbell, “Fixing Marine Governance in Fiji? The New Scalar Narrative of Ecosystem-based Management,” *Global Environmental Change* 23 (2013), page 208. The three authors draw from Roe (1991), Swyngedouw (1997) and González (2006), to define a scalar narrative as a story about the relationships among processes, scale and outcomes (*ibid*). See Emery M. Roe, “Development Narratives, or Making the Best of Blueprint Development,” *World Development* 19 (1991): 287-300; Erik

In an analogous approach, the author uncovers the scalar narratives between UNEP personnel working on this specific project, and the people they work with, be it Cambodian, Thai and Vietnamese government officials and technical experts, or last but not least the local coastal communities whose lives are connected to the seas on a daily basis.

In the context of unpacking the scalar narratives, it is worth noting that “scale is rendered most meaningful in its development as an empirical generalisation - a concept made real by building up an understanding of complex and dynamic relationships and processes in context”.³¹ Scale is not something that is visible or awaiting discovery, but a crucial way of framing conceptions of reality.³² Thus, as urged by Andrew Herod, we should “remain vigilant as to how our conception of scale shapes how we engage with the material world”.³³

1.2 Research Objectives

The research objectives of this thesis are chiefly shaped by the objectives of the UNEP/GEF SCS Project to enhance and strengthen cooperation between Kampot province of Cambodia and Kien Giang province of Vietnam, and between Koh Kong province of Cambodia and Trat province of Thailand. Although there were slight differences between the goals of the two transboundary coastal ecosystem project sites, there were two distinct overlaps when the UNEP/GEF SCS Project documents of both transboundary sites were compared.³⁴ The first overlapped objective was to strengthen transboundary subnational institutional arrangements for management of natural resources and marine environment in the shared waters. The second overlapped objective was to enhance public awareness of marine conservation and sustainable resource use. Based on the two overlapped objectives, the thesis will aim to present comparative scalar narratives from the two subnational joint cooperation coastal sites.

Within this framework, the aims of the thesis were to fulfill five objectives.

- The first objective was to map out key marine environmental and political challenges in the Gulf of Thailand (especially in the eastern part where the four provinces are located) as part of the contextual research setting.

Swyngedouw, “Excluding the Other: the Production of Scale and Scaled Politics,” In Roger Lee and Jane Willis, (eds.), *Geographies of Economies*, (Arnold: London, 1997): 167-176; Sara González, “Scalar Narratives in Bilbao: a Cultural Politics of Scales Approach to the Study of Urban Policy,” *International Journal of Urban and Regional Research* 30 (2006): 836-857.

³¹ Richard Howitt, “Scale,” in John Agnew, Kathryn Mitchell and Gerald Toal, (eds.), *A Companion to Political Geography*, (Oxford: Blackwell, 2003), page 151.

³² David Delaney and Helga Leitner, “The Political Construction of Scale,” *Political Geography* 16 (1997), pages 94-95.

³³ Herod, above n 7, page 251.

³⁴ See, Memorandum of Agreement between The Provincial People’s Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), above n 24, page 9; *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, above n 25, pages 25-26.

- The second objective was to highlight local perceptions of coastal communities in relation to their concerns and/or roles played in the joint cooperation in the management of those selected transboundary coastal ecosystems.

It is important to uncover the coastal communities' thoughts and feelings, paying close attention to their roles in the UNEP/GEF SCS Project and raising awareness of 'voices' from the border regions in these three countries. Although many environmental issues are construed as global issues, requiring global solutions and global collaboration, the environment is, however, valued differently across scales, creating 'multiple' environments or more specifically, contested environmental thinking and policies.³⁵ Furthermore, local communities' concerns over their marine environment are part of national and possibly regional environmental issues to address but they could be subject to lesser attention given by their central governments and regional organisations. Therefore, by engaging in the different environmental thoughts of local communities utilising marine resources on a daily basis that are of critical importance to them, it is more likely to contribute a wider range of opinions from a bottom-up analysis concerning joint cooperation in the management of those selected transboundary coastal ecosystems.

- The third objective was to investigate the implementation of the UNEP/GEF SCS Project at the national scale. People working in national agencies or serving as independent technical experts that play a part in the three countries management of coastal ecosystems, with particular reference to the fisheries were interviewed.

This was considered critical because coastal communities in the area under consideration tend to rely on fishing as subsistence and/or occupations. It is worth noting that national environmental management policies could also integrate international legal instruments and obligations under those instruments into their formulation and national agencies may pay little attention to specific place characteristics and the views of local communities in the implementation of those policies.

The second and third objectives of the thesis echo Papanicolopulu's call to further develop the international legal regime, providing an adequate place for persons as active participants in the LOSC.³⁶ Although Papanicolopulu is mainly arguing in the context of persons at sea (seafarers), the author seeks to expand this idea of having a place for persons in the LOSC to local coastal villagers and local environmental officials along the coast in relation to managing coastal ecosystems.

- The fourth objective was to obtain views from the people who were main figures in the UNEP/GEF SCS Project.

³⁵ Sally Eden, "Environment," in Rob Kitchin, Nigel Thrift, Noel Castree, Mike Crang, Mona Domosh, Kay Anderson, Paul Cloke, Jeremy Crampton, Brian Graham, Costis Hadjimichalis, Phil Hubbard, Robin Kearns, Mei-Po Kwan, Loretta Lees, Sara McLafferty, Anssi Paasi, Chris Philo, James Sidaway, Katie Willis and Henry Yeung (eds.), *International Encyclopedia of Human Geography*, (Oxford: Elsevier, 2009), pages 514-515.

³⁶ Irimi Papanicolopulu, "The Law of the Sea Convention: No Place for Persons?," *The International Journal of Marine and Coastal Law* 27 (2012): 867-874.

The cross-border collaborations between the four provinces were and continued to be influenced and largely led by the UNEP/GEF programme up to 2008. Notable personnel include Dr. John Pernetta (Project Director) and Christopher Paterson (Fisheries Expert) to shed light on the engagement of local communities and government officials to implement marine environment protection in the transboundary coastal ecosystems. Interviewing UNEP personnel where some of them are scientists and technical experts would help to flesh out “stories” about conservation, illuminating future options in coastal and marine policy.³⁷

- The fifth and last objective was to analyse and synthesise the respective opinions from the three groups mentioned above to tease out the similarities and differences in opinions in relation to their respective agendas towards the UNEP/GEF South China Sea Project.

By unveiling the intricacies of the interactions between the various parties, the thesis hopes to provide an informed scalar narrative analysis on how a common platform could be reached to carry out effective joint cooperation on the management of transboundary coastal ecosystems in the eastern part of the Gulf of Thailand and inform policy development at other sites elsewhere in the future.

To address the above issues, a few key questions surrounding scale are considered. As stated and explained earlier in Section 1.1.2, the thesis is concerned with uncovering the scalar narratives in which how the politics of scale (strategies) were played out by the different actors within and between different spatial scales. The key research question for this thesis is:

- How did different parties utilise scale in the process of cooperation on the management of transboundary coastal ecosystems between Cambodia, Thailand and Vietnam in the eastern part of the Gulf of Thailand?

The thesis also examines the following sub-questions :

- How did politics of scale influence the strengthening of institutional arrangements for the management of natural resources and the marine environment?
- How did politics of scale shape the enhancement of public awareness of marine conservation and sustainable resource use?
- How can we improve joint cooperation on marine environmental protection at the subnational scale based on the scalar narratives gathered?

These questions mentioned above provide focus for the intended enquiries on joint cooperation in management of transboundary coastal ecosystems in the eastern part of the Gulf of Thailand.

1.3 Significance and Limitations of the Research

³⁷ Heather M. Leslie, Erica Goldman, Karen L. McLeod, Leila Sievanen, Hari Balasubramanian, Richard Cudney-Bueno, Amanda Feuerstein, Nancy Knowlton, Kai Lee, Richard Pollanc and Jameal F. Samhour, “How Good Science and Stories Can Go Hand-in-hand,” *Conservation Biology* 27 (2013): 1126-1129.

This thesis addresses a timely and relevant issue in the eastern part of the Gulf of Thailand where the three littoral States are facing a myriad of marine environmental problems.³⁸ This discloses an urgent need for joint efforts to ensure sustainable use of living and non-living resources and protection of coastal ecosystems. In particular, by proposing scale as a conceptual framework in this academic study, the thesis demonstrates how we can better integrate ‘top-down’ and ‘bottom-up’ approaches in improving coastal ecosystems. Moreover, the research will provide a detailed empirical study backed by grounded fieldwork. This illuminates the meaning and content of successful environmental policies by involving local communities in public participation³⁹ and detailed cross checking of views across scales and space.

The research emphasis on joint cooperation may be centred on the border regions and the surrounding coastal waters only, but by exploring differences in the geographically restricted areas on a subnational scale in cross-border engagement this study is designed to provide better ideas on how to construct larger and more extensive marine environmental protection plans in future. This is in the view of the author more useful than an approach which for example, creates a huge marine protected area for joint management that covers the entire eastern part or even the whole of the Gulf of Thailand by following general international legal instruments at the start, then tries to bring in coastal communities’ concerns later on to reach a compromise between preserving the marine environment and the societal livelihoods of these communities.

Starting with smaller-scale joint cooperation projects in the eastern part of the Gulf of Thailand is also more realistic simply because of enduring maritime boundary disputes between Thailand and Cambodia that would restrict the feasibility of joint cooperation over areas that encompass overlapping maritime claims. Therefore, one of the explicit contributions of this thesis lies in the potential assistance it may offer to the Cambodian, Thai and Vietnamese governments in terms of how to formulate future or improved national policies which incorporate at the subnational scale cross-border joint cooperation in management of transboundary coastal ecosystems. Through the repository of information gathered from conducted fieldwork, it complements the data and opinions of the three States from their experiences on the UNEP/GEF SCS Project, which could translate into slowly expanding the spatial size and depth of joint cooperation to include more provinces and cover remaining areas that do not have overlapping maritime claims.

Beyond the immediate States concerned, this study speaks to a broader audience of scholars and policy-makers interested in marine environmental protection, joint cooperation in maritime spaces, and politics of scale in coastal environments. The thesis adds a distinct contribution to the burgeoning literature on joint cooperation in marine environmental protection through its focus on the subnational scale which is underdeveloped in academic discourse. The subnational scale of cooperation is important to examine in detail here in this thesis because it provides a window on how joint cooperation can be taken further for potential bilateral and/or regional collaboration in marine environmental protection. The

³⁸ This is particularly dealt with in Chapter 2 where the environmental problems of the Gulf of Thailand are examined in detail.

³⁹ It is now common to see policy planning involving public participation in varying degrees. However, Holland has argued that ‘public consultation, inappropriately pursued, will not enhance policy coherence or policy legitimacy.’ Ian Holland, “Consultation, Constraints and Norms: The Case of Nuclear Waste,” *Australian Journal of Public Administration* 61 (2002), page 77.

empirical case studies presented in this thesis also can be cross-compared with other places that have joint cooperation on marine environmental protection to contribute even more significant insights into crafting more relevant oceans governance suited to different parts of the world, particularly those marine environmental projects that engage local communities. In addition, this piece of research discusses joint cooperation in the Gulf of Thailand beyond the current empirical observations written by other authors who have chiefly focused on the joint development zone between Thailand and Malaysia in the south.⁴⁰

It must be stressed that the thesis has limitations in covering the full scope of marine environmental protection in the eastern part of the Gulf of Thailand. The thesis does not discuss seabed oil and gas reserves and the associated decommissioning of the offshore platforms in the central part of the Gulf of Thailand. This is not to deny the importance of this issue as it is widely recognised as one of the main sources of marine environmental degradation.⁴¹ However, to sustain a deep focus and analysis, this thesis assesses only the areas defined by the UNEP/GEF SCS Project (see rectangular areas drawn in Figures 1 and 2) of the four researched provinces. Additionally for obvious reasons including practical fieldwork access and time management issues, this research endeavour has opted not to spread itself too thinly in terms of the range of topics that could be covered. Nevertheless, it is hoped that this piece of research will provide a meaningful contribution to the understanding and implementation of better marine environmental protection schemes in the transboundary coastal ecosystems in the Gulf of Thailand with potential applicability beyond this sub-region.

1.4 Research Methods

1.4.1 Primary and Secondary Data Research

Primary and secondary documents form the backbone of the thesis research. A total of twenty-five primary documents dating from 2000 to 2009 were sourced and downloaded from the UNEP/GEF SCS Project website.⁴² Significant primary documents take account of several progressive meeting reports between the management teams of the demonstration sites at the four researched provinces. Other important primary documents include the Memorandum of Agreement between The Provincial People's Committee of Kien Giang

⁴⁰ For discussions on the joint development zone between Thailand and Malaysia, see David Ong, "The 1979 and 1990 Malaysia-Thailand Joint Development Agreements: A Model for International Legal Co-operation in Common Offshore Petroleum Deposits?," *The International Journal of Marine and Coastal Law* 14 (1999): 207-246; May Tan-Mullins, "The Implication of Seabed Energy Resource Development: The Gulf of Thailand Case," in Clive Schofield (ed.), *Maritime Energy Resources in Asia: Energy and Geopolitics*, (NBR Special Report #35, 2001): 85-108.

⁴¹ For a recent example, see Youna Lyons, "Transboundary Pollution from Offshore Oil and Gas Activities in the Seas of Southeast Asia," in Robin Warner and Simon Marsden (eds.), *Transboundary Environmental Governance in Inland, Coastal and Marine Areas*, (Farnham, Surrey, Ashgate Publishing, 2012): 167-202.

⁴² Primary documents were obtained from <http://www.unepscs.org/>

Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia),⁴³ a key UNEP/GEF SCS Project legal report that reviews the instruments and mechanisms for strengthening marine environmental cooperation in the South China Sea,⁴⁴ and the Terminal Report of the UNEP/GEF SCS project.⁴⁵ The content of the primary documents were analysed chronologically and topically based on the locales where the researcher took note of any important progress and impediment in the developed subnational joint cooperation of marine environmental protection.

Secondary materials gathered are largely centred on academic writings and to a small extent, newspaper accounts. Of particular note, there is a special academic peer-reviewed issue on the UNEP/GEF SCS Project in *Ocean and Coastal Management*.⁴⁶ This special issue highlights articles written by the UNEP personnel and technical experts involved in various aspects of the SCS project, covering topics ranging from management of the sub-projects and their outcomes and their applicability to other multilateral cooperative initiatives. The special issue is also the first GEF project to have its results published in peer-reviewed academic literature. John Pernetta notes that the fact that “the GEF itself does not encourage international publication of project results and outcomes is also not surprising because they require information dissemination on outcomes via the world-wide web and grey literature publications that are more designed for publicity purposes rather than the dissemination of knowledge”.⁴⁷

1.4.2 Interviews

An ethnographic approach is also taken to complement the documentary or textual research. As Steve Herbert eloquently puts it:

How better to determine how place and agency intertwine and recreate each other than by closely examining how different social groups meaningfully define, inhabit, manipulate and dominate space?⁴⁸

The primary motivation and objective of this study is to tease out and elucidate the array of opinions on joint cooperation in managing transboundary coastal ecosystems in the four researched provinces. In unpacking the range of sentiments to shape the analysis of the research topic, an ethnographic approach is thus critical to examine how the different actors involved negotiate and renegotiate the marine environmental protection measures. An

⁴³ Memorandum of Agreement between The Provincial People’s Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), above n 19.

⁴⁴ Shelley Lexmond, “Review of Instruments and Mechanisms for Strengthening Marine Environmental Cooperation in the South China Sea,” *UNEP/GEF/SCS Technical Publication No. 17* (2008).

⁴⁵ John C. Pernetta, *Terminal Report of the UNEP/GEF Project Entitled: Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand* (2009).

⁴⁶ John C. Pernetta and J. Michael Bowers (eds.), “Special Issue on South China Sea,” *Ocean and Coastal Management* 85B (2013): 125-276.

⁴⁷ John C. Pernetta, “Editorial. The South China Sea Project: A Multilateral Marine and Coastal Area Management Initiative,” *Ocean and Coastal Management* 85B (2013), page 126.

⁴⁸ Steve Herbert, “For Ethnography,” *Progress in Human Geography* 24 (2000), page 551.

ethnographic approach also provides the various actors in the Gulf of Thailand with a means to tell their own stories about scale, following directly from Moore's statements of what people *do* with scale categories to achieve their specific political aims.⁴⁹

To support this ethnographic approach, the fieldwork methodology undertaken was qualitative in nature.⁵⁰ Semi-structured, open-ended interviews were conducted. This form of interview was preferred to fully structured interviews as each interview was conducted with a flexible approach to the interviewee's responses. For example, some interviewees were able to comment more on certain issues because they were directly involved in that particular matter and were asked to elaborate further. Carrying out interviews was also preferred to large questionnaire surveys as the author perceives surveys as being unable to capture the nuances of exact concerns and feelings that may be expressed in interviews. Interviews are better able 'to understand parts of the world as they are experienced and understood in the everyday lives of people who actually 'live them out'.'⁵¹

Hence, conducting interviews facilitated a form of critical dialogue between the researcher and interview respondents. In depth interviews were carried out with three main groups: 1) villagers of coastal communities that were involved in the UNEP/GEF SCS Project, 2) local technical experts from universities or research institutions who are experts in their respective fields or from the government sector such as the Ministry of Environment, that assisted the UNEP personnel to link up with the coastal communities, and 3) relevant UNEP personnel that were engaged directly and/or indirectly in the marine environmental projects in the four provinces. The interviewees from the second and third groups were selected from the pool of candidates involved in the UNEP/GEF SCS Project, where the primary documents have listed their names along with their email addresses and contact numbers. Interviews with villagers were facilitated with the help of local environmental officials and former technical experts who worked with them in the UNEP/GEF SCS Project. Further details on how these three interviewee groups were reached out are addressed in the next sub-section. As for ethical considerations, only UNEP personnel interviewees are identified because of the very small pool of candidates and the easy linkage to their respective identities based on the key appointments they held during the UNEP/GEF SCS Project. The interviewees from the first two groups remain anonymous, with only their roles in the UNEP/GEF SCS Project and residing provinces stated. Doing fieldwork across multi-sited scales is especially important for revealing the working of complex power relations⁵² in the UNEP/GEF SCS Project.

A total of 46 semi-structured interviews were conducted in Cambodia, Singapore, Thailand and Vietnam over the period of December 2012 to July 2013, out of which four were conducted with former UNEP personnel. The interviews conducted with former UNEP personnel, central government officials and former demonstration site managers were conducted in English. Interviews conducted with provincial government officials were conducted in English or in their local language with aid from an accompanying translator. All

⁴⁹ Moore, above n 27.

⁵⁰ The list of interview questions is provided in Appendix 1.

⁵¹ Ian Cook and Mike Crang, "*Doing Ethnographies*," (Norwich: Geobooks 1995), page 4.

⁵² Irus Braverman, "Who's Afraid of Methodology?: Advocating a Methodological Turn in Legal Geography," in Irus Braverman, Nicholas Blomley, David Delaney and Alexandre Kedar (eds.), *The Expanding Spaces of Law: A Timely Legal Geography*, (Stanford, Stanford University Press, 2014): 120-141.

interviews with local coastal communities were conducted in their local language with help from the researcher's translator. Having a local translator in the three countries was essential as villagers tend to be unable to converse in English. Furthermore, the author does not speak Khmer and Vietnamese, and is only competent in conversational Thai and not entirely fluent to undertake interviews.

Questions were asked in English by the author while the translator translated into the local language to ask the villager and further translated back into English for the author to take field-notes. The researcher was aware that some of the questions asked and answers given may not fully capture all nuances of the interview, but the researcher did slow down and clarify doubts whenever there was a long pause by the respondent and/or the answer did not match the question asked in terms of relevance. All interviews lasted, on average, 45 minutes. Some were significantly longer, others shorter. All interviews were also conducted at a time and place suited to the respondents' convenience. Interviews were recorded and transcribed, except in some cases where consent was not obtained the author took field notes instead. The collected interview information was mapped into analytical categories based on the research locales. A list of the interview questions is provided in the appendix.

The author notes that not an equal number of interviewees were attained across the study site provinces and different stakeholder groups. It is therefore hard to fully demonstrate representative scalar narratives. Context-based interview data collected from the various stakeholder groups, however, shed more light by providing further information and thoughts on the actual consequences of the UNEP/GEF SCS Project conducted in the Gulf of Thailand.

1.4.2 Participant Observation

Participant observation was undertaken to supplement interviews. The participant observation was overt in nature where the author actively observed and took field notes at the villages and former demonstration sites to build detailed descriptions from the ground up.⁵³ These included walking along the mangrove trails and beach, taking boat rides to outlying smaller islands off the main coast, and observing fishing activities. The informal activities provided the author valuable opportunities to observe the locals' 'flow of everyday life'⁵⁴ and to appreciate nuances within their societies. This is important in the context of taking note of recent developments after the UNEP/GEF SCS Project ceased in the four researched provinces, particularly in relation to the conservation management of transboundary coastal resources.

Permission was also asked to take pictures that are relevant to the thesis research. This was to prevent any discomfort with the villagers that the researcher may be "taking things for granted" during fieldwork. Documentary research in the form of photographs has the ability to construct knowledge of places, and impart a way of seeing the changing 'visible' landscape,⁵⁵ therefore reinforcing the strength of the arguments presented.

⁵³ Eric Laurier, "Participant Observation," in Nicholas Clifford, Shaun French and Gill Valentine, (eds.), *Key Methods in Geography*, (London: Sage, 2000): 116-130.

⁵⁴ Iain Hay (ed), *Qualitative Research Methods in Human Geography*, (South Melbourne, Victoria; Oxford: Oxford University Press, 2000). 339pp.

⁵⁵ Gillian Rose, *Visual Methodologies*, (London: Sage, 2001). 231pp.

1.4.3 Fieldwork Considerations and Challenges

Researching a specific UNEP/GEF SCS Project that required the carrying out of interviews beyond UNEP personnel entailed an initial contact enquiry with the Project Director to verify the feasibility of this approach. An email was sent to John Pernetta, Project Director of the UNEP/GEF SCS Project in August 2012, during the researcher's preparation for the research proposal review seminar. A positive reply was followed by proper fieldwork preparation. The author arranged a meeting with John Pernetta at Bangkok to discuss fieldwork execution in December 2012. Given the researcher's profile as a postgraduate student, John Pernetta's reference was helpful in setting up contact with the respective local technical experts who may have been apprehensive to meet the candidate if he was to approach them directly.

The detailed fieldwork preparation and execution included a long chain of persons to contact and meet in a snowballing process, but it reveals that undertaking the necessary interviews conducted depended, to a large extent, on the researcher building a relationship of trust and support with people involved. In other words, technical experts interviewed expected the author to have spoken with the UNEP/GEF staff that they worked with, and the coastal communities perceived that the researcher had already engaged the people 'higher-up' before coming to their villages.⁵⁶ That said, this is not meant to imply that interview respondents insisted that the researcher must have fulfilled all these requirements before granting interviews. Most respondents (especially villagers) did, however, express interest in the candidate's Singaporean background and research interests on this specific marine environmental protection project in the Gulf of Thailand considering that the researcher is neither a UNEP working staff member nor a citizen of the three researched coastal States. The author thinks that his Singaporean postgraduate researcher background arguably helps the villager respondents and local environmental officials in particular to 'open up' and speak more candidly about their feelings and thoughts about the UNEP/GEF SCS Project held in their locales. This is because they need not 'fear' of upsetting or offending non-central government official/UNEP personnel with their truthful remarks.

In Trat province, the author managed to secure a homestay with one of the key locals that was involved in the demonstration site's development during the UNEP/GEF SCS Project. This was helped by the recommendation of the former demonstration site leader in Thailand who acted as a gatekeeper. Subsequently, the homestay host acted as a gatekeeper for the author's interview engagement with the local coastal community. Homestays were, however, not secured in Cambodia and Vietnam. Nevertheless, this did not deter the author's efforts in reaching out to the local coastal villagers in Kampot, Kien Giang and Koh Kong provinces. The author and his translator made repeated visits to the villages with the local environmental officials acting as gatekeepers. There were times when the researcher felt that villagers may feel compelled to give 'politically-correct' answers in the presence of the accompanying provincial environmental official. To address this specific challenge, the author suggested going on a walk around the village's coastal area with the interview respondent taking the lead. This method was found quite useful in two respects. First, the accompanied gatekeeper may not choose to follow and mingle with other villagers in the village. Second, most interview respondents that brought the author and his translator around

⁵⁶ Technical experts especially were also interested in whether the author visited field sites and talked or had the intention to talk with the local villagers. Villagers, on the other hand, questioned whether the researcher had links with a non-governmental organisation that deals with environmental protection.

the village were found to be more enthusiastic in opening up their thoughts on the UNEP/GEF SCS Project and the current local coastal environmental conditions as they pointed to conservation efforts, coastal development and/or degradation in their specific locales.

1.5 Thesis Structure

Chapter 2 opens by providing ecological, environmental, and political background information on the Gulf of Thailand and the specific field sites in the two transboundary coastal ecosystems. It also fore-grounds the context in which the Gulf of Thailand has served as a contested site for overlapping maritime claims in contemporary times despite joint cooperative measures taking place among the littoral States.

Chapter 3 reviews extant literature on the various spatial scales of joint cooperation in marine environmental protection of the marine environment (global, regional, national-bilateral and subnational) in light of the politics of scale framework. The literature review is also undergirded by discussions on two principles and a concept surrounding the researched areas: sustainable development, duty to prevent transboundary harm, and fisheries *refugia*.⁵⁷ These conceptual tools are to aid in the analysis of scalar narratives in the empirical chapters.

Chapters 4 and 5 are empirical chapters that discuss the findings of the author's research through the scalar narratives uncovered. Chapter 4 addresses the strengthening of institutional arrangements while Chapter 5 looks at the enhancement of public awareness in marine conservation. Drawing on the responses from Chapter 4 and 5, Chapter 6 reviews the findings of this study. It proposes detailed policy options for the four researched provinces (Kampot, Kien Giang, Koh Kong and Trat) to improve their subnational cooperation in marine environmental protection. Chapter 6 also offers some insights in transposing the insights from the Gulf of Thailand to other areas for application.

Chapter 7 concludes the thesis. It summarises the main findings from this study. The chapter ends with a few closing thoughts on subnational joint cooperation in marine environmental protection and the environmental issues in the Gulf of Thailand.

⁵⁷ This is a novel approach developed to integrate fisheries and habitat management in the UNEP/GEF SCS project. The following chapters will contain more elaboration on fisheries *refugia*.

Chapter 2

BACKGROUND INFORMATION ON THE GULF OF THAILAND AND RESEARCHED FIELD SITES

2.1 Introduction

This chapter provides further background information on the research locations. It is pertinent to briefly mention the geographical setting, political challenges, ecological and environmental conditions to facilitate the reader's understanding of the specific characteristics of the research locations. The first focus is the Gulf of Thailand as a whole, with its physical setting, general maritime claims and political geography, shared living and non-living resources, as well as environmental threats to the Gulf being highlighted. Attention then turns to the eastern part of the Gulf of Thailand, where coverage of Cambodia, Thailand and Vietnam's claims to maritime jurisdiction are examined in detail. Lastly, the geographical and ecological profiles of the UNEP/GEF SCS Project field sites at the four provinces are presented.

2.2 Gulf of Thailand

2.2.1 Physical Setting

“The Gulf of Thailand may be considered to lie north of a line measuring 204 nautical miles (NM) joining Mui Ca Mau, the southern point of Vietnam's mainland, and the coast of Malaysia near Kota Bahru at 6° 12'N, 102° 20'E, extending northwards for a distance of 400 NM to the head of the rectangular Bight of Bangkok”.¹ It is a semi-enclosed sea located in Southeast Asia with a total surface area of approximately 82,715 square nautical miles (NM²) (283,700 km²).² It constitutes a portion of the shallow Sunda Shelf, opening to the South China Sea. The Gulf of Thailand is bordered by four littoral States, clockwise from the southwest, by Malaysia, Thailand, Cambodia and Vietnam. The coastal geography of this marine region is complex, with several islands of varying sizes dotting the coastline, the larger among them Ko Chang and Ko Samui of Thailand and Phu Quoc island of Vietnam.³ The Gulf is generally a shallow sea with an average depth of around 50 metres with a maximum depth of approximately 83 metres in the central part.⁴ The Gulf also constitutes a portion of the Sunda Shelf, sharing a strong functional relationship with the South China Sea.⁵

¹ Victor Prescott, *The Gulf of Thailand*, (Kuala Lumpur: Maritime Institute of Malaysia, 1998), page 10.

² Ibid, page 11.

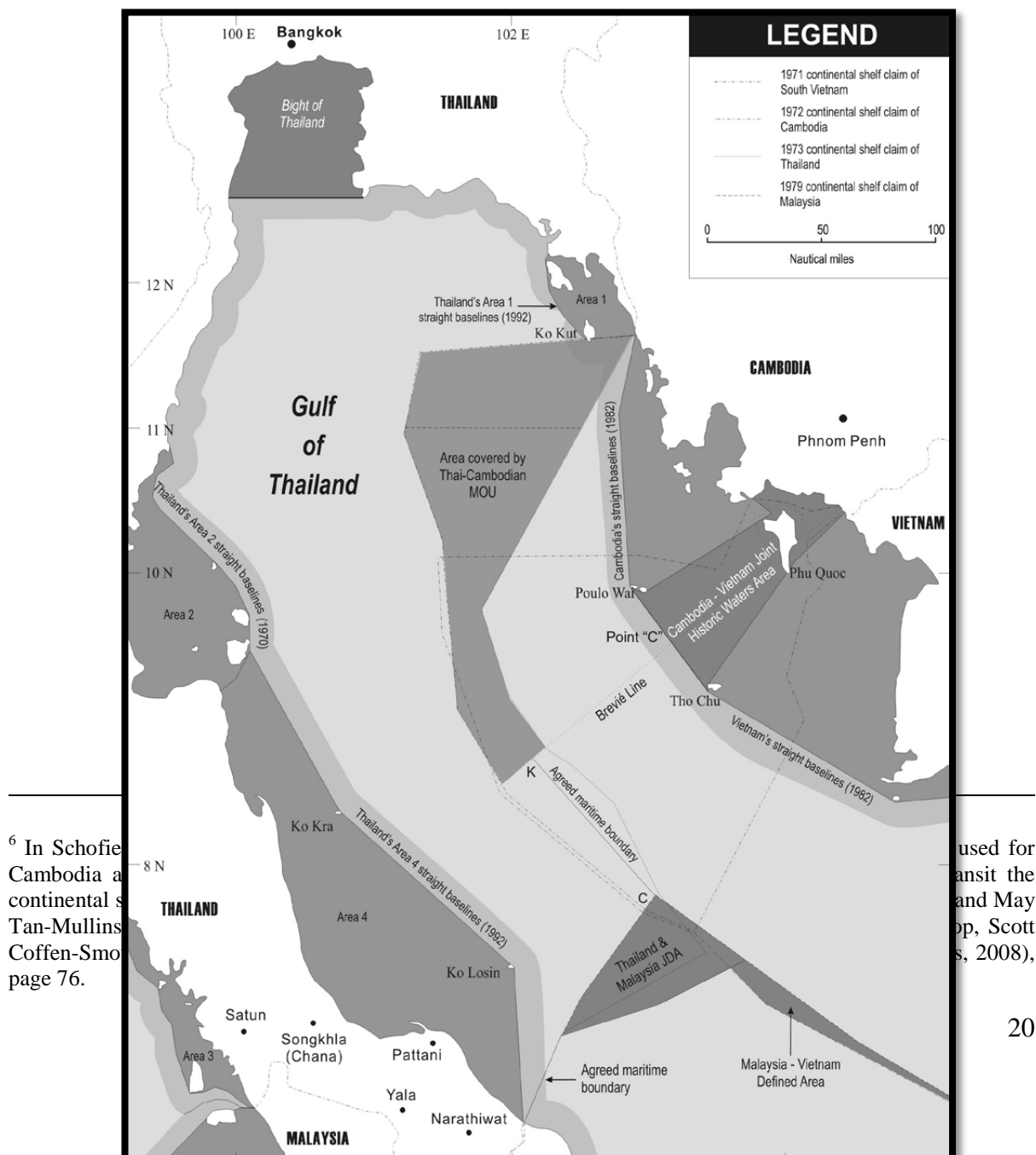
³ For more detailed information of the complex coastal geography of the Gulf of Thailand, see, for examples, Kriangsak Kittichaisaree, *The Law of the Sea and Maritime Boundary Delimitation in South-East Asia*, (Oxford: Oxford University Press, 1987), pages 97-99; “*Sailing Directions (Enroute): South China Sea and the Gulf of Thailand, Publication No. 161*”, National Geospatial-Intelligence Agency, United States Government (2014), pages 156-190.

⁴ Clive Schofield, *Maritime Boundary Delimitation in the Gulf of Thailand*, (Unpublished PhD thesis, Durham University, 1999).

⁵ May Tan-Mullins, “The Implication of Seabed Energy Resource Development: The Gulf of Thailand Case,” in Clive Schofield (ed.), *Maritime Energy Resources in Asia: Energy and Geopolitics*, (NBR Special Report #35, 2011), page 87. The International Hydrographic Organization (IHO) also defines the South China Sea as a semi-enclosed body of water stretching from South Sumatra to the northern tip of Taiwan, in which it covers the Gulf of Thailand.

2.2.2 Maritime Claims and Political Geography

The four littoral States have claimed extended zones of maritime jurisdiction including exclusive economic zones (EEZs) of up to 200 NM in the Gulf. As the coasts of countries in the Gulf of Thailand are less than 400 NM apart, overlapping maritime claims result (see Figure 3). This means that maritime boundary delimitation is necessary between those coastal States in the relatively confined maritime space, creating a complex, multi-jurisdictional scenario in the Gulf. Additionally, Schofield and Tan-Mullins note that the Gulf's restricted area means that its littoral States, particularly Cambodia and Thailand, are 'zone' and 'shelf locked'.⁶



⁶ In Schofield and Tan-Mullins, *Maritime Claims in the Gulf of Thailand*, page 76.

used for transit the and May pp, Scott s, 2008),

(Source: Clive Schofield et al, 2011, page 6).⁷

Successful maritime boundary delimitation negotiations are rare in the Gulf of Thailand. In fact, to date, the only maritime boundaries to be delimited have been a 1979 territorial sea border and a partial section of continental shelf boundary between Malaysia and Thailand⁸ and a 1997 delimitation concerning continental shelf and EEZ rights in the central Gulf reached between Thailand and Vietnam.⁹ As a result, several distinct spatial zones emerged in a highly complex maritime map of the Gulf of Thailand consisting of areas of undisputed waters generally lying towards the coast, joint development areas, joint historic waters and unresolved overlapping claims.¹⁰

To provide a brief example of this complexity, the Malaysia-Thailand joint development area (JDA) is taken as an example.¹¹ Despite some progress in their maritime boundary delimitation negotiations, disputes over the status of an offshore feature, Ko Losin (see Figure 3), and its potential impact on claims to maritime jurisdiction limit any further progress.¹² As such, with an eye to the prospective oil and gas resources of the continental shelf, on 21 February 1979 the two countries signed a Memorandum of Understanding (MoU) *Memorandum of Understanding Between Malaysia and the Kingdom of Thailand on the Establishment of the Joint Authority for the Exploitation of the Resources of the Sea-Bed in a Defined Area of the Continental Shelf of the Two Countries in the Gulf of Thailand*, in order to lay out the basic principles of joint development of seabed resources.¹³ This was followed by another agreement to put the terms of the MoU into practice on 30 May 1990, which is the *Agreement between the Government of Malaysia and the Government of the Kingdom of Thailand on the Constitution and Other Matters Relating to the Establishment of the Malaysia-Thailand Joint Authority*.¹⁴

⁷ Clive Schofield, Ian Townsend-Gault, Hasjim Djalal, Ian Storey, Meredith Miller and Tim Cook, “From Disputed Waters to Seas of Opportunity: Overcoming Barriers to Maritime Cooperation in East and Southeast Asia, (NBR Special Report #30, 2011), page 6.

⁸ Jonathan I. Charney and Lewis M. Alexander (eds.), *International Maritime Boundaries. Volume I and II*, (Dordrecht: Martinus Nijhoff, 1993), pages 1096-1098 and 1105-1107.

⁹ Jonathan I. Charney and Robert W. Smith (eds.), *International Maritime Boundaries. Vol. IV*, (Martinus Nijhoff: The Hague, 2002), pages 2683-2694.

¹⁰ To better understand the geographical and political complexity of the Gulf of Thailand, see, Clive Schofield, “Unlocking the Seabed Resources of the Gulf of Thailand,” *Contemporary Southeast Asia* 29 (2007): 286-308.

¹¹ The author purposefully chose this particular Malaysia-Thailand example to provide a more general example of the Gulf of Thailand’s political geography context as the rest of the specific examples concerning Cambodia-Thailand and Cambodia-Vietnam are better fitted in the next sub-section.

¹² Schofield, above n 10, page 290.

¹³ Charney and Alexander, above n 8, pages 1107-1111; Schofield, above n 10, page 291.

¹⁴ Charney and Alexander, above n 8, pages 1111-1123; Schofield, above n 10, page 292.

It took over a decade of negotiations in order to implement the principles of the MoU and turn it into a binding agreement. It is worth noting that despite the time it took, the Malaysia and Thailand JDA is not a total success and remains an issue of border environmental concern in the south of Thailand even up to recent times.¹⁵ This is because coastal communities were protesting about environmental pollution and detrimental socio-cultural impacts from the construction of a gas-separation plant as well as on and offshore pipelines to bring gas extracted from the JDA, delaying the project repeatedly.¹⁶ This is the kind of subnational scale response associated with the political geographical setting of the Gulf of Thailand that this thesis intends to examine in order to map out other similar complexities in the specific research areas.

2.2.3 Shared Resources in the Gulf of Thailand

2.2.3.1 Fishery Resources

Fishery resources are of immense traditional importance to the States of the Gulf of Thailand. However, escalating demand for fish from the littoral States' populations for food and the incentive of earning lucrative sums through exports to countries like China and Singapore have caused the coastal States to rapidly increase their fish catches. In 1958, trawling was introduced into the Gulf of Thailand and fisher people began to convert their purse seine nets into trawl nets. As a result, the number of trawlers shot up from 99 in 1960 to 2,700 in 1966.¹⁷ By the 1970s, Thailand became a major commercial fishing nation.¹⁸ Cambodia and Vietnam only began to catch up in the 1980s.¹⁹ The most commercially important fish stocks are pelagic species (those that dwell and feed near the sea surface) like mackerel, scad, longtail tuna and sardines; demersal species (those that have their habitats near the bottom of the sea) like snapper, grouper, bream and lizard fish; and invertebrates and crustacean like shrimps, crabs, lobsters, cockles, oysters and clams.²⁰ With fishery resources becoming strong industrial drivers in the economies of the Gulf's littoral States, overfishing was inevitable. This aspect of the Gulf will be examined further in the following pages.

2.2.3.2 Seabed Resources

¹⁵ In January 2013, the Supreme Administrative Court ruled that the Royal Thai Police must pay compensation to 24 villagers for using force to break up their 'peaceful' protest against the Thai-Malaysian pipeline outside JB Hat Yai Hotel in 2002, bringing an end to a 10-year legal battle waged by the villagers' ground. See Apinya Wipatayotin, "Court Rules in Favour of Pipeline Protestors," *Bangkok Post* (17 January 2013).

¹⁶ See for more explanation, Tan Mullins, above n 5; Schofield and Tan-Mullins, above n 6, pages 108-111.

¹⁷ John Butcher, *The Closing of the Frontier: A History of the Marine Fisheries of Southeast Asia c.1850-2000*, (Singapore: ISEAS, 2004).

¹⁸ See, Ted L. McDorman, "Thailand and the 1982 Law of the Sea Convention," *Marine Policy* 9 (1985), page 298; Ted L. McDorman, "International Fishery Relations in the Gulf of Thailand," *Contemporary Southeast Asia* 12 (1990), page 41.

¹⁹ Deb Menavesta, "Fisheries Management Needs and Prospects for the Countries Bordering the Gulf of Thailand," in Douglas M. Johnston (ed.), *SEAPOL Integrated Studies of the Gulf of Thailand, Volume 1* (Bangkok: SEAPOL, 1998), page 209.

²⁰ Paul Barlett and Joanna Baker-Rogers, "Oil and Gas Exploration in the Gulf of Thailand and the Importance of Environmental Protection", in Jonathan Rigg (ed.), *Counting the Costs: Economic Growth and Environmental Change in Thailand* (Singapore: ISEAS- Institute of Southeast Asian Studies, 1995), page 202.

According to Victor Prescott, the two linear basins aligned northwest-southeast (Thai and Malaysia) that underlay the Gulf of Thailand “have been proved to contain gas and condensate reserves, fields have been identified and production has commenced”. He also suggests that “there appears to be no obvious reason why similar fields should not be found in the overlapping zones of Cambodia and Thailand”.²¹ Schofield and Tan Mullins also highlight in the context of the relatively limited oil and gas resources located in Southeast Asia, that the Gulf of Thailand has proven to be a major source of oil and particularly gas resources.²² Yet, because of overlapping claims to maritime jurisdiction and almost fruitless negotiations between the littoral States, the seabed resources of the Gulf of Thailand have not been fully explored let alone exploited. This is shown in the above discussion of the Malaysia and Thailand JDA which has only been partially successful in unlocking the oil and gas reserves. Overall, the key issue is that exploration and exploitation of seabed resources cannot proceed in broad areas of the Gulf subject to overlapping maritime claims.

Among the four littoral States, Thailand is the most established gas producer in the Gulf of Thailand. Malaysia and Vietnam are active oil and gas producers but most of their seabed resources are actually located outside the Gulf of Thailand.²³ Cambodia’s results have been mixed. Despite some offshore discoveries in its waters, Cambodia has not gone beyond the exploration stage into oil and gas production.²⁴ Due to this development, Schofield and Tan Mullins argue that the large area of overlapping claims between Thailand and Cambodia in the central part of the Gulf (refer to Figure 3) is more significant than ever to resolve as both countries seek to address energy security concerns.²⁵ To illustrate this particular concern, Deputy Prime Minister (DPM) of Cambodia, Sok An, and Admiral Thanom Charoenlarp, an advisor to the Thai technical team for maritime boundary negotiations, commented in their media interviews:

DPM Sok An,

Now, it has been more than 10 years in negotiations, but no agreement has been reached yet... I told the Thai delegation our stance for the Overlapping Claim Area and we hope to find a formula that is acceptable to both sides in order to jointly exploit oil and gas from the area.²⁶

Admiral Thanom Charoenlarp,

We should do it now [entering talks on the overlapping maritime zone with Cambodia]. When we started negotiations with Cambodia in 1970, we believed we still had more time because we still had a lot of energy reserves in the country. Up until 2001, we were

²¹ Prescott, above n 1, page 12.

²² Schofield and Tan-Mullins, above n 6, page 78.

²³ Ibid, page 79.

²⁴ Chan Muyhong, “No End Date in Sight on Oil Plant Completion,” *Phnom Penh Post* (3 April 2015).

²⁵ Ibid, page 79.

²⁶ Xinhua News, (27 July 2012)

still confident we had about 26 years left to exploit these reserves. But as of today, we have only 10 years left because domestic energy consumption has increased rapidly. If we do not make our move now, we might need to go back to using firewood to cook our food.²⁷

Indeed, it can be perceived that the politics of access to seabed resources plays an influential role in any aspect of joint cooperation in the Gulf of Thailand.

2.3 Ecological Threats to the Gulf of Thailand

2.3.1 Overfishing

As stated above, the occurrence of overfishing in the Gulf of Thailand is no surprise given the food and economic security that fisheries resources offer. The fishery resources of the Gulf are already severely overexploited,²⁸ and by 1995 biomass levels were already less than 10 percent of the biomass in the early 1960s.²⁹ The deleterious impact of this activity on the marine environment's fisheries, especially in relation to the over-exploitation of demersal resources, can be attributed mainly to the development of trawl fishing in the Gulf of Thailand.³⁰ In their research, Ahmed et al identify that the fisheries development in the Gulf of Thailand has concentrated on increasing fishing effort to maintain or increase the production volume, which increasingly, led to the total catch containing a higher proportion of "trash" fish (consisting of by-catch and undersized juveniles of various demersal and some pelagic species, much of which goes to fish meal or duck feed or is thrown overboard), aggregated across all species and gear types.³¹ The use of inappropriate equipment and the inability of the Gulf's governments to enforce certain environmental regulations exacerbate the overfishing problem.

²⁷ "Thailand: Interview - Admiral Thanom Charoenlarp, advisor to technical team for maritime boundary negotiations," *Bangkok Post* (7 September 2011).

²⁸ Amnuay Kongprom, Pakjuta Khemakorn, Monton Eiamsa-ard and Mala Supongpan, "Status of Demersal Fishery Resources in the Gulf of Thailand," in Geronimo T. Silvestre, Len R. Garces, Iona C. Stobutzki, Mahfuzuddin Ahmed, Rowena A. Valmonte-Santos, Cesar Luna, Lualnati Lachica-Aliño, Patricia Munro, Villy Christensen and Daniel Pauly (eds.), *Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries*, WorldFish Center Contributions, 1705, (Penang, Malaysia: WorldFish Center, 2003): 137-152; Iona C. Stobutzki, Geronimo T. Silvestre and Len R. Garces, "Key Issues in Coastal Fisheries in South and Southeast Asia, Outcomes of a Regional Initiative," *Fisheries Research* 78 (2006): 109-118; Gullaya Wattayakorn, "Environmental Issues in the Gulf of Thailand," in Eric Wolanski (ed.), *The Environment in Asia-Pacific Harbours*, (Dordrecht, Springer, 2006): 249-259; Robert S. Pomeroy, "Managing Overcapacity in Small-scale Fisheries in Southeast Asia," *Marine Policy* 36 (2012): 520-527.

²⁹ "Review of the State of World Fishery Marine Resources," *FAO Fisheries and Aquaculture Technical Paper* 569 (2011), page 164.

³⁰ Ratana Chuenpagdee and Daniel Pauly, "The Gulf of Thailand Trawl Fishers," *Report and Documentation of the International Workshop on the Implementation of International Fisheries Instruments and Factors of Unsustainability and Overexploitation in Fisheries*, (Mauritius, 3-7 February 2003).

³¹ Mahfuzuddin Ahmed, Pongpat Bouchuwongse, Waraporn Dechboon and Dale Squiries, "Overfishing in the Gulf of Thailand: Policy Challenges and Bioeconomic Analysis," *Environment and Development Economics* 12 (2007), page 147.

Another problem that indirectly worsens overfishing in the Gulf of Thailand is the destruction of mangroves in the coastal areas. Mangroves are extracted from the coastal environment, processed and sold as charcoal fuel to the local communities.³² In many cases mangroves have also been cleared to make way for shrimp farms as aquaculture offers more monetary opportunities.³³ Sathirathai and Barbier argue that mangroves are important coastal wetland systems that act as major breeding and feeding grounds for many species of prawn and fish.³⁴ Hence, with crucial mangrove habitats destroyed, fisheries resources are further affected. This places more pressure on fish stocks especially as fisher people seek to match increasing demand, leading to inevitable overfishing.

2.3.2 Pollution from Land-Based and Marine-Based Sources

Pollution from a combination of land-based and marine-based sources is a perennial problem in the Gulf of Thailand. Polluted water bodies, if not dealt with, result in habitat degradation over time. Cheevaporn and Menasveta categorise the priorities of the land-based and marine based pollution problems in the Gulf of Thailand as: (1) untreated municipal and industrial waste water, (2) eutrophication, (3) trace metals contamination, and (4) petroleum hydrocarbons.³⁵

The first three of these pollutants come from land, which signifies that the threat of marine pollution from land-based sources in the Gulf of Thailand is compelling. These land-based pollutants are transported to the Gulf chiefly via major rivers like the Chao Phraya River in Thailand. Along the eastern seaboard of Thailand, industrial waste from a number of large industrial estates such as Laem Chabang and Bang Poo are discharged into the river, reaching the Gulf in most cases.³⁶ One other land-based source causing major pollution to the Gulf's marine environment is shrimp farming. Shrimp farming has extremely adverse impacts on the coastal water quality and ground water aquifers because it discharges more particulate and dissolved nutrient-laden effluent into the Gulf of Thailand.³⁷ Another chief culprit is the intensification of coastal tourism. One of the best examples in the Gulf of Thailand is Pattaya where unplanned and spontaneous development has resulted in the surrounding coastal waters being polluted by poorly treated waste-water as a result of inadequate infrastructure

³² Charcoal production from clearing mangroves is more prevalent in Cambodia. See, for example, *Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand. Report on the Eighth Meeting of the Regional Working Group on Mangroves*. UNEP/GEF/SCS/RWG-M.8/3 (2007).

³³ Miriam Huitric, Carl Folke and Nils Kautsky, "Development and Government Policies of the Shrimp Farming Industry in Thailand in Relation to Mangrove Ecosystems," *Ecological Economics* 40 (2002): 441-455.

³⁴ Suthawan Sathirathai and Edward B. Barbier, "Valuing Mangrove Conservation in Southern Thailand," *Contemporary Economic Policy* 19 (2001): 109-122.

³⁵ Voravit Cheevaporn and Piamsak Menasveta, "Water Pollution and Habitat Degradation in the Gulf of Thailand," *Marine Pollution Bulletin* 47 (2003), page 43.

³⁶ Pornsook Chongprasith and Vithet Srinetr, "Marine Water Quality and Pollution of the Gulf of Thailand," In Douglas M. Johnston (ed.), *SEAPOL Integrated Studies of the Gulf of Thailand, Volume 1* (Bangkok: SEAPOL, 1998): 137-204.

³⁷ Mark Flaherty and Choomjet Karnjanakesorn, "Marine and Shrimp Aquaculture and Natural Resource Degradation in Thailand," *Environmental Management* 19 (1995): 27-37; Mark Flaherty and Peter Vandergeest, "Rice Paddy or Shrimp Pond: Tough Decisions in Rural Thailand," *World Development* 27 (1999): 2045-2060.

for waste and waste-water treatment, and coral reefs being removed or destroyed as a result of recreational activities or pollution from waste-water.³⁸

Marine-sourced pollution is not as detrimental compared to land-based pollution in affecting the Gulf's marine environment, but it is still a serious issue to rectify. Oil and gas exploration disturbs the Gulf's ecological system as wastes are generated during the dredging and drilling. This increases the current risk of transboundary pollution from offshore oil and gas platforms. In a relevant case, Tan-Mullins comments on the protests by the Songkhla residents in Southern Thailand over the construction of the Thai-Malaysian pipeline.³⁹ Through her interviews with the coastal communities, she reveals that the waters around the coast may be polluted with cadmium, mercury and lead which will inevitably threaten the ecological security of the lower Gulf.⁴⁰ Another source of marine-based pollution in the Gulf of Thailand is oil discharges from ships. Using satellite remote sensing imagery, Lu et al identified the most polluted area of the Gulf of Thailand as being located off the coast of Southern Vietnam, at the intersection of several major shipping routes.⁴¹

2.4 The Eastern Part of the Gulf of Thailand

It is imperative to give a short account of the claims to maritime jurisdiction and political geography background of the researched countries. As recognised by Sulan Chen in the UNEP/GEF SCS Project, "where multiple issues overlap and interact, the study of environmental cooperation must be based on a larger geopolitical context rather than focus purely on environmental protection activities".⁴² The eastern part of the Gulf of Thailand has been a longstanding source of maritime boundary, sovereignty and resource disputes between Thailand and Cambodia, and between Cambodia and Vietnam.⁴³

Cambodia is not a party to the LOSC, as, although it has signed the Convention, it has not yet deposited its instrument of ratification with the United Nations. Thailand and Vietnam ratified the LOSC on 15 May 2011 and 25 July 1994 respectively.⁴⁴ Thailand's slow and recent ratification can be attributed to the fact that as a 'zone-locked' country it was resistant to the introduction of the EEZ that has seen the establishment of neighbouring EEZs that restrict Thai access to what Thai fisher people have long perceived as their traditional fishing

³⁸ Poh Poh Wong, "Coastal Tourism Development in Southeast Asia: Relevance and Lessons for Coastal Zone Management," *Ocean and Coastal Management* 38 (1998), page 93.

³⁹ Tan-Mullins, above n 5, pages 97-103.

⁴⁰ Ibid.

⁴¹ Jingxuan Lu, Hock Lim, Soo Chin Liew, Mingquang Bao and Leong Keong Kwoh, "Ocean Oil Pollution Mapping with ERS Synthetic Aperture Radar Imagery," *Geoscience and Remote Sensing Symposium 1999, IGARSS'99 Proceedings, IEEE 1999 International*, Volume 1, page 214.

⁴² Sulan Chen, "Environmental Cooperation in the South China Sea: Factors, Actors and Mechanisms," *Ocean and Coastal Management* 85B (2013), page 139.

⁴³ See Victor Prescott and Clive Schofield, *The Maritime Political Boundaries of the World*, Second Edition, (Leiden: Martinus Hijhoff Publishers, 2005), pages 430-433; Clive Schofield, above n 10.

⁴⁴ Refer to <<http://cil.nus.edu.sg/1982/1982-united-nations-convention-on-law-of-the-sea/>>. Accessed on 25 June 2012.

grounds.⁴⁵ The following sub-sections first address the three respective littoral States' baselines claims, unilateral claims to continental shelf, and EEZ claims. Second, the overlapping claims between Cambodia and Thailand and the joint historic waters are further discussed because these two specific maritime geography examples directly relate to the locales of the two researched transboundary sites.⁴⁶

2.4.1 Baselines Claims

2.4.1.1 Cambodia

Cambodia claim straight baselines along their coasts in the Gulf of Thailand. Cambodia first adopted straight baselines in 1957, and in 1972, moved to revise its claimed system of straight baselines to incorporate island basepoints significantly further offshore than those that had been previously been utilised.⁴⁷ These baselines were revised again in 1982 with Cambodia pushing its straight baselines claims further offshore and even diverging from the general direction of its mainland coastline (see Figure 4).⁴⁸ These repeated revisions arguably do not follow the principles of LOSC's Article 7 on straight baselines, as the islands used as basepoints by Cambodia are too far offshore to be qualified as fringing islands.⁴⁹ Schofield and Tan argue that Cambodia's motives for this move may lie in the additional waters claimed and the perception of an enhanced maritime boundary negotiating position with regard to Thailand.⁵⁰

2.4.1.2 Thailand

Thailand declared a system of straight baselines for three sectors of its coastline on 11 June 1970, two of which, Areas 1 and 2, lie in the Gulf of Thailand (refer back to Figure 3).⁵¹ In

⁴⁵ Ted L. McDorman, "Thailand's Fisheries: A Victim of 200 Mile Zones," *Ocean Development and International Law* 16 (1986): 183-209.

⁴⁶ It is, however, noted that in the eastern part of the Gulf of Thailand context, Thailand and Vietnam signed a maritime boundary delimitation agreement relating to continental shelf and EEZ rights on 9 August 1997 which was subsequently ratified on 28 February 1998. This section does not discuss this specific maritime geography example because the researched UNEP/GEF SCS Project field sites are only between Cambodia and Thailand, and between Cambodia and Vietnam.

⁴⁷ Schofield and Tan-Mullins, above n 6, page 84.

⁴⁸ *Ibid.*, page 85. See Appendix 5 for Cambodia's (1982) baselines legislation.

⁴⁹ The United States officially protested against the Cambodian claim in an *Assertion of Right* in 1986. See Ashley Roach and Robert Smith, "United States Responses to Excessive Maritime Claims," 2nd Edition (The Hague: Martinus Nijhoff Publishers, 1996), page 77.

⁵⁰ *Ibid.*

⁵¹ The other area of straight baselines claimed by Thailand is at the Andaman Sea (Area 3) and is therefore out of the thesis' focus. Refer to

particular, Area 1 is located immediately to the north of the terminus of the Thai-Cambodian land boundary on the coast of the Gulf of Thailand. On 17 August 1992, Thailand proclaimed straight baselines in an additional sector in the Gulf of Thailand, Area 4.⁵² In Area 4, Ko Kra and Ko Losin, despite being mere isolated rocks that are distant not only from one another but also from the Thai mainland coast, were chosen to be two intermediary basepoints.⁵³ Thailand's excessive straight baselines claim is seen as a possible counter measure to Cambodia's and Vietnam's similar straight baseline systems for future maritime boundary negotiations (see Figures 3 and 4).⁵⁴

2.4.1.3 Vietnam

Vietnam first made a claim to straight baselines in 1977,⁵⁵ and subsequently implemented it in 1982.⁵⁶ The straight baseline systems of Cambodia and Vietnam meet at an as yet undefined point, Point "O," out to sea on a straight line joining the Cambodian islands of the Poulo Wei group and the Vietnamese Puolo Panjang group of islands, which also forms the seaward limit of the two countries joint Historic Waters area (see Figure 3). This point was designated as the western end of Vietnam's 1982 straight baseline system. Vietnam's selection of basepoints for her straight baseline claim is largely founded on small and scattered islands considerably offshore, reflecting another case of excessive claims in the eastern part of the Gulf of Thailand.⁵⁷

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/THA_1970_Announcement.pdf>. Accessed on 20 July 2012. See Appendix 6 for Thailand's (1970) baselines legislation.

⁵² Schofield and Tan-Mullins, above n 6, page 88. See Appendix 7 for Thailand's (1992) baselines legislation.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Refer to
<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VNM_1977_Statement.pdf>. Accessed on 20 July 2012. See Appendix 8 for Vietnam's baselines legislation.

⁵⁶ Refer to
<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VNM_1982_Statement.pdf>. Accessed on 20 July 2012.

⁵⁷ These excessive maritime claims have been subject to United States and Thai protests. See, Roach and Smith, above n 47, page 102 and "*Law of the Sea Bulletin, No. 7*," United Nations (April 1986), page 111.



Figure 4 Claims to maritime jurisdiction in the eastern part of the Gulf of Thailand

(Source: Adapted from Schofield above n 10, page 287)

2.4.2 Unilateral Claims to Continental Shelf

The three eastern Gulf of Thailand coastal States advanced unilateral claims to continental shelf rights in the 1970s. On 6 June 1971, South Vietnam made a claim to continental shelf which included parts of the Gulf of Thailand.⁵⁸ In the following year, Cambodia made a

⁵⁸ See Appendix 11 for South Vietnam's continental shelf claims.

claim to seabed rights.⁵⁹ Thailand then followed up “in response” to Cambodia and Vietnam by making its formal claim to continental shelf in 1973.⁶⁰

Schofield and Tan observe that the continental shelf claims of the three coastal States to parts of the Gulf of Thailand are “predominantly based on equidistance, although they apply differing interpretations of this method of delimitation”.⁶¹ In addition, they argue that each claimant State sought to interpret equidistance to its maximum advantage.⁶² Key variables such as using islands and straight baseline systems as the basis for claims and the recognition or rejection of those claims by one or more of the other Gulf of Thailand littoral States led to overlapping claims to jurisdiction (details are expanded in section 2.4.4).⁶³

2.4.3 Exclusive Economic Zones

The three eastern Gulf of Thailand coastal States claimed their respective EEZs in the late 1970s to early 1980s. Vietnam claimed an EEZ through its Statement of 12 May 1977 which provides, in Article 3, a definition of Vietnam’s EEZ: “adjacent to the Vietnamese territorial sea and forms with it a 200 nautical mile zone from the baseline used to measure the breadth of Vietnam’s territorial sea”.⁶⁴ There have been no subsequent coordinates or map to define the limits of Vietnam’s EEZ claim.⁶⁵ Cambodia was the next State to claim a 200 nautical mile EEZ through a *Ministry of Foreign Affairs Statement* of 15 January 1978, and repeated and updated its claim in Article 5 of the 31 July 1982 *Council of State Decree on Territorial Waters*.⁶⁶ Thailand established its claim to EEZ by a *Royal Proclamation* of 23 February 1981.⁶⁷ In particular, none of the States concerned in the eastern part of the Gulf of Thailand has specified the precise limits of its claimed EEZ in full. Schofield and Tan offer a likely explanation for this reticence is the fact these three States “have in any case made claims to continental shelf within the Gulf of Thailand and established the limits of these claims through geographic coordinates and illustrative maps”.⁶⁸

2.4.4 Overlapping Claims and Joint Historic Waters

2.4.4.1 Cambodia and Thailand

⁵⁹ See Appendix 9 for Cambodia’s continental shelf claims.

⁶⁰ See Appendix 10 for Thailand’s continental shelf claims.

⁶¹ Schofield and Tan, above n 6, page 93.

⁶² Ibid.

⁶³ Schofield and Tan, above n 6, page 94.

⁶⁴ See above n 55.

⁶⁵ Schofield and Tan, above n 6, page 96.

⁶⁶ Refer to <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/KHM_1982_Decree.pdf>. Accessed on 25 August 2015. See Article 5 of Appendix 5 for Cambodia’s EEZ claims.

⁶⁷ Refer to <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/THA_1981_Proclamation.pdf>. Accessed on 25 August 2015. See Appendix 12 for Thailand’s EEZ claims.

⁶⁸ Schofield and Tan, above n 6, page 96.

Having outlined the different maritime claims based on Cambodia's and Thailand's excessive straight baselines, it is not surprising to find that both countries have outstanding maritime boundary disputes in the Gulf of Thailand. The largest remaining overlapping claim in the Gulf is between these two States (see Figure 3). As observed by Schofield, the reasons for the overlap relate to fundamentally different approaches being applied to construct the lateral boundary claims from the terminus of the land boundary on the coast offshore, and divergent treatment of island basepoints in the application of the equidistance method for the delimitation line between opposite coasts in the central Gulf.⁶⁹ Cambodia insisted on using a flawed interpretation of the Franco-Siamese boundary treaty of March 1907, where it extended a land boundary offshore with no reference to the LOSC's delimitation principles. The fact that both countries also discounted each other's claimed straight baselines and ignored relevant islands (such as Ko Kut) as basepoints, coupled with Cambodia misconstruing the 1907 Franco-Siamese boundary Treaty, has already resulted in a deadlock in maritime boundary negotiations.⁷⁰

Furthermore, Thailand's management of the overlapping maritime claims aggravates the situation. In recent years, Thailand has undergone a series of political party changes in the government. Following the announcement of Cambodian Prime Minister Hun Sen's appointment of Thaksin Shinawatra⁷¹ as his economic advisor, the Thai Democrat Party-led government of Abhisit Vejjajiva announced in November 2009 that the 2001 MoU on the "Area of their Overlapping Maritime Claims to the Continental Shelf" signed during former Prime Minister Thaksin Shinawatra's administration would be scrapped. The controversy continued when the current Prime Minister Yingluck Shinawatra claimed that the MoU was never abandoned, and apparently rumours surfaced on reported secret meetings to cut an undisclosed deal on maritime resources in the Gulf of Thailand in 2009 and 2010 between Suthep Thaugsuban, then Deputy Prime Minister, and his Cambodian counterpart.⁷² In late 2014, pressing energy concerns saw Cambodia and Thailand edge closer to rekindling negotiations over the long-contested, and presumably lucrative overlapping maritime claims.⁷³

This confusing political background to the MoU between Cambodia and Thailand may produce corresponding influences and impediments to joint cooperation on management of their transboundary coastal ecosystem between the provinces of Koh Kong and Trat. According to Agardy, "transboundary coastal conservation and management cannot take place in a vacuum; pre-existing claims, conflicts, and governmental jurisdictions are all part of the socio-political context that must be taken into consideration".⁷⁴

⁶⁹ Schofield, above n 10, page 301.

⁷⁰ See Appendix 15 for the 1907 Franco-Siamese boundary Treaty.

⁷¹ Thaksin Shinawatra served as Thailand's Prime Minister from 2001-2006.

⁷² "Details Sought on 'Secret' Meetings," *The Nation* (3 September 2011).

⁷³ May Kunmakara and Kevin Ponniah, "Thais Want to Talk Energy," *Phnom Penh Post* (4 September 2014); Eddie Morton, "Gov't Forms OCA Committee," *Phnom Penh Post* (4 December 2014).

⁷⁴ Tundi S. Agardy, "*Marine Protected Areas and Ocean Conservation*," (R.G. Landes Company: Austin, 1997), page 217.

2.4.4.2 Cambodia and Vietnam

Unlike the tense overlapping maritime claims between Cambodia and Thailand, the other side of the eastern part of the Gulf sees Cambodia and Vietnam sharing a unique joint-historic waters area in the eastern part of the Gulf of Thailand. On 7 July 1982 both States signed an *Agreement on Historic Waters of Vietnam and Kampuchea* which projected an area of approximately 4,000 nm² (13,720 km²) into the Gulf offshore from the two States' border provinces on the coast (See Figure 1).⁷⁵ The two countries' straight baseline systems meet at an undefined point, Point "O", out to sea on a straight line joining the Cambodian islands of the Poulo Wei group and the Vietnamese Poulo Panjang group of islands, which also forms the seaward limit of their joint Historic Waters area (see Figures 3 and 4).⁷⁶

Article 3 of the 1982 agreement notes the integration of the two countries' straight baseline systems at "Point O" on the south-western limit of the historic waters area (see Figures 3 and 4). Significantly, Article 3 also resolves Cambodia and Thailand longstanding sovereignty dispute over several islands in the Gulf of Thailand by providing that the two sides would "continue to regard the Brevié Line drawn in 1939 as the dividing line for the islands in this zone".⁷⁷ This particular use of the colonial-era Brevié Line as the dividing line for jurisdiction over islands within the zone essentially left the Poulo Wei group of islands to Cambodia and the large island of Phu Quoc and the Tho Chu (Poulo Panjang) islands to Vietnam (See Figure 4).⁷⁸

No maritime boundary delimitation was effected through the agreement, with commitments to undertake joint surveillance and patrolling in the historic waters area taking more significance. The joint historic waters declaration drew protests in the international community such as those from neighbouring Thailand and the United States who both argued that it was baseless under international law and excessive.⁷⁹ In his evaluation of the different joint maritime development zones present in the Gulf of Thailand, Schofield argues that unlike others, the Cambodia-Vietnam Joint Historic Waters Agreement is political in nature, rather than being resource-oriented.⁸⁰ Schofield adds that the agreement is significant in terms of reaching a resolved conclusion on previous island sovereignty disputes, thus reducing much of the area of overlapping maritime claims.⁸¹

⁷⁵ Jonathan I. Charney and Lewis M. Alexander (eds.), *International Maritime Boundaries. Volume III*, (Dordrecht: Martinus Nijhoff, 1998), pages 2359, 2364-2365.

⁷⁶ Schofield and Tan Mullins, above n 6, page 89.

⁷⁷ Schofield, above n 10, page 295; Schofield and Tan Mullins, above n 6, page 91.

⁷⁸ The Brevié Line was defined by French Governor-General Jules Brevié on 31 January 1939 in order to resolve a dispute over mining rights on offshore islands between the former Ha Tien province of Vietnam and Kampot province of Cambodia (see Figure 4). See Appendix 14 for the Brevié Line of 1939.

⁷⁹ "Law of the Sea Bulletin, No. 7," above n 60; "Law of the Sea Bulletin, No. 10," United Nations (November 1987), page 23; Ashley Roach and Robert Smith, *Excessive Maritime Claims*, 3rd Edition (The Hague: Martinus Nijhoff Publishers, 2012), pages 42-43.

⁸⁰ Schofield, above n 10, page 299.

⁸¹ Ibid.

2.5 Brief Profiles of Field Sites

Before providing a brief profile of the environmental status of the four provinces, it must be noted that these areas have undergone transboundary diagnostic analysis (TDA) as part of the UNEP/GEF SCS Project. A TDA is a scientific and technical assessment of transboundary environmental issues and problems in the given area of a shared water body. As highlighted by Pernetta and Bewers:

Such an analysis involves an identification of the causes and impacts of environmental disturbances and/or threats and assesses the scale and distribution of those impacts at national, regional and global scales. Impacts are predominantly evaluated in socio-economic terms.⁸²

The TDA then becomes the basis for a strategic action programme (SAP) which is coordinated both at national and regional levels.⁸³ A SAP comprises a set of targeted actions needed to address the problems identified in the TDA. During the period 1997-1999, UNEP worked with the countries bordering the SCS to prepare the TDA and framework SAP.⁸⁴ The UNEP/GEF SCS Project's Regional Scientific and Technical Committee (RSTC) recommended that the chosen demonstration sites and pilot activities 'serve as an opportunity to implement, and experiment with, new management models and methods'.⁸⁵ This is then designed to "build regional experience and capacity in project implementation, cross-sectorial coordination, and the conduct of socio-economic and biological surveys and studies needed to contribute to more sustainable management of coastal habitats and pollution".⁸⁶

2.5.1 Kampot and Kien Giang provinces

Kampot province is located in southeast Cambodia and Kien Giang is a province in southern Vietnam. In particular, the joint historic waters area between Cambodia and Vietnam is generated from these two provinces, albeit that on the Vietnamese side, it covers Phu Quoc only, an offshore island that is closer to Cambodia than the Vietnamese mainland (see Figure 3). The coastline of the two provinces is 295 km in length, including 200 km in Kien Giang Province and 95 km in Kampot Province.⁸⁷ The transboundary waters between these two provinces have favourable physical conditions for development of tropical shallow water

⁸² John C. Pernetta and J. Michael. Bewers, "Transboundary Diagnostic Analysis in International Waters Interventions Funded by the Global Environmental Facility," *Ocean and Coastal Management* 55 (2012), page 3.

⁸³ Liana Talaue-McManus, "Transboundary Diagnostic Analysis for the South China Sea," *EAS/RCU Technical Reports Series No. 14* (UNEP, Bangkok, Thailand, 2000).

⁸⁴ Chen, above n 42, page 133.

⁸⁵ Si Tuan Vo, John C. Pernetta and Christopher J. Paterson, "Lessons Learned in Coastal Habitat and Land-based Pollution Management in the South China Sea," *Ocean and Coastal Management* 85B (2013), page 231.

⁸⁶ Ibid.

⁸⁷ Memorandum of Agreement between The Provincial People's Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), *Policy Framework for Cooperation in the Management of Coastal Ecosystems and Natural Resources*, Kampot, Cambodia, 27 March 2008, page 1.

ecosystems such as seagrass beds, coral reefs and mangroves and as a result, they support abundant living resources.⁸⁸

The marine environmental problems revealed in those two provinces include serious degradation to their mangroves and endangered species such as sea turtles and dugongs, and decreasing daily fish catch over the years. It is not surprising, therefore, that over-exploitation of fisheries and illegal fishing, and to some extent, uncontrolled tourism, are identified as the main culprits. The recommended SAP aimed at arresting the declining fisheries resources by protecting the seagrass in the transboundary waters in particular, with Phu Quoc island engaging the use of fisheries *refugia* as a tool for integrated fisheries and habitat management to great effect.⁸⁹

The eventual MoA signed between the two provinces was the culmination of progressive marine environmental protection initiatives at selected demonstrated sites in Prek Ampil (Kampot) and Phu Quoc (Kien Giang) starting in 2005. It is critical, however, to realise that the validity of this MoA is from the date of signature to December 2012 and it may be extended thereafter by mutual consent, and the policy and framework may be amended or expanded as considered necessary. Fieldwork carried out in 2013 has revealed that a second MoA is being planned along with other socio-economic development projects between Kampot and Kien Giang provinces. On 29 May 2014, the Kampot Fishery Department and Kien Giang Department of Agriculture and Rural Development signed a plan of cooperation in fisheries management to improve the management of the fisheries resources of the two provinces in the Gulf of Thailand for the period of 2014 to 2020.⁹⁰ This is explored in greater detail in Chapter 5.

2.5.2 Koh Kong and Trat provinces

Koh Kong province is located in southwestern Cambodia and Trat is a province in eastern Thailand. The transboundary waters between these two provinces are located in the eastern portion of the Gulf of Thailand between 11°35'-12°15' N Latitude and 102°15'-103° E Longitude.⁹¹ The coastline of the two provinces is 357 km in length, including 237 km in Koh Kong province and 120 km in Trat province.⁹² Similarly to Kampot and Kien Giang provinces, the transboundary coastal ecosystems also support high species richness of marine

⁸⁸ Ibid, page 4.

⁸⁹ Christopher J. Paterson, John C. Pernetta, Somboon Siraraksophon, Yasuhisa Kato, Noel C. Barut, Pirochana Saikliang, Ouk Vibol, Phiak Ean Chee, Thi Trang Nhung Nguyen, Nilanto Perbowo, Trian Yunanda and Nygiel B. Armada, "Fisheries *Refugia*: A Novel Approach to Integrating Fisheries and Habitat Management in the Context of Small-scale Fishing Pressure," *Ocean and Coastal Management* 85B (2013): 214-229. This issue of fisheries *refugia* is dealt with in more detail in Chapter 3 as discussion of a key concept.

⁹⁰ Plan of Cooperation in Fisheries Management between Kampot Administrative Committee (Kingdom of Cambodia) and The Provincial People's Committee of Kien Giang Province (S.R. Vietnam), *Implementing the Cooperation in Fisheries between Kampot Fishery Department and Kien Giang Fishery Department*, Kampot, Cambodia, 29 May 2014.

⁹¹ *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, UNEP/GEF South China Sea Project, Trat Province, Thailand, (18-20 February 2008).

⁹² Ibid.

organisms; a large number of spawning and nursery grounds; and shared stocks of migratory species.⁹³ Coastal and marine environmental concerns and problems also mirror the other transboundary site.

In Koh Kong province, the Peam Krasop Wildlife Sanctuary (PKWS) was selected as the demonstration site (see Figure 2). PKWS is the most intact mangrove forest in Cambodia and arguably in the whole Gulf of Thailand. In Trat province, Pred Nai Village in the capital district was chosen to be the demonstration site given its previous efforts on mangrove conservation.⁹⁴ Unlike the subnational transboundary joint cooperation between Kampot and Kien Giang provinces, the cooperation here focused more on the mangroves and wetlands instead of seagrass and coral reefs. The significant cross border technical workshop exchanges between these two provinces on managing coastal resources comprised largely mangrove rehabilitation and conservation. The transboundary cooperation did not, however, materialise into a signed MoA between these two provinces despite having a draft MoA finalised. The reasons for this distinct difference in outcome from the other transboundary site will be explored in the discussion contained in Chapters 4 and 5. The next chapter reviews extant literature on the various spatial scales of joint cooperation in marine environmental protection of the marine environment (global, regional, national- bilateral and subnational) in light of the politics of scale framework.

⁹³ Ibid.

⁹⁴ Another selected independent demonstration site in Trat province, Mu Ko Chang at Ko Chang, dealt more specifically with fisheries issues under the fisheries *refugia* concept by focusing on protecting coral reefs. However, this does not fall under the transboundary cooperative mechanisms between Koh Kong and Trat provinces.

Chapter 3 LITERATURE REVIEW

3.1 Introduction

One of the clearest messages to emerge from the wealth of environmental literature that has been generated since the late 1960s is that environmental degradation does not respect jurisdictional borders.¹

The transboundary nature of many habitats and species, as well as of the threats posed to them, necessitates management approaches that are not confined to the areas under the jurisdiction of a single state.²

Given the inherently transboundary context of the marine environment, collaboration among littoral States is necessary to manage the shared waters. Having raised and dealt with the issue of the spatial and political roles of scale in marine environmental cooperation earlier, the first part of this chapter goes straight in evaluating selected bodies of literature on joint cooperation in marine environmental protection in different spatial scales. Empirical accounts of global, regional and national (bilateral) and subnational collaboration are critically examined in light of politics of scale. The contributions are assessed and gaps in the literature are also highlighted. The first half of the chapter then summarises how this thesis can address lacunae in the academic literature on joint cooperation in marine environmental protection and contribute to extant scholarship.

The second half of the chapter examines two principles and one concept, namely, the duty to prevent transboundary harm, sustainable development, and fisheries *refugia*. Arguably, there are more principles and concepts that could be engaged or that could replace the ones selected for examination, as it will be illustrated in section 3.3, the above three themes are the most relevant to the research project on the eastern part of the Gulf of Thailand. The theoretical components explored in this chapter act as critical tools central to how the empirical findings in the subsequent chapters are analysed.

3.2 Global, Regional, National and Subnational Scales of Joint Cooperation in Marine Environmental Protection: Engaging Politics of Scale

3.2.1 Global Scale of Joint Cooperation

There are several global marine initiatives and instruments to protect the marine environment through joint cooperation among nation states. This sub-section takes stock of the most critical ones amongst international law, with LOSC as the leading example. The goal of LOSC was to provide an overall framework for ocean affairs. Arguably, the area in which it has achieved most success was the agreement on maritime zones of jurisdiction, with the

¹ Warwick Gullett, "Transboundary Environmental Impact Assessment in Marine Areas," in Robin Warner and Simon Marsden (eds.), *Transboundary Environmental Governance in Inland, Coastal and Marine Areas*, (Farnham, Surrey, Ashgate Publishing, 2012), page 269.

² Catarina Grilo, Aldo Chircop and José Guerreiro, "Prospects for Transboundary Marine Protected Areas in East Africa," *Ocean Development and International Law* 43 (2012), page 243.

Exclusive Economic Zone (EEZ) introduced as a unique form of maritime zone. This is not to say that protection of the marine environment was not considered at all in the LOSC, but it was one of many issues covered. Nonetheless, LOSC became one of the most important international agreements and instruments on the topic of marine environmental protection by establishing a framework for this.³

The LOSC covers the marine environment in different sections,⁴ but it is Part XII that primarily deals with the protection and preservation of the marine environment.⁵ Part XII “constitutes an extensive part of the LOSC comprising some 40 Articles (Articles 192-265) addressing the general obligation to protect the marine environment, the control of all sources of pollution, the requirement for international cooperation to prevent and minimise damage from marine pollution, technical assistance, the requirement for monitoring and environmental assessment of activities under the jurisdiction of states and the requirement for states to adopt laws and regulations governing pollution”.⁶

In particular, Part XII begins with a general obligation, as Article 192 illustrates:

States have the obligation to protect and preserve the marine environment.⁷

To undertake this obligation, Article 194 of the LOSC 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. Birnie et al contend that the LOSC recognises “protection extends not only to States and their marine environment, but to the marine environment as a whole, including the high seas”.⁸ Viewing protection of the marine environment as a whole, Section 2 of Part XII (Articles 197-201) emphasises global and regional cooperation.

The idea of global cooperation to protect and preserve the marine environment through international law was further developed in the 1990s. In June 1992, the United Nations Conference on Environment and Development (UNCED) also widely known as the “Earth Summit” was held in Rio de Janeiro.⁹ UNCED made explicit that environmental

³ Jonathan I. Charney, “The Marine Environment and the 1982 United Nations Conference on the Law of the Sea,” *International Lawyer* 28 (1994), page 884.

⁴ For example on the exploitation of living resources in different jurisdictional zones, the environment issue is addressed under the EEZ (Articles 56, 61-73), high seas (Articles 116-120) and deep seabed (Article 145).

⁵ Articles 192-265 form Part XII of the LOSC.

⁶ Julian Roberts, “*Marine Environment Protection and Biodiversity Conservation: The Application and Future Development of the IMO’s Particularly Sensitive Sea Area Concept*,” (Heidelberg: Springer, 2007), page 22.

⁷ It is to be noted that the obligation of States to protect and preserve the marine environment is unlimited in terms of geographic scope.

⁸ Patricia Birnie, Alan Boyle and Catherine Redgwell, “*International Law & the Environment*, Third Edition,” (New York: Oxford University Press, 2009), page 387.

⁹ Rio Earth Summit, also known as the *United Nations Conference on Environment and Development* (UNCED), Rio de Janeiro, Brazil, 3-14 June 1992.

protection must be taken into account together with economic development, thus encouraging states to pursue sustainable development. The Earth Summit resulted in a few major agreements. There are two legally binding instruments, the Convention on Biological Diversity (CBD), and the United Nations Framework Convention on Climate Change (UNFCCC).¹⁰ There are also three non-binding instruments, namely the Rio Declaration on the Environment and Development,¹¹ Agenda 21, and the Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests.

It is the ocean related matters of UNCED that the thesis now turns to. Paragraph 10 of Chapter 17 in Agenda 21 is of most direct relevance to cooperation among States:

The role of international cooperation and coordination on a bilateral basis and, where applicable, within a subregional, interregional, regional or global framework, is to support and supplement national efforts of coastal States to promote integrated management and sustainable development of coastal and marine areas.

There is not much difference between this and Article 197 of the LOSC which states that,

States shall cooperate on a global basis and, 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.

Agenda 21, however, acknowledges more of the sub-regional scale in implementing this statement in practice. Agenda 21, unlike LOSC, also included emphases on integrated and precautionary approaches to the protection of the marine environment absent from LOSC, focussing more on the prevention of environmental degradation and the protection of ecosystems.¹² Having said this, it is not meant that Agenda 21 is necessarily a ‘better’ international instrument for marine environmental protection because Agenda 21 is an action plan rather than a binding legal agreement between States. It is crucial to note that it is a combination of LOSC, Agenda 21 and even the CBD¹³ that guide principles of joint cooperation to protect the marine environment at the global scale.

For example, Christopher Joyner has argued that in the current millennium, States must adopt a precautionary approach to ocean management to arrest the causes of marine environmental degradation.¹⁴ A precautionary approach is vital, but equally important, also,

¹⁰ *Convention on Biological Diversity*, Rio de Janeiro, Brazil, 5 June 1992; *United Nations Framework on Convention on Climate Change*, New York, United States, 9 May 1992.

¹¹ *Rio De Janeiro Declaration on Environment and Development*, hereafter referred to as Rio Declaration, Rio de Janeiro, 14 June 1992.

¹² See, for example, the references made at paragraphs 5 and 19 of Chapter 17 in Agenda 21.

¹³ In particular, see, Articles 1, 3, 4 and 5 of the CBD.

¹⁴ Christopher C. Joyner, “The International Ocean at the New Millennium,” *Ocean and Coastal Management* 43 (2000), page 200.

an awareness of spatial scale and its scalar politics in execution. This significant scalar basis for understanding was raised in paragraph 4 of Chapter 17 in Agenda 21 and is still true today:

Despite national, subregional, regional and global efforts, current approaches to the management of marine and coastal resources have not always proved capable of achieving sustainable development, and coastal resources and the coastal environment are being rapidly degraded and eroded in many parts of the world.

Similarly elsewhere in several appraisals of major environmental action plans produced by the 1992 Rio Earth Summit, the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg,¹⁵ and the 2012 Rio+20 conference,¹⁶ there are observations of mismatches between ecological and governance scale.¹⁷

Sylvia Karlsson-Vinkhuyzen, in particular, asserts that it is becoming more difficult to revive the spirits of those plans mentioned above because of a failure to find a way to vertically integrate institutions and other actors across levels.¹⁸ This is sadly, in spite, of the “numerous words and phrases in Agenda 21 and the Johannesburg Plan of Implementation¹⁹ (JPOI) (the major text adopted at WSSD) that refer to a particular point on the geographic scale or a specific level of governance” as she points out.²⁰ Karlsson-Vinkhuyzen nonetheless sums up the situation explicitly by commenting that “in most cases, however, the text of environmental protection documents does not expand on how to divide the responsibility between levels and how they should interact”.²¹ Additionally, Timothy Doyle has gone as far as criticising the Agenda 21 action plan as too narrow and selective in focus, largely ignoring the key environmental issues as defined by the majority of the people, both in the Global North and the South.²²

¹⁵ *United Nations World Summit on Sustainable Development*, Johannesburg, South Africa, 26 August-4 September 2002.

¹⁶ Rio+20, also known as the *United Nations Conference on Sustainable Development*, Rio de Janeiro, Brazil, 20-22 June 2012.

¹⁷ See, for examples, Lisa M. Campbell, Noella J. Gray, Luke W. Fairbanks, Jennifer J. Silver and Rebecca L. Gruby, “Oceans at Rio+20,” *Conservation Letters* 6 (2013): 439-447; Susan Lieberman and Joan Yang, “Rio+20 and the Oceans: Past, Present and Future,” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell (eds.), *Ocean Yearbook 27*, (Leiden: Martinus Nijhoff Publishers, 2013): 67-87; Biliiana Cicin-Sain, Miriam C. Balgos, Joseph Appiott, Gwénaëlle Hamon and Kateryna Wowk, “Assessing Progress Made on the Ocean and Coastal Commitments of the 1992 Earth Summit and the 2002 World Summit on Sustainable Development for the 2012 Rio+20 Conference,” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell (eds.), *Ocean Yearbook 28*, (Leiden: Martinus Nijhoff Publishers, 2014): 1-57.

¹⁸ Sylvia I. Karlsson-Vinkhuyzen, “From Rio to Rio via Johannesburg: Integrating Institutions Across Governance Levels in Sustainable Development Deliberations,” *Natural Resources Forum* 36 (2012): 3-15.

¹⁹ United Nations World Summit on Sustainable Development, Johannesburg Plan of Implementation, *Plan of Implementation of the World Summit on Sustainable Development*. Johannesburg, South Africa, 26 August-4 September 2002.

²⁰ Karlsson-Vinkhuyzen, above n 18, page 7.

²¹ *Ibid.*

²² Timothy Doyle, “Sustainable Development and Agenda 21: The Secular Bible of Global Free Markets and Pluralist Democracy,” *Third World Quarterly* 19 (1998): 771-786.

In light of the above, it is evident that global joint cooperation in marine environmental protection needs to develop a richer understanding of the role that politics of scale plays in transboundary collaboration. There are improvements to be made beyond existing international law and policy frameworks in conceptualising joint cooperative measures taken by States. These views have provided a critical impetus for my thesis to engage in the different environmental thoughts (various scalar narratives) surrounding the transboundary marine ecosystems in the eastern part of the Gulf of Thailand.

3.2.2 Regional Scale of Joint Cooperation

The regional scale points to specific geographical areas and projects where joint cooperation on marine environmental protection has taken place. The most explicit example of regional marine environmental protection is the United Nations Environment Programme (UNEP) Regional Seas Programme. The Regional Seas Programme (RSP) was launched in 1974 in the wake of the 1972 United Nations Conference on the Human Environment held in Stockholm. One of the key aims of the RSP is to address the escalating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment and through encouraging neighbouring countries in specific cooperative action plans to protect their shared marine environment. The areas that are covered by the RSP include the Antarctic, Arctic, Baltic, Black Sea, Caspian, Eastern Africa, East Asian Seas, Mediterranean, North-East Atlantic, North-East Pacific, North-West Pacific, Pacific, Red Sea and Gulf of Aden, ROPME Sea Area, South Asian Seas, South-East Pacific, Western Africa and the Wider Caribbean.²³ Most of the RSP function through Action Plans, which are adopted by member governments in order to establish a comprehensive strategy and framework for protecting the environment and promote sustainable development.²⁴ An Action Plan outlines the strategy and substance of the programme, based on the region's particular environmental challenges as well as its socio-economic and political situation.²⁵ In 12 of the regional programmes, the Parties have adopted a legally-binding convention setting out what governments must do to implement their Action Plan.²⁶

Another regional scale of marine environmental protection is the Global Environment Facility (GEF) funded projects in shared Large Marine Ecosystems (LMEs), which work closely with other international and regional bodies.²⁷ Some examples are areas like the UNEP East Asian Seas Regional Seas Programme, Partnership in Environmental Management for the Seas of East Asia (PEMSEA), Coral Triangle Initiative (partnership with Asian Development Bank- ADB), Intergovernmental Oceanographic Commission (IOC)

²³ Refer to < <http://www.unep.org/regionalseas/programmes/>> Accessed on 26 August 2015.

²⁴ Ibid.

²⁵ For more details on the Action Plan, refer to <<http://www.unep.org/regionalseas/programmes/actionplans/default.asp>>. Accessed on 26 August 2015.

²⁶ Refer to < <http://www.unep.org/regionalseas/programmes/conventions/default.asp>>. Accessed on 26 August 2015.

²⁷ See, for example, Alfred M. Duda and Kenneth Sherman, "A New Imperative for Improving Management of Large Marine Ecosystems," *Ocean and Coastal Management* 45 (2002): 797-833.

Sub-Commission for the Western Pacific (WESTPAC) and South China Sea/Gulf of Thailand (both partnering with UNEP).²⁸ The GEF was established in 1991 by the World Bank, UNEP and the United Nations Development Programme (UNDP). The GEF is “the financial mechanism of the Multilateral Environmental Agreements (MEAs) and is the largest financial mechanism with the mandate to address current and future challenges to shared freshwater and marine systems”.²⁹ Its main function is to “provide funds to enable developing countries to meet agreed incremental costs of measures taken pursuant to UNCED Agenda 21 and intended to achieve agreed global environmental benefits with regard to climate change, biological diversity, international waters, ozone-layer depletion, deforestation, desertification, and persistent organic pollutants”.³⁰

A brief account of a specific regional effort to implement joint cooperation in marine environmental protection in the Baltic Sea is now referred to in terms of how far the joint cooperation has engaged in the politics of scale. The Baltic Sea is a semi-enclosed sea bounded by the Scandinavian Peninsula, the mainland of Eastern Europe, and the Danish mainland and islands (see Figure 4). The Baltic Sea contains several basins with the maximum depth at slightly more than 450 metres, and the mean depth is 55 metres.³¹

²⁸ See, for examples, Pedro Fidelman, Louisa Evans, Michael Fabinyi, Simon Foale, Josh Cinner and Franciska Rosen, “Governing Large-Scale Marine Commons: Contextual Challenges in the Coral Triangle,” *Marine Policy* 36 (2012): 42-53; Shih-Ming Kao, Nathaniel Sifford Pearre and Jeremy Firestone, “Regional Cooperation in the South China Sea: Analysis of Existing Practices and Prospects,” *Ocean Development & International Law* 43 (2012): 283-295; Thia-Eng Chua, “Coastal and Ocean Governance in the Seas of East Asia: PEMSEA’s Experience,” *Coastal Management* 41 (2013): 99-119.

²⁹ Anna Tengberg and Annadel S. Cabanban, “Lessons Learned from Investing in Marine and Coastal Management Initiatives in the East Asian Seas,” *Marine Policy* 38 (2013), page 355.

³⁰ Birnie et al, above n 8, page 82.

³¹ Ulf Ehlin, “Measures to Restore and Protect the Baltic Sea Environment,” *Limnologica* 29 (1999), page 212.



Figure 5 Baltic Sea
 (Source: Elmgren et al n 47, page 336)

Ehlin notes that the marine environment of the Baltic Sea is vulnerable given its drainage area and the threats of untreated waste discharged mostly from the former communist States on the east, south-east and southern sides of the sea, which intensified during the period of 1950s to early 1970s.³² Chemical runoff into the Baltic Sea remains for a long time because of the narrow and shallow entrances that slow the flushing out of these pollutants.³³ The 1974 Helsinki Convention resulted as the coastal States of the Baltic Sea aimed to arrest the rampant pollution problem and restore the ecological well-being of this semi-enclosed water

³² Ehlin, above n 31.

³³ Matti Leppäranta and Kai Myrberg, *Physical Oceanography of the Baltic Sea*, (Heidelberg: Springer-Praxis, 2009).

body.³⁴ An international organization was established in order to administer the implementation of the Convention, The Baltic Marine Environment Protection Commission, Helsinki Commission (HELCOM), which has been the central forum for international environmental cooperation concerning the Baltic Sea.³⁵

Ehlers observes that to ensure early progress, the recommendations put forth by HELCOM “focused primarily on maritime shipping and scientific cooperation in assessing the quality status of the Baltic Sea, as these were the fields in which most work had already been carried out nationally and internationally”.³⁶ From the mid-1980s, a more action-oriented strategy was adopted on implementing measures to reduce inputs from land-based sources.³⁷ The environmental situation improved substantially with only eutrophication remaining a perennial problem. Hence, HELCOM’s management of the Baltic Sea is often credited as an exemplar of relatively successful regional cooperation in marine environmental protection with its “total approach” to areas such as monitoring and assessing the marine environment, fostering joint scientific research, and elaborating and implementing protective measures.³⁸

The post-Cold War period in the 1990s saw the Helsinki Convention being renegotiated and its treaty area was extended beyond the open waters of the sea to include inland waters draining into the sea.³⁹ A new programme was developed in 1992, known as the Joint Comprehensive Environmental Action Programme (JCP), where 132 ‘hot spots’ were identified for clean-up and restoration (of which 127 were point and non-point emission sources and the remaining five as special management areas in the form of large coastal lagoons and wetlands).⁴⁰ Available data after the first five-year phase (phase 1) indicated that JCP was falling short of its targeted pollution-reduction goals.⁴¹ In 2007, HELCOM made

³⁴ The Convention on the Protection of the Marine Environment of the Baltic Sea - the Helsinki Convention was signed on 22 March 1974 by Denmark, Sweden, Finland, the Soviet Union, Poland, the German Democratic Republic and the Federal Republic of Germany.

³⁵ Ronnie Hjorth, “Baltic Sea Environmental Cooperation: the Role of Epistemic Communities and the Politics of Regime Change,” *Cooperation and Conflict* 29 (1994): 11-31.

³⁶ Peter Ehlers, “The Baltic Sea Area: Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention) of 1974 and the Revised Convention of 1992,” *Marine Pollution Bulletin* 29 (1994), page 617.

³⁷ Hjorth, above n 35; Ehlers, above n 36.

³⁸ Malgosia Fitzmaurice, *International Legal Problems of the Environmental Protection of the Baltic Sea*, (Dordrecht: Martinus Nijhoff, 1992), page 59; Peter Ehlers, “Marine Environment Protection-The Baltic Example,” in Peter Ehlers, Elisabeth Mann-Borgese and Rüdiger Wolfrum (eds.), *Marine Issues: From a Scientific, Political and Legal Perspective*, (The Hague, Kluwer Law International, 2002), page 104.

³⁹ *Convention on the Protection of the Marine Environment of the Baltic Sea Area*, Helsinki, Finland 9 April 1992. Refer to <<http://www.helcom.fi/stc/files/Convention/Conv1108.pdf>>

⁴⁰ Matthew R. Auer and Eve Nilenders, “Verifying Environmental Cleanup: Lessons from the Baltic Sea Joint Comprehensive Environmental Action Programme,” *Environment and Planning C: Government and Policy* 19 (2001): 881-901.

⁴¹ Ibid.

institutional changes and implemented an ecosystem-based approach in the form of the Baltic Sea Action Plan (BSAP) to restore the ecological status of the Baltic marine environment.⁴²

Whilst the regional marine environmental cooperation in the Baltic Sea has achieved some success over the decades, however, it still exhibits shortcomings, particularly in the area of eutrophication. According to Henrik Larsen, the policy implementation of the Baltic Sea environment joint cooperation could be better if it did not reduce the regional problem of eutrophication to a national matter.⁴³ This down-scaling was done because it was seen that the land-based marine pollution should be tackled in the domain of national jurisdiction among the States bordering the Baltic Sea and regional approaches are viewed as inappropriate because of territorial sovereignty concerns (specifically the then Soviet Union had a strict doctrine on territorial sovereignty).⁴⁴ Larsen comments that “recurring incidents of algae bloom could indicate, for example, that the Baltic Sea environment is yet to be framed at a scale that can tackle problems of eutrophication”.⁴⁵ In addition, Elmgren et al argue that for HELCOM’s ecosystem-based approach to work in the Baltic Sea, it must recognise that it is “dealing with complex social-ecological systems that need governance mechanisms adapted to the scale of the problems, whether local, regional or global, with cooperative, multilevel management, partnership approaches, social learning, and knowledge co-production”.⁴⁶

This Baltic Sea case is worthy to note as background for the eastern part of the Gulf of Thailand for this thesis, as environmental problems such as land-based pollution between Thailand, Cambodia and Vietnam are also seen as national problems to address rather than regional ones.⁴⁷ From this perspective, it is important to see how the coastal communities at the subnational scale negotiate down-scaling environmental issues associated with the national and/or regional scales of environmental governance. With the thesis focusing on border regions along the coast of the eastern part of the Gulf of Thailand, it raises the prospect of regional joint cooperation among States on an incremental basis by finding out the differences between the subnational, national and regional scales to bridge the gap and pave the way for improvement.

3.2.3 National Scale of Joint Cooperation

⁴² Matilda Valman, “Institutional Stability and Change in the Baltic Sea: 30 Years of Issues, Crises and Solutions,” *Marine Policy* 38 (2013): 54-64.

⁴³ Henrik Larsen, “Scaling the Baltic Sea Environment,” *Geoforum* 39 (2008), page 2005.

⁴⁴ Hjorth, above n 35.

⁴⁵ Larsen, above n 43, page 2007.

⁴⁶ Ragnar Elmgren, Thorsten Blenckner and Agneta Andersson, “Baltic Sea Management: Successes and Failure,” *AMBIO* 44 (2015), page 341.

⁴⁷ Franckx (1998) argues that joint cooperation in regional marine environmental protection faces limitations in solving land based pollution of the marine environment generally around the world because of the fact that point sources for such pollution are located within national territory. See, Erik Franckx, “Regional Marine Environment Protection Regimes in the Context of UNCLOS,” *The International Journal of Marine and Coastal Law* 13 (1998), pages 318-320.

The national scale of joint cooperation is concerned with bilateral collaboration. This subsection briefly discusses two particular case studies, the 1978 Torres Strait Treaty⁴⁸ and the 2000 Sino-Vietnamese Fishery Agreement for the Gulf of Tonkin.⁴⁹ The former is chosen because it established one of the rare joint development areas between two countries that place weight on both marine environmental protection and the interests of indigenous people rather than just joint exploitation of marine resources. This is an issue that resonates with the thesis' aim to uncover in relation to subnational marine resource users 'voices' on joint cooperation in management of transboundary marine ecosystems in the eastern part of the Gulf of Thailand.

The latter case study is selected because of similar physical and political characteristics of this marine area with the Gulf of Thailand. The Gulf of Tonkin, like the Gulf of Thailand, is a semi-enclosed sea, and shares boundary and resources disputes among the claimant States. Vietnam also borders both Gulfs, thus increasing the empirical relevance. Moreover, the specific attention on bilateral fisheries cooperation in the Gulf of Tonkin is highly relevant in the context of UNEP/GEF SCS Project research field sites where subnational joint cooperation in marine environmental protection concerns local fisher people and marine living resources.

3.2.3.1 Torres Strait

The Torres Strait Treaty was concerned with overlapping maritime claims between Australia and Papua New Guinea in the Torres Strait, and reaching agreement on sovereignty over certain islands and establishing maritime boundaries. Secondly, the Treaty delimited the boundary in a way which represents one of the most innovative delimitation agreements in existence where the seabed and fisheries jurisdiction boundaries were separated (see Figure 6). The Treaty also enclaved the maritime zones of a number of Australian islands separated from Papua New Guinea by a shallow stretch of water, creating what might be described as "a joint development zone (JDZ), which seeks, amongst other things, to protect the rights and traditional way of life of the people of the region".⁵⁰

⁴⁸ *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*. Sydney, Australia, 18 December 1978. Entered into force on 15 February 1985.

⁴⁹ *Agreement between the Government of the People's Republic of China and the Government of the Socialist Republic of Vietnam on Fisheries Cooperation in the Gulf of Tonkin*, Beijing, China, 25 December 2000.

⁵⁰ Stuart Kaye, "The Torres Strait Treaty: A Decade in Perspective," *The International Journal of Marine and Coastal Law* 9 (1994), page 311.

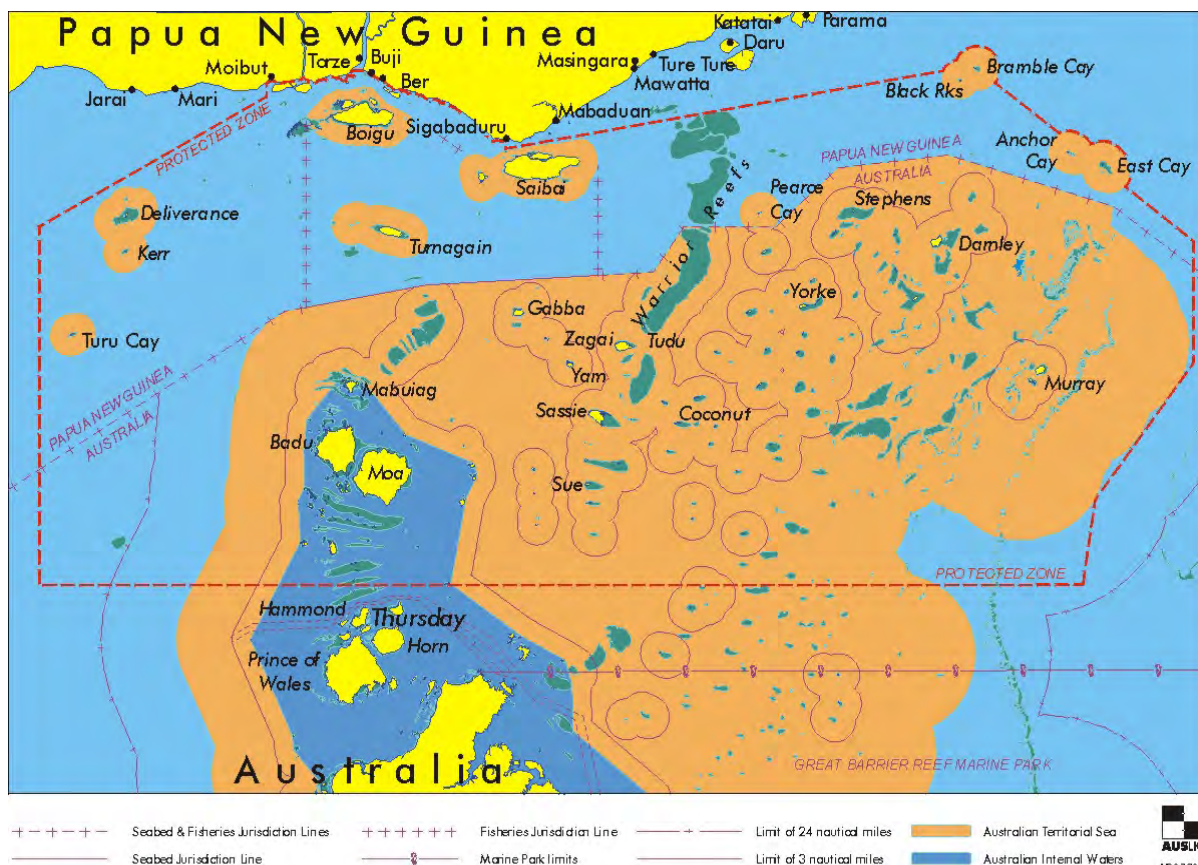


Figure 6 Torres Strait between Australia and Papua New Guinea
(Source: Australian Government - GeoSciences Australia)

Articles 9 and 10 indicate the need for the Parties to protect the marine environment, and preserve the marine flora and fauna. On fisheries, Part 5 (Articles 20-28) focuses on the protected zone for commercial fisheries, with Article 20 emphasising the priority of traditional fishing and stating that each Party shall use its best endeavours to minimise any restrictive effects of that measure on traditional fishing.

There is also a system of resource allocation when it comes to the sharing of commercial fisheries in the Protected Zone, where the catch is divided in differing ratios, depending on where in the Zone the fishing took place. In areas under Australia's jurisdiction, Papua New Guinea receives 25 percent of the commercial catch; in areas under Papua New Guinea's jurisdiction, Australia gets 25 percent of the commercial catch, while in the territorial sea of the Australian islands north of the fisheries line, the catch is divided equally between the two states.⁵¹ Most importantly, to facilitate cooperation for the administration of this treaty, a Torres Strait Joint Advisory Council was established to partially draw upon the traditional inhabitants' expertise in the marine area.⁵² Article 19(2b) also empowers the council to report and make recommendations to the Parties on any developments or proposals which might affect the protection of the traditional way of life and the livelihood of the traditional inhabitants.

⁵¹ Article 23 of Torres Strait Treaty.

⁵² Article 19 of Torres Strait Treaty.

While the Torres Strait Treaty does specify a preference for local communities to get involved in marine environment protection, the coastal Papuans and Torres Strait Islanders have played peripheral roles with limited participation in the implementation of the treaty.⁵³ Stuart Kaye describes the situation as the local communities 'are not dissatisfied with the Treaty provisions dealing with environmental protection, but rather with the steps taken by governments to implement effective protection'.⁵⁴ Kaye gives the examples of the Torres Strait Islanders wanting to have a greater degree of control over the fisheries because they found it inappropriate that fisheries licenses were issued by politicians who were not accountable to them on the sensitive marine environment of the Torres Strait, and the coastal Papuans who wanted stronger environmental enforcement to reduce the land-based pollution through mines on the Fly River that flow into the sea.⁵⁵ This indicates that even such bilateral legal collaboration led at the national scale is subjected to 'pressures from below', with coastal communities trying to advocate their inputs as concrete ideas to the government and/or regional organisations above.

Coastal communities tend to be more concerned about the marine environment because their livelihoods depend on the ecological well-being of their immediate surroundings. This is what Kevin Cox calls the "spaces of dependence - defined by those more-or-less localised social relations upon which we depend for the realisation of essential interests and for which there are no substitutes elsewhere; they define place-specific conditions for our material well-being and our sense of significance".⁵⁶ Arguing in this sense, the Torres Strait Treaty case study is applicable in the eastern part of the Gulf of Thailand's context where the UNEP/GEF SCS Project also involved many coastal communities at the border provinces that share a close working relationship with the marine environment and resources.

3.2.3.2 Gulf of Tonkin

The Gulf of Tonkin is a semi-enclosed sea between China and Vietnam located in the northern part of the South China Sea. This sub-section is only specifically concerned with the Sino-Vietnamese Fishery Agreement that was principally derived from the settlement of a maritime boundary dispute⁵⁷ between these two coastal States in the Gulf of Tonkin which has been a significant area for the fisher people of China and Vietnam for centuries⁵⁸ (see Figure 7).

⁵³ Donald M. Schug, "International Maritime Boundaries and Indigenous People: The Case of the Torres Strait," *Marine Policy* 20 (1996), pages 217-221.

⁵⁴ Stuart Kaye, "The Torres Strait Treaty: A Decade in Perspective," *The International Journal of Marine and Coastal Law* 9 (1994), page 326.

⁵⁵ *Ibid*, pages 325-326.

⁵⁶ Kevin R. Cox, "Spaces of Dependence, Spaces of Engagement and the Politics of Scale, or: Looking for Local Politics," *Political Geography* 17 (1998), page 2.

⁵⁷ The author thinks it is not necessary to give an account of the nature of the maritime boundary dispute. For more details on how the boundary dispute arose and was resolved, see, for example, Keyuan Zou, "The Sino-Vietnamese Agreement on Maritime Boundary Delimitation in the Gulf of Tonkin," *Ocean Development and International Law* 36 (2005): 13-24.

⁵⁸ Nguyen Hong Thao, "Maritime Delimitation and Fishery Cooperation in the Tonkin Gulf," *Ocean Development and International Law* 36 (2005): 25-44; Julia Xue, "Improved Fisheries Co-operation: Sino-

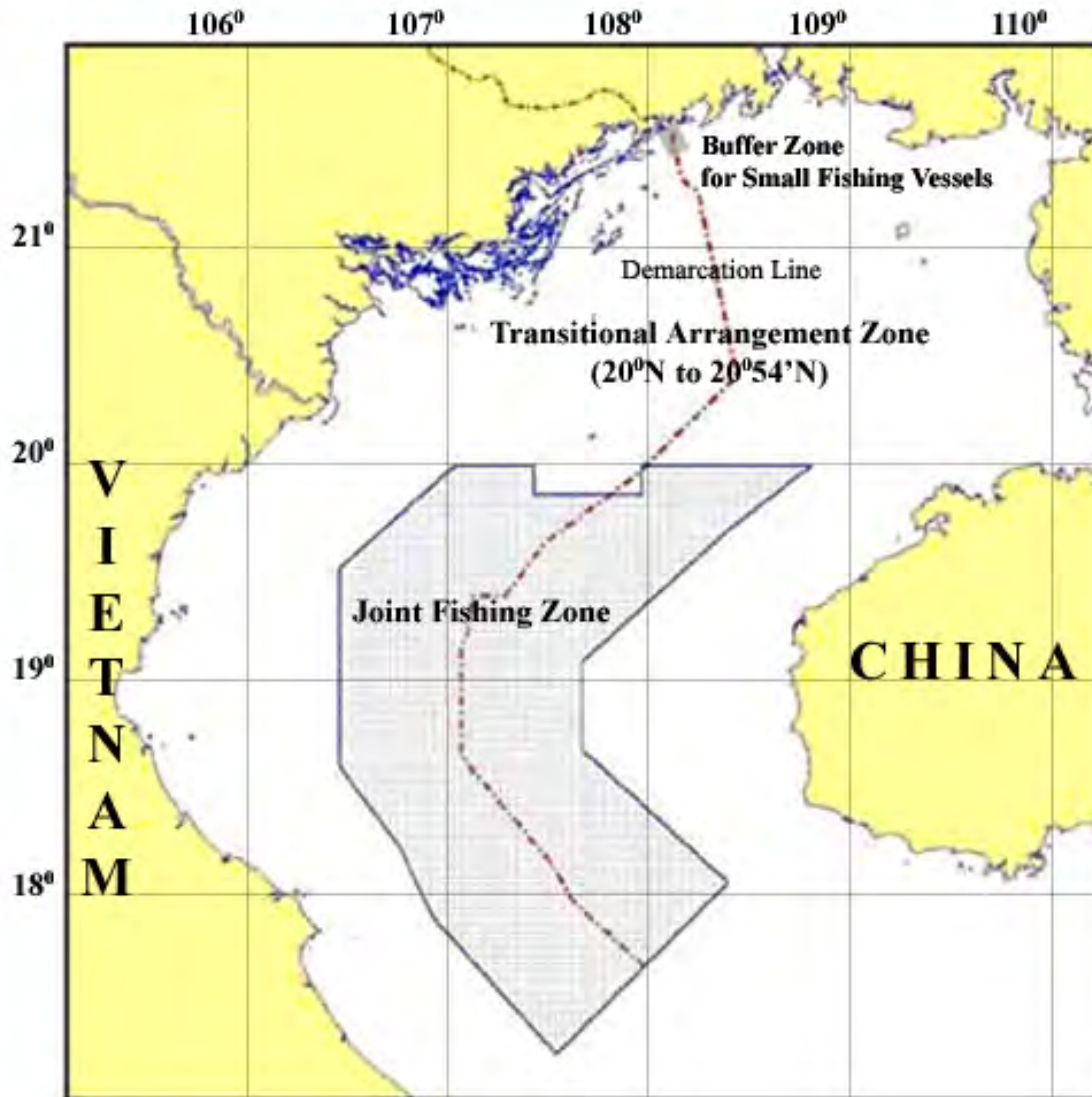


Figure 7 Fishing Zones of the Sino-Vietnamese Fisheries Agreement (adapted from Xue n 59, page 226)

The Sino-Vietnamese Fishery Agreement is hailed as a successful example of bilateral joint cooperation amidst complex geopolitics and maritime boundary disputes between two ‘traditional foes’.⁵⁹ The Fishery Agreement sets up three Agreed Zones, namely the Joint Fishery Zone, the waters in the Transitional Arrangement Zone, and the Buffer Zone for small-sized fishing vessels, where appropriate management regimes apply. The Parties agreed to undertake fisheries cooperation in the Agreed Zones based on mutual respect of sovereignty, sovereign rights and jurisdiction.⁶⁰ This, however, is without prejudice to the sovereignty over their respective territorial seas and sovereign rights and interests enjoyed by

Vietnamese Fisheries Agreement for the Gulf of Tonkin,” *The International Journal of Marine and Coastal Law* 21 (2006): 217-234.

⁵⁹ See for example, Keyuan Zou “Gulf of Tonkin,” *The International Journal of Marine and Coastal Law* 17 (2002): 127-148.

⁶⁰ Preamble of the Sino-Vietnamese Fishery Agreement.

the two states in their respective EEZs.⁶¹ The Fishery Agreement also established a Joint Fisheries Committee (JFC) to implement the management measures. The Fishery Agreement lasts for 12 years with an automatic extension for another three years.⁶²

A number of measures have been adopted pursuant to the Fishery Agreement. In the Joint Fishing Zone where it falls within the EEZs of both Parties, the party concerned has the right to monitor and inspect the fishing vessels of the other party in its own side of the Joint Fishing Zone.⁶³ Each party is to provide facilities in the Joint Fishing Zone for the authorised fishing vessels of the other party, and where necessary, the Parties may coordinate joint inspection and prosecute offences according to the regulations laid down by the JFC.⁶⁴ The Transitional Arrangement Zone set forth provisions to allow transitional arrangements for vessels fishing in the other party's EEZ due to the existing fishing operations of both Parties.⁶⁵ However, Xue points out that the Fishery Agreement was not able to specify the extent of the Transitional Arrangement Zone and the measures for such an arrangement, and this was settled by the contracting Parties in the Supplementary Protocol, which was negotiated after the conclusion of the Fishery Agreement.⁶⁶ Due to the fact that both China and Vietnam have a substantial number of small fishing vessels fishing in the near shore waters of the Gulf, and usually do not have the necessary technology to locate their position accurately and thus crossing the maritime boundary by mistake, the Buffer Zone was specifically created for them to reduce potential conflicts.

The JFC is a permanent body given decisive power in all matters regarding fisheries cooperation between China and Vietnam. Xue argues that “these fundamentals made JFC competent in safeguarding the effective implementation of the Fishery Agreement, and it has improved fisheries bilateral cooperation”.⁶⁷ While bilateral cooperation in fisheries improved between China and Vietnam, the Fishery Agreement faces some critics in its regulation. First, Li and Chen argue that the Chinese State could do more in compensation efforts and creating alternative livelihoods for some of the Chinese fisher people who were phased out from the fishing activities in the implementation of the Fishery Agreement.⁶⁸ It is also noted that the Fishery Agreement mainly focuses on the control of fishing efforts from both Parties, and there is no mention of the total allowable catch from the Gulf of Tonkin. According to Yu and Mu, the absence of the total allowable catch “may be considered to be a main shortcoming of the Fishery Agreement with regard to article 61 of LOSC” where a coastal

⁶¹ Article 2 of the Sino-Vietnamese Fishery Agreement.

⁶² Article 22 of the Sino-Vietnamese Fishery Agreement.

⁶³ Article 9(1) of the Sino-Vietnamese Fishery Agreement.

⁶⁴ Article 9(3) and (4) of the Sino-Vietnamese Fishery Agreement.

⁶⁵ Article 11(2) of the Sino-Vietnamese Fishery Agreement.

⁶⁶ Xue, above n 58, page 228.

⁶⁷ Xue, above n 58, page 230.

⁶⁸ Jianfeng Li and Pingping Chen, “China-Vietnam Fishery Cooperation in the Gulf of Tonkin Revisited,” *Second International Workshop 2010, The South China Sea: Cooperation for Regional Security and Development Proceedings*.

State shall determine the allowable catch of the living resources in its exclusive economic zone.⁶⁹

The collaboration undertaken in the Gulf of Tonkin serves to exemplify that the national scale cannot be understated. Global legal instruments and/or regional organisational efforts to promote joint cooperation in marine environmental protection must be more consistent in taking heed of bilateral ties between any two States. Linking this understanding to my thesis, bilateral ties between Thailand and Cambodia are to be considered from the perspective of how they could influence the interactions across different scales of joint cooperation in the management of their transboundary coastal ecosystems in light of their overlapping maritime claims. As for the relevance to Cambodia-Vietnam, this specific fisheries cooperation in the Gulf of Tonkin serves as a reminder to take note of how local fisher people (subnational ‘voices’) in the provinces of Kampot and Kien Giang adjusted and coped with the fisheries *refugia* project executed in their areas.

3.2.4 Subnational Scale of Joint Cooperation

The subnational scale of joint cooperation in marine environmental protection refers to provinces cooperating across international borders. This scale is the least visible among the different scales of marine environmental cooperation that exist in the world. While there can be some subnational collaboration that occurs within a larger regional framework of marine environmental cooperation, this is generally rare.

For instance, there exists a political network of regional authorities below the national level such as the Baltic Sea States Sub-regional Cooperation (BSSSC) in the Baltic Sea region. Kapaciauskaite notes that more than 100 sub-regions (counties and similar sub-national divisions) representing their interests towards larger national and European organisations, regularly participate in the annual conferences of the BSSSC.⁷⁰ Another example is found in the regional area which is the topic of this thesis. The subnational cooperation on the two transboundary coastal ecosystems between the four provinces (Kampot and Koh Kong in Cambodia, Trat in Thailand, and Kien Giang in Vietnam) have been chosen as demonstration sites and they are part of the larger regional cooperation under the UNEP/GEF SCS Project in the Gulf of Thailand.

There can also be subnational collaboration on marine environmental protection that is independent of larger scales. The Gulf of Maine is used here as a brief example to illustrate this in greater detail. In December 1989, governors in the three states in Northeast United States (Maine, Massachusetts, and New Hampshire) and premiers in two Canadian provinces (New Brunswick and Nova Scotia) adopted the Agreement on Conservation of the Marine Environment of the Gulf of Maine between the Governments of the Bordering States and Provinces.⁷¹ The Gulf of Maine agreement is significant because it was signed just five years after Canada and the United States went to the International Court of Justice to resolve a

⁶⁹ Yunjun Yu and Yongtong Mu, “The New Institutional Arrangements for Fisheries Management in Beibu Gulf,” *Marine Policy* 30 (2006), page 258.

⁷⁰ Ieva Kapaciauskaite, “Environmental Governance in the Baltic Sea Region and the Role of Non-governmental Actors,” *Procedia: Social and Behavioral Sciences* 14 (2011), page 94.

⁷¹ See Gulf of Maine Council on the Marine Environment, *The Gulf of Maine Action Plan 1991-2000* 1, 6-7 (1991), available at <<http://www.gulfofmaine.org>>

maritime boundary dispute in the region (see Figure 8).⁷² Chircop et al. wrote in the mid-1990s that the agreement is, “essentially, a non-binding, multilateral, political agreement and therefore the impetus to cooperate is political and moral, rather than as a result of any legal obligation or commitment”, and labelled it as a “novel but nascent approach to transboundary marine environmental protection”.⁷³

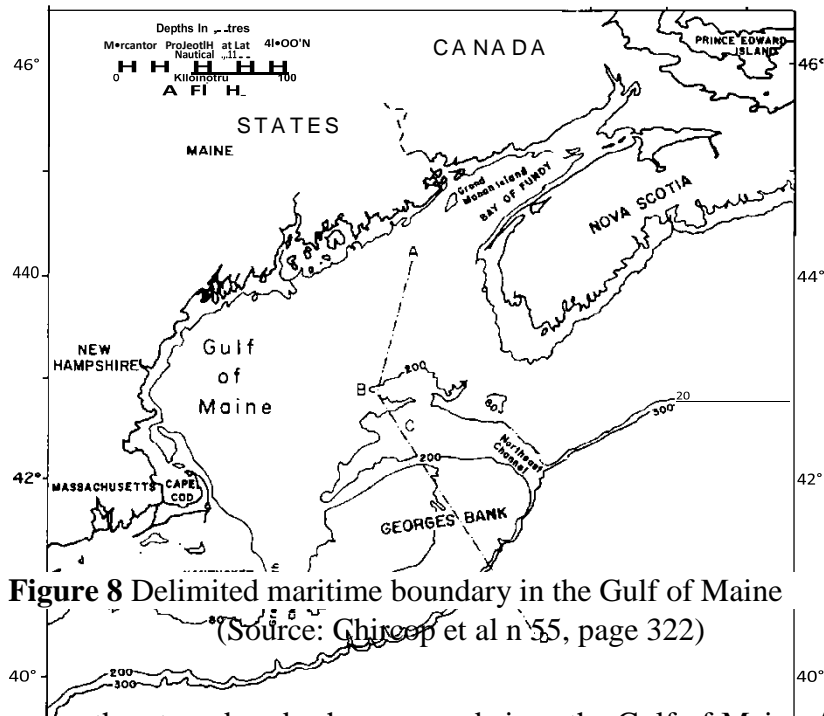


Figure 8 Delimited maritime boundary in the Gulf of Maine
(Source: Chircop et al n 55, page 322)

Slightly more than two decades have passed since the Gulf of Maine Agreement was negotiated and the Action Plan developed and there have been assessments of its effectiveness. In the early 2000s, Hildebrand et al. highlighted that the Gulf of Maine Agreement and Action Plan have yet to develop concrete regional environmental standards and a firm financial mechanism.⁷⁴ Hildebrand et al. went further to explain that infusions of funds from the local governments, though a boon, is also a bane to the Working Group and Council as their motivation to actively seek out funding resources from external source.⁷⁵ This specific financial sore point is also taken up once again in 2010 by Hildebrand and Chircop in their continued research on the Gulf of Maine, where both of them state that the Working Council still faces a lack of long-term funding despite some modest contributions from regional businesses and foundations, indicating that fundraising efforts have not been

⁷² *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, International Court of Justice, Judgment, 12 October 1984, available at <<http://www.icj-cij.org/docket/files/67/6369.pdf>> Accessed on 26 August 2015.

⁷³ Aldo Chircop, David VanderZwagg and Peter Mushkat, “The Gulf of Maine Agreement and Action Plan: A Novel but Nascent Approach to Transboundary Marine Environmental Protection,” *Marine Policy* 19 (1995), page 318.

⁷⁴ Lawrence P. Hildebrand, Victoria Pebbles and David A. Frasers, “Cooperative Ecosystem Management Across the Canada-US Border: Approaches and Experiences of Transboundary Programs in the Gulf of Maine, Great Lakes and Georgia Basin/Puget Sound,” *Ocean and Coastal Management* 45 (2002), page 429.

⁷⁵ *Ibid.*

generally successful.⁷⁶ Both authors also point to the avoidance of direct treatment of divisive issues, most notably fisheries management which has seen little improvement over the two decades.⁷⁷

The case study of the Gulf of Maine relates to a crucial point on financial funding in the execution of joint cooperation in marine environmental protection. A scalar narrative that could be valid for the lack of success in the Gulf of Maine is that both the national governments of Canada and US (national scale) are not coming to the party with the financial backing to push forward environmental efforts. While the Canada and US provinces engaged in the daily operations of transboundary marine environmental protection, provincial funding was arguably insufficient to sustain collaboration without their national governments' financial aid. This funding issue is highly relevant to the thesis research on the four provinces in the Gulf of Thailand, especially in the aftermath of the UNEP/GEF SCS project. As revealed in the following empirical chapters, the lack or even absence of funding after the project has been initiated, has seen local communities voicing their desires for their national governments to step in after UNEP's departure. Additionally, this financial funding point is important to note in the context of giving recommendations on how to move towards better subnational joint cooperation in marine environmental protection in Chapter 6.

3.2.5 Summary

The above examples raised in the literature review not only reinforce the fact that social and ecological phenomena are intimately linked across scales,⁷⁸ but also continue to stress how a scalar approach towards marine environmental issues offers us a comprehensive view of interactions between the different actors. A range of dialogues theoretically and in practical policy terms are disclosed as well. The appropriate scale framing of the marine environmental problem and the re-scaling of the environmental issue among different actors are conceptual matters that are continuously attended to in the politics of scale literature.⁷⁹ Financial funding and gaining local support are also found to be the perennial practical issues for consideration in joint cooperation in transboundary marine environmental protection projects.

Much of the literature on joint cooperation in marine environmental protection remains ensconced in the spatial scales of global, regional, and to some extent national. It is

⁷⁶ Lawrence P. Hildebrand and Aldo Chircop, "A Gulf United: Canada-U.S. Transboundary Marine Ecosystem-Based Governance in the Gulf of Maine," *Ocean and Coastal Law Journal* 15 (2010), page 372.

⁷⁷ *Ibid.*, page 374.

⁷⁸ Nathan F. Sayre, "Ecological and Geographical Scale: Parallels and Potential for Integration," *Progress in Human Geography* 29 (2005), page 286.

⁷⁹ See, for recent examples, Leila Sievanen, Rebecca L. Gruby and Lisa M. Campbell, "Fixing Marine Governance in Fiji? The New Scalar Narrative of Ecosystem-based Management," *Global Environmental Change* 23 (2013): 206-216; Chia-Chi Wu, "Cross-scale and Multi-Level Mismatch Problems in Marine Natural Resources Management: Case Studies in the Penghu Archipelago, Taiwan," *Regional Environmental Change* 14 (2014): 2079-2087.

clear that the lacunae in academic work on joint cooperation in marine environmental protection come primarily from the subnational spatial scale. There is also a lack of analysis on how joint cooperation in marine environmental protection at the subnational scale interacts with the other spatial scales politically as well. To be fair, it is not that the aforementioned bodies of literature have often bypassed the intricate experiences at the subnational scale, but that there are not many existing collaborations of this kind and scalar narratives to write about as compared to the larger spatial scales.⁸⁰ Moreover, it is argued that no spatial scale is inherently more important in research; the priority is to examine how certain spatial scales engage in socio-political strategies to advance and defend their respective interests in environmental issues.⁸¹

It therefore becomes a priority of this study to investigate how the actors at the subnational scale could advance and defend their interests in marine environmental conservation and marine resource utilisation. Since there are limited attempts to research and write about the subnational scale of joint cooperation in marine environmental protection, we are missing the opportunity to plug the gap in the scholarship and formulate new rapprochements of academic knowledge and potential marine policy recommendations in the relevant fields of environmental politics of scale and marine environmental protection policies.

The intensively empirical endeavour that follows will pay more attention to the intricacies of the scalar narratives encompassed in subnational collaboration in the eastern part of the Gulf of Thailand. This thesis, therefore, not only adds to the flourishing body of politics of scale in environmental management but will also confront the conspicuous dearth of scholarly work in terms of the subnational scale of joint cooperation in marine environmental protection.

3.3 Key Principles and Concept

There are indeed many environmental law principles and associated concepts that could be used to complement the scalar narratives that are to be raised in the empirical chapters. Examples derived from LOSC include the duty to protect and preserve the marine environment (Article 192) and duty to prevent reduce and control marine pollution (Article 194). The Rio Declaration provides environmental principles such as duty to prevent transboundary harm and sustainable development.⁸²

Article 192 of LOSC establishes the fundamental duty of Parties to protect and preserve the marine environment. Rothwell and Stephens note that this particular duty is “elevated above the sovereign right of States to exploit their natural resources, as Article 193 of LOSC provides that this right must be exercised by States in accordance with their duty to

⁸⁰ The Gulf of Maine proves to be a notable exception. See above n 73, 74 and 76.

⁸¹ Erik Swyngedouw and Nikolas C. Heynen, “Urban Political Ecology, Justice and the Politics of Scale,” *Antipode* 35 (2003): 898–918; Mary Lawhon and Zarina Patel, “Scalar Politics and Local Sustainability: Rethinking Governance and Justice in an Era of Political and Environmental Change,” *Environment and Planning C: Government and Policy* 31 (2013): 1048-1062.

⁸² Rio Declaration, above n 11. Articles 1-9 deal with sustainable development. Articles 16-19 provide specific principles applicable to the duty to prevent transboundary harm.

protect and preserve the marine environment”.⁸³ It is worth noting that the reach of Article 192 obligation is significant in that it applies to the entirety of the marine environment, and must be undertaken in a way that does not pose risks to other environments.⁸⁴

Article 194(1) of LOSC indicates that States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source. It provides further States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights. In particular, Article 194(5) states the need to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

Transboundary harm refers to “harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border”.⁸⁵ The areas damaged by transboundary harm may be either within a jurisdiction or beyond national jurisdiction. The principle of the duty to prevent transboundary harm is derived from the fundamental principle *sic utere tuo ut alienum non laedas* or “principle of good neighbourliness”, and has been reinforced by State practice, judicial decisions, multilateral environmental agreements, and the work of the International Law Commission (ILC).⁸⁶ The duty to prevent transboundary harm is usually discussed as an international law obligation. It has customary international law status⁸⁷ and is therefore binding on all States whether or not they are party to particular treaties or agreements.⁸⁸

There are many working definitions of sustainable development, but the most quoted definition of sustainable development is the one contained in the 1987 Brundtland Commission’s Report, *Our Common Future*:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

⁸³ Donald R. Rothwell and Tim Stephens, *The International Law of the Sea*, (Oxford and Portland: Hart Publishing, 2010), page 342.

⁸⁴ Charney, above n 3.

⁸⁵ Article 2(c) of the *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, Geneva, Switzerland, 11 May 2001.

⁸⁶ Birnie et al, above n 8, page 137.

⁸⁷ Ibid.

⁸⁸ Multiple international cases have reinforced this binding effect. For example, the Trail Smelter arbitration of 1938 and 1941 was a landmark decision about a dispute over environmental degradation between the United States (US) and Canada. A tribunal was set up by Canada and the US to resolve a dispute over damages to US citizens and property in the state of Washington caused by a smelter on the Canadian side of the border. The tribunal decided that Canada had to pay the US for damages, and further that it was obliged to abate the pollution.

It contains within it two key concepts:

- the concept of ‘needs,’ in particular the essential needs of the world’s poor, to which over-riding priority should be given; and,
- the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.⁸⁹

This comprehension of sustainable development came to influence the 1992 UNCED in Rio de Janeiro. The central aim of the Rio summit was to identify the principles of and an agenda for action towards sustainable development in the future and it was the first time that the world’s governments officially adopted sustainable development as the development paradigm.⁹⁰ Birnie et al. argue that with the adoption of the Rio instruments, sustainable development became and remained the leading concept in international environmental policy.⁹¹

The chosen principles that are to be selected from the above discussion must be closely aligned to the thesis’ focus on the subnational scale via the two research objectives surrounding the strengthening of institutional arrangements and enhancing public awareness on marine conservation. This means that daily livelihood concerns, fishing catch, transboundary pollution, and local awareness on marine conservation which were core issues experienced at the subnational scale during the UNEP/GEF SCS Project had to be analysed in terms of the chosen principles.

The two above articles from LOSC are broad overarching provisions which Parties are obligated to follow and are carried out at a variety of different spatial scales. Although the two articles are important in their own context and represent the broad objective the people in the local communities are working towards, they may be unable to fully engage the subnational narratives that are to be uncovered at the four researched provinces of Kampot and Koh Kong (Cambodia), Kien Giang (Vietnam), and Trat (Thailand). This is because the villagers tend to be more engaged with practical concrete measures on marine environmental concerns that relate to their livelihoods. This is a crucial point to make that though the villagers’ voices do not represent the whole of subnational voices, they constitute the majority of the interview respondents and thus form an important component of the subnational ‘voices’.

Therefore, the Rio Declaration which provides environmental principles that are more tool-based in approach resonates better with coastal communities’ concerns. In order to better address the scalar narratives on the strengthening of institutional arrangements, the duty to prevent transboundary harm was chosen due to the reason that the subnational joint cooperation during the UNEP/GEF SCS Project was to prevent transboundary marine pollution and reverse degradation to the coastal and marine environments. As for the scalar

⁸⁹ World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987), page 43.

⁹⁰ Daniel B. Magraw and Lisa D Hawke, “Sustainable Development,” in Daniel Bodansky, Jutta Brunnée and Ellen Hey, (eds.), *The Oxford Handbook of International Environmental Law*, (New York: Oxford University Press, 2007): 613-638.

⁹¹ Birnie et al, above n 8, page 53.

narratives on enhancing the public awareness on marine conservation, the concept of sustainable development was taken up because the willingness to conserve coastal resources were strongly tied to utilising these resources for livelihood survival.

The author also settled on the choice of fisheries *refugia* which was introduced in the UNEP/GEF SCS Project (elaborated further in the following pages). Indeed, fisheries *refugia* is more in the nature of a concept that has been developed to implement a variety of overarching principles and international law obligations including the overarching framework obligations. Additionally, fisheries *refugia* has been applied on selected demonstration sites in the UNEP/GEF SCS Project which strengthen its empirical relevance, and thus inclusion as a key concept in my thesis. The concept of fisheries *refugia* was engaged together with sustainable development in Chapter 5 where concerns over fisheries catch were examined in light on marine conservation efforts. The following sub-sections then further justify the selection of the key principles and concept by explaining in greater detail.

3.3.1 Duty to Prevent Transboundary Harm

The duty to prevent transboundary harm is very much allied to the notions of being precautionary and consultative on the existence of transboundary environmental risks. Günther Handl explains that this is due to:

A growing international acknowledgement that environmental effects ought to be dealt with holistically - that is, in an integrated fashion that takes into account systemic ecological implications and their spatial manifestations irrespective of territorial boundaries or jurisdictional competences.⁹²

Carrying out environmental risk assessments is thus encouraged to prevent transboundary harm. This is signified in Principle 17 of the Rio Declaration:

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Also, a strong provision on this concept was included in Principle 19 of the Rio Declaration:

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

In the marine ecosystem context, littoral States are obliged to prevent transboundary harm from land or marine based pollution as informed by Article 192 of the LOSC stressing the obligation for states to protect and preserve the marine environment as a whole. The explicit wording of Article 123 (a) and (b) of LOSC is also applicable in the Gulf of Thailand:

⁹² Günther Handl, "Transboundary Impacts," in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law*, (New York: Oxford University Press, 2007), page 546.

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

- (a) to coordinate the management, conservation, exploration and exploitation of the living resources of the sea;
- (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment.

The people living along the coast at the two researched border areas are experiencing environmental impacts from transboundary activities on a daily basis. It is from this point of view that the author wishes to engage the concept of the duty to prevent transboundary harm, and incorporate a broader perspective of how the subnational scale of coastal communities react to efforts by the national and regional scales in averting transboundary pollution and degradation of the marine environment. This is important because coastal communities are the ones experiencing any form of environmental degradation or environmental impacts first hand on the ground, and their responses and roles may reconfigure transboundary collaboration measures between States. It is also significant to note that if subnational joint cooperation in marine environmental protection is successful, transboundary harm to the marine environment can be prevented at the subnational scale.⁹³

3.3.2 Sustainable Development

Although sustainable development became a mainstream idea in environmental policies after the Rio Earth Summit, consensus around sustainable development backtracked. This was because there was confusion over the role of economic development, how to prevent environmental degradation exactly, and how to determine the integration of development and environment under the diverse and expanding concept of sustainable development.⁹⁴ The 2002 WSSD sought to rectify this situation, setting in place a broadened institutional architecture for sustainable development, to further implement Agenda 21, and to meet sustainable development challenges. In particular, the Chapter XI of the WSSD's action plan, "JPOI, sets out a multi-tiered international architecture for sustainable development governance, through which states seek to provide a strengthened and linked system of international bodies and organisations working toward sustainable development".⁹⁵

With these elaborations taken into account in the context of this thesis, sustainable development is understood as the balance between economic development and protection of the marine environment through using natural resources in the eastern part of the Gulf of Thailand in an equitable and sustainable manner, without affecting present and future human

⁹³ This idea is further explored in Chapter 4.

⁹⁴ See, for examples, Sharachandra M. Lélé, "Sustainable Development: A Critical Review," *World Development* 19 (1991): 607-621; Lawhon and Patel, above n 81.

⁹⁵ Marie-Claire Cordonier Segger, "Sustainable Development in International Law," in Hans Christian Bugge and Christina Voigt (eds.), *Sustainable Development in International and National Law: What did the Brundtland Report do to Legal Thinking and Legal Development, and Where Can We Go From Here?* (Groningen: Europa Law Publishing, 2008), page 109.

needs. Salient issues surrounding joint cooperation on the management of transboundary coastal ecosystems are inescapably intertwined with relations of power⁹⁶ in the central governments of Cambodia, Thailand and Vietnam as they seek to develop the coastal regions and utilise the marine resources to serve their own national agendas. This concept of sustainable development may not necessarily align with the views of the coastal communities living along the eastern part of the Gulf of Thailand. As Gerd Winter rightfully reminds us, sustainable development is still open to the question of scale: “geographically recurring units such as individual, population and habitat must perhaps yield to economic or social development priorities”.⁹⁷ In this sense, the coastal communities at the subnational scale may yield to the demands set by their respective central governments regarding economic or social development concerns.

3.3.3 Fisheries *Refugia*

The concept of fisheries *refugia* is defined as “spatially and geographically defined, marine or coastal 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”.⁹⁸ It was “developed as a novel approach to the identification and designation of priority areas in which to integrate fisheries and habitat management”.⁹⁹ It aims to maintain important transboundary fish stocks under a specific objective of the UNEP/GEF SCS project which is the “Improved integration of fisheries and biodiversity management in the Gulf of Thailand”.¹⁰⁰

It must be stressed that the concept of fisheries *refugia* is different from other forms of fisheries management such as “no-take zones” and “highly protected marine reserves” which emphasise restriction or banning of fishing activity in the particular marine areas. It is argued that traditional Marine Protected Areas (MPAs) are unlikely to enhance fish stocks and catch in the South China Sea as they are directed towards achieving the wider objectives of biodiversity conservation that often precludes adequate consideration of the life history and population dynamics of fishery species.¹⁰¹ Thus, fisheries *refugia* has been developed to redress this imbalance as it is mainly focused on the nature of the specific habitat in the

⁹⁶ Thomas J. Wilbanks, “Sustainable Development in Geographic Perspective,” *Annals of the Association of American Geographers* 84 (1994): 541-556.

⁹⁷ Gerd Winter, “A Fundament and Two Pillars; The Concept of Sustainable Development 20 Years after the Brundtland Report,” in Hans Christian Bugge and Christina Voigt (eds.), *Sustainable Development in International and National Law: What did the Brundtland Report do to Legal Thinking and Legal Development, and Where can we go From Here?* (Groningen: Europa Law Publishing, 2008), page 35.

⁹⁸ Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand, *Report of the Fifth Meeting of the Regional Working Group on Fisheries*, (UNEP 2005), UNEP/GEF/SCS/RWG-F.5/3.

⁹⁹ Christopher J. Paterson, John C. Pernetta, Somboon Siriraksophon, Yasuhisa Kato, Noel C. Barut, Pirochana Saikliang, Ouk Vibol, Phiak Ean Chee, Thi Trang Nhung Nguyen, Nilanto Perbowo, Trian Yunanda, Nygiel B. Armada, “Fisheries *Refugia*: A Novel Approach to Integrating Fisheries and Habitat Management in the Context of Small-scale Fishing Pressure,” *Ocean and Coastal Management* 85B (2013), page 215.

¹⁰⁰ Ibid.

¹⁰¹ Somboon Siriraksophon, “Fisheries *Refugia*: A Regional Initiative to Improve the Integration of Fisheries and Habitat Management,” *Journal of the Marine Biological Association of India* 56 (2014): 55-64.

marine ecosystem and its critical linkage to the life-history of the fished species.¹⁰² Therefore, instead of restricting or banning fishing either spatially or temporally, fisheries *refugia* is concerned with the eco-health of the habitat that supports the fisheries.

The concept of fisheries *refugia* is easily understood by local fishing communities and because it does not prohibit fishing, local support is able to be harnessed widely.¹⁰³ The unique concept of fisheries *refugia* has proved to be very innovative, leading to Alfred Duda, GEF Secretariat's Senior Advisor on International Waters to comment:

This is a very important concept that you are developing here in this project; it has application throughout the world. We support 16 or 17 other Large Marine Ecosystems around the world, with perhaps 105 other countries working together, and I don't believe any of them are doing what you're doing here. So there is a very important potential for what you are getting experience with to share with the whole world.¹⁰⁴

This statement has prompted my closer examination in this thesis of the concept of fisheries *refugia* and investigation of how exactly it became successful particularly in the cooperation between Kampot province and Phu Quoc island of Kien Giang province where it has played a leading role. There were also attempts to link the results of such investigation to potential application to transboundary fisheries management in other areas (such as the transboundary ecosystem between Koh Kong and Trat provinces) in Chapter 6.

3.4 Conclusion

This chapter has reviewed the literature surrounding joint cooperation in marine environmental protection at different spatial scales, and underpinned with the relevant concepts discussed in this chapter, the thesis seeks to inform subsequent empirical chapters and analyses via the repository of scalar narratives in the research field sites. While situating these scalar interactions to study joint cooperation in marine environmental protection in this thesis, it is important not to envisage "a nested hierarchy of governance levels reaching down from the inter-state to the local level".¹⁰⁵ This is unhelpful as Harriet Bulkeley observes that "the scales of governance remain bounded, and there is little consideration of the possibilities that the governance of global environmental issues might emanate from the 'bottom up'".¹⁰⁶ This strongly relates to the thesis' aims to listen to the 'voices' at different levels and scales through grounded fieldwork. As such, "thinking critically about scale and jurisdiction is not achieved by denouncing one scale from the standpoint of another scale".¹⁰⁷ Rather, it is cautiously reflecting the intricacies and relations between different scales.

¹⁰² Ibid.

¹⁰³ Si Tuan Vo and John Pernetta, "The UNEP/GEF South China Sea Project: Lessons Learnt in Regional Cooperation," *Ocean and Coastal Management* 53 (2010), page 594.

¹⁰⁴ Ibid.

¹⁰⁵ John Vogler, "Taking institutions seriously: how regime analysis can be relevant to multilevel environmental governance," *Global Environmental Politics* 3 (2003), page 30.

¹⁰⁶ Harriet Bulkeley, "Reconfiguring Environmental Governance: Towards a Politics of Scales and Networks," *Political Geography* 24 (2005), page 879.

¹⁰⁷ Mariana Valverde, "Jurisdiction and Scale: Legal 'Technicalities' as Resources for Theory," *Social and Legal Studies* 18 (2009), page 146.

In the following two empirical chapters (Chapters 4 and 5), the perspectives of scalar narratives and key concepts are applied to the understanding of subnational joint cooperation in marine environmental protection in the Gulf of Thailand. Major research questions are concerned with:

- 1) Were there improvements in the institutional arrangements and public awareness on marine conservation in both transboundary sites in the Gulf of Thailand?
- 2) What challenges and problems did UNEP face?
- 3) Did the respective central governments alter the way in which UNEP was supposed to work with provincial authorities at the subnational spatial scale of the UNEP/GEF SCS Project?
- 4) What roles did the technical experts and local government officials play in influencing the strengthening of institutional arrangements and enhancement of public awareness on marine conservation?
- 5) Were there any similarities or differences in the two subnational demonstration sites when compared with each other?

In turn, such questions require a careful mapping out of the scalar narratives between the relevant actors from the various spatial scales.

Chapter 4

SCALAR NARRATIVES ON THE STRENGTHENING OF INSTITUTIONAL ARRANGEMENTS

4.1 Introduction

There are clear institutional weaknesses in the region. At the national level, the multiplicity of agencies dealing with the maritime environment, and the lack of interest at the highest political level, make efficient and integrative ocean policy virtually impossible. This problem is aggregated at the regional level where no single agency exists that can coordinate national efforts at improving the maritime environment. It is possible that UNEP may eventually emerge as the effective force in integrating national and regional policies.¹

The above assessment given by Tom Naess before the full operational implementation of the UNEP/GEF SCS Project in 2002 indicates a grim outlook on the institutional capability of the coastal States in the South China Sea and the Gulf of Thailand. Additionally, Rochette and Billé have also warned in a general context that even when legal agreements are well developed over time, the adopted institutional frameworks could remain “frozen” and thus impede effective implementation.²

Well aware of the institutional challenges, the UNEP/GEF SCS Project established a Legal Task Force to evaluate the present status of legal environmental instruments at national, regional and sub-regional levels with a view to exploring ways to strengthen regional cooperation in the environmental management of the South China Sea and Gulf of Thailand.³ In the course of evaluation, the Legal Task Force revealed many weaknesses including: “national perspectives and policies that focussed on national relevance; lack of understanding of the national relevance of global issues and priorities among both scientists and decision makers; and national processes of priority setting that tended to ignore or downplay regional and global concerns”.⁴

UNEP’s Legal Task Force then facilitated cooperation among the coastal States, and if specifically required, urged that meetings take place among people involved in the chosen transboundary marine environment demonstration sites studied in this thesis to discuss overlapping concerns. The interactions between the littoral States came in the form of organised joint meetings of the key government and technical personnel once or twice a year, workshops and study tours to exchange and transfer knowledge, and disseminate the existing

¹ Tom Naess, “Environmental Cooperation around the South China Sea: the Experience of the South China Sea Workshops and the United Nations Environment Programme’s Strategic Action Programme,” *The Pacific Review* 14 (2001), page 555.

² Julien Rochette and Raphaël Billé, “Bridging the Gap between Legal and Institutional Developments within Regional Seas Frameworks,” *The International Journal of Marine and Coastal Law* 28 (2013), pages 434-435.

³ Shelley M. Lexmond, “Review of Instruments and Mechanisms for Strengthening Marine Environmental Cooperation in the South China Sea,” *UNEP/GEF/SCS Technical Publication No. 17* (2008); M. Nizam Basiron and Shelley M. Lexmond, “Review of the Legal Aspects of Environmental Management in the South China Sea and Gulf of Thailand,” *Ocean and Coastal Management* 85B (2013), 257-267.

⁴ John C. Pernetta and Si Tuan Vo, “The UNEP/GEF South China Sea Project: Lessons Learnt in Regional Cooperation,” *Ocean and Coastal Management* 53 (2010), page 590.

laws and regulations of the respective provinces and countries concerning coastal and marine environment management.⁵ Overall, Shelley Lexmond (Legal Expert) from the UNEP/GEF SCS Project's Legal Task Force expressed the view that the role of the Legal Task Force was to "review gaps in the respective laws of the coastal States and create better informed project documents to facilitate any form of cooperation", and it was "not in UNEP's intention and power to change the legal frameworks of those countries".⁶

To understand the extent to which UNEP was influential in strengthening the institutional arrangements in protecting the marine environment among the three concerned littoral States in the UNEP/GEF SCS Project, it is imperative to examine the views of other relevant stakeholders such as the central and local government officials, and technical experts and to unravel the complex network of relations between them. In doing so, this chapter addresses the first aim of the thesis' objectives in examining how politics of scale was used by the different actors to strengthen institutional arrangements for the management of natural resources and the marine environment in the UNEP/GEF SCS Project. In particular, the author highlights an apparent conundrum that there was such a dramatic contrast in outcomes between the two UNEP/GEF SCS Project sites both of which involved the Cambodian government, and explores the underlying reasons behind the great difference of both outcomes in sections 4.2.3.1 and 4.2.3.2.

Following this analysis, the third section of the chapter will then demonstrate the lessons learnt from the respective scalar narratives gathered. The chapter illuminates the lessons to be gleaned from the practical aspects of the strengthening of institutional arrangements in this particular UNEP/SCS Project in the Gulf of Thailand. It illustrates how transboundary harm can be better prevented and how a common platform can be attained in carrying out effective joint cooperation on marine environmental protection at the subnational scale. In this thesis, the opinions of the local villagers and fisher people on the strengthening of institutional arrangements for the management of natural resources and the marine environment were not sought as they were only involved in the marine conservation aspect of the UNEP/GEF SCS Project. Additionally, as mentioned earlier in the methodology in Chapter 1, provincial officials and technical experts remain anonymous, so only their occupation and residing province details are included in the interview quotes.

4.2 Scalar Narratives in the Gulf of Thailand: Voices and Arguments

4.2.1 Kampot (Cambodia) and Kien Giang (Vietnam)

Seagrass dominates in the transboundary coastal ecosystem between the provinces of Kampot and Phu Quoc island, Kien Giang, and serves as a crucial ecological habitat for fisheries. The legal review done by UNEP found that neither Cambodia nor Vietnam has laws specific to the management and protection of seagrass.⁷ Consequently, with guidance from UNEP's

⁵ *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, UNEP/GEF South China Sea Project, Trat Province, Thailand, (18-20 February 2008); *Memorandum of Agreement between The Provincial People's Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), Policy Framework for Cooperation in the Management of Coastal Ecosystems and Natural Resources*, Kampot, Cambodia, 27 March 2008.

⁶ Interview with Shelley Lexmond, May 2013.

⁷ In fact, not one single country in the UNEP/GEF SCS Project has laws specific to the management and protection of seagrass.

transboundary diagnostic analysis (TDA) and strategic action programme (SAP), specialised executing agencies (SEAs) were appointed to bring relevant parties together to bridge the gap in institutional arrangements.⁸ In Cambodia, the central institutions chosen were the Department of Fisheries – Ministry of Agriculture, Forestry and Fishery to tackle issues of seagrass and fisheries, and the Department of Planning and Legal Affairs – Ministry of Environment to handle legal matters. In Vietnam, the Haiphong Institute of Oceanography-Research Institute for Marine Fisheries, Ministry of Fisheries, and Vietnam Environmental Protection Agency were chosen to oversee seagrass and legal matters respectively. These central institutions worked along with the provincial leaders and authorities in Kampot and Kien Giang to develop and establish a coordinating mechanism starting from May 2006.

The provincial leaders of Kampot and Kien Giang appointed appropriate agencies as the focal points to coordinate cross-border collaboration. The Department of Natural Resources and Environment in Kien Giang province, and the Fisheries Cantonment of Kampot province were selected. With regard to the strengthening of the institutional arrangements, existing legal documents of both provinces regarding management of resources and environment were reviewed, and joint meetings of the management board/Steering Committee took place once or twice a year.⁹

4.2.1.1 In Praise of UNEP as the Bridging Agency

Before the UNEP/SCS Project, there was no shared marine data between Kien Giang and Kampot. There was also no proper transboundary knowledge nor management of our shared waters... When UNEP came, technical and management expertise were introduced. We [officials] started learning more about organising meetings and workshops. We deepened our knowledge on seagrass ecology and transboundary fisheries resources... Things changed for the better.¹⁰

The above comment was made by the former demonstration site manager at Phu Quoc island and emphasises UNEP's contribution as an important and efficient third party that coordinated meetings and facilitated sharing of data towards the strengthening of institutional arrangements between Kampot and Kien Giang provinces. There is a general consensus amongst the author's central and local government respondents in Cambodia and Vietnam that UNEP's interventions were immensely significant. Other anecdotal accounts expressed approval and support for UNEP's facilitation of joint cooperation between the two provinces. As a key central government official who served as the former national focal point leader for Cambodia put it¹¹:

⁸ John C. Pernetta, *Terminal Report of the UNEP/GEF Project Entitled: Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand* (2009); John C. Pernetta and Yihang Jiang, "Managing Multi-Lateral, Intergovernmental Projects and Programmes: the Case of the UNEP/GEF South China Sea Project," *Ocean and Coastal Management* 85B (2013): 141-152.

⁹ Memorandum of Agreement between The Provincial People's Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), above n 5, page 41.

¹⁰ Interview with former manager of the Phu Quoc demonstration site, Rach Gia, Kien Giang province, April 2013.

¹¹ Interview in the Fisheries Conservation Department, Phnom Penh, March 2013.

Interviewer: How would you describe your experience working with UNEP/GEF in the marine environmental cooperation between Kampot and Kien Giang provinces?

Official: I appreciate it [the experience] very much. I learnt a lot to develop national policy plans because of this experience in the UNEP/GEF SCS Project... I gained a lot of insights in terms of fieldwork, such as the setting up of concrete poles to reduce illegal fishing and boost fish spawning. In terms of law enforcement, the legal review done by them has highlighted to me the importance for setting up patrolling teams to tackle illegal fisheries activities out at sea.

Interviewer: So how would you rate UNEP's influence as an external third party to improve the institutional arrangements?

Official: Very influential. UNEP/GEF SCS Project enjoys a very high reputation in Cambodia till present, especially in Kampot. It's very appealing.

The particular point made by the Cambodian central government official on the importance of setting up patrolling teams against illegal fishing is vital because the gaps that UNEP's Legal Task Force pointed out in the legal review had a positive impact on the implementation of law enforcement measures.¹² A similar positive impact was also present in Kampot province. As the Director of the Kampot Fisheries Cantonment explained¹³:

Interviewer: To what extent do you think the legislation for transboundary marine environmental protection has improved with UNEP's involvement?

Director: UNEP helped to improve law enforcement for sure. They made us aware of the exact environmental problems that we faced. Vietnam allowed trawlers into their waters in the past so the local governments on both sides decided that no big ships and trawlers can come to the waters between Phu Quoc island and Kampot, just the use of traditional boats and ferries... We learned to protect our marine environment better than before.

From the similar accounts given in Phnom Penh and Kampot province, it would appear that the national and subnational governments capitalised on UNEP's presence and expertise to bring about better law enforcement in the transboundary coastal environment between Kampot and Kien Giang provinces.

Furthermore, the officials were quick to comment on how 'locally' this UNEP/GEF SCS Project was administered and were proud of it. The officials largely credited UNEP for this achievement. This is an extract from an interview with the former manager based at the Phu Quoc demonstration site¹⁴:

¹² Patrols were established to curb illegal fishing. However, corruption limited the extent of success. See, for example, Matt Blomberg and Sek Odom, "Squid Inc.," *Cambodia Daily* (21 May 2015).

¹³ Interview in Kampot province, March 2013.

¹⁴ Interview in Rach Gia, Kien Giang province, April 2013

Interviewer: Can you share with me your experiences with the Cambodians in the joint meetings? What were your memories from those meetings?

Manager: I enjoyed working with them [Cambodians] because they were passionate and they knew the environmental issues of the transboundary waters between Kampot and Phu Quoc well.

Interviewer: So do you think their passion and knowledge of the transboundary waters of Kampot and Kien Giang contributed to the working relationship?

Manager: Yes. Of course. The two provincial governors signed a MoA in the end. This would not be possible if the 'right' people are not present.

Interviewer: So how did Vietnam and Kien Giang province find the 'right' people to be involved in this cross-border collaboration? This is not something easy to achieve.

Manager: Yes. This was not easy. The central government could send 'marine science experts' to the demonstration site but they are not the 'right' people. I think it was good of UNEP to stress to the central and provincial governments that they should appoint local leaders and not people from other provinces. If people from other provinces were appointed, yes, they may be well trained, but they will definitely lack local knowledge of the marine environment and contacts. So when we [Vietnamese and Cambodians] went for meetings organised by UNEP, there was not much of a problem because we had the relevant experience. From there, we were able to develop better working relationships.

The 'local' factor in which the 'right' people that have the relevant experience for the UNEP/GEF SCS Project are recruited is indeed perceived as a source of successful strengthening of institutional arrangements. However, despite the final decision made by SEAs themselves in sub-contracting selected individuals and national organisations to assist in the implementation of the UNEP/GEF SCS Project, UNEP is believed to be the primary cause of ensuring the relevant people were recruited in the collaboration between Kampot and Kien Giang provinces among the respondents. This suggests the significant part that UNEP as a key actor has played.

Praise for UNEP occupies a central narrative within the strengthening of institutional arrangements between Kampot and Kien Giang provinces. It is, therefore, not surprising that working meetings, first initiated by UNEP and subsequently facilitated by the respective central government agencies, culminated in an MoA signed between the two provinces to cooperate in the management of their transboundary coastal ecosystems and natural resources in March 2008. As one of the technical experts in Vietnam remarked succinctly in the aftermath of the UNEP/GEF SCS Project: "although the MoA was signed between Kampot and Kien Giang provinces, there would be even greater results achieved if UNEP is still involved".¹⁵

The collective voice from the interviews in the discussion so far presents UNEP's significant contribution in the UNEP/GEF SCS Project. However, it would be inaccurate to credit UNEP solely for the success seen in Kampot and Kien Giang provinces. What we also

¹⁵ Interview with former focal point leader for the coral reefs component (Vietnam) based in the Institute of Oceanography, Nha Trang, April 2013.

witnessed was that various Cambodians and Vietnamese at the subnational scale and to a smaller extent, the national scale, utilised the international standing of UNEP to gain extra technical knowledge in which they were lacking, facilitate cross-border cooperation, and advance law enforcement in their transboundary waters. Specifically, the politics of scale engaged by the Cambodians and Vietnamese were scalar strategies to tap on UNEP's presence and know-how to address transboundary marine environmental concerns, thus asserting their specific local concerns at a wider scale and strengthening joint collaboration amongst them.¹⁶ The scalar strategies deployed were overall an opportunistic scalar approach. The following sub-section will illuminate how this opportunistic scalar approach engaged by the Cambodians and Vietnamese advances our understanding of environmental politics of scale.

4.2.1.2 An Opportunistic Scalar Narrative

The study of environmental politics of scale has enjoyed sustained academic attention.¹⁷ Strategies pursued by individuals and groups (actors) and their interactions across different levels of social/political organisation to achieve their particular goals are well explored in the environmental literature.¹⁸ In a recent Brazilian Amazon development case study, Taravella and de Sartre note that the large ranchers try to play the role of "local developers" for the smaller farmers, supposedly helping them but in actual fact they have other intentions to engage larger regional/national/international scales to benefit their businesses' interests.¹⁹

¹⁶ For environmental examples on scalar strategies in advancing local interests, see, Katrina Brown and Sérgio Rosendo, "The Institutional Architecture of Extractive Reserves in Rondônia, Brazil," *The Geographical Journal* 166 (2000): 35-48; Mark Boyle, "Cleaning Up the Celtic Tiger: Scalar 'Fixes' in the Political Ecology of Tiger Economies," *Transactions of the Institute of British Geographers* 27 (2002): 172-194; Gard Lindseth, "Scalar Strategies in Climate-Change Politics: Debating the Environmental Consequences of a Natural Gas Project," *Environment and Planning C: Government and Policy* 24 (2006): 739-754. For general examples on scalar strategies, see, Kevin R. Cox, "Spaces of Dependence, Spaces of Engagement and the Politics of Scale, or: Looking for Local Politics," *Political Geography* 17 (1998): 1-23; Richard Howitt, "Scale," in John Agnew, Kathryn Mitchell and Gerald Toal, (eds.), *A Companion to Political Geography*, (Oxford: Blackwell, 2003): 138-157.

¹⁷ See, for examples, James Meadowcroft, "Politics and Scale: Some Implications for Environmental Governance," *Landscape and Urban Planning* 61 (2002): 169-179; James McCarthy, "Scale, Sovereignty, and Strategy in Environmental Governance," *Antipode* 37 (2005): 731-753; Maureen G. Reed and Shannon Bruyneel, "Rescaling Environmental Governance, Rethinking the State: A Three-dimensional Review," *Progress in Human Geography* 34 (2010): 646-653; Mary Lawhon and Zarina Patel, "Scalar Politics and Local Sustainability: Rethinking Governance and Justice in an Era of Political and Environmental Change," *Environment and Planning C: Government and Policy* 31 (2013): 1048-1062.

¹⁸ See, for examples, Emma S. Norman and Karen Bakker, "Transgressing Scales: Water Governance across the Canada-U.S. Borderland," *Annals of the Association of American Geographers* 99 (2009), 99-117; Eleanor Andrews and James McCarthy, "Scale, Shale, and the State: Political Ecologies and Legal Geographies of Shale Gas Development in Pennsylvania," *Journal of Environmental Studies and Sciences* 4 (2014): 7-16; Alice Cohen and Karen Bakker, "The Eco-scalar Fix: Rescaling Environmental Governance and the Politics of Ecological Boundaries in Alberta, Canada," *Environment and Planning D: Society and Space* 32 (2014): 128-146; Vanessa Lamb, "Where is the Border? Villagers, Environmental Consultants and the 'Work' of the Thai-Burma Border," *Political Geography* 40 (2014): 1-12.

¹⁹ Romain Taravella and Xavier A. de Sartre, "The Symbolic and Political Appropriation of Scales: A Critical Analysis of the Amazonian Ranchers' Narrative," *Geoforum* 43 (2012): 645-656.

This has led to their legitimisation as ‘local developers’ of the Amazon region, gaining access to natural resources in protected areas by downplaying environmental issues.²⁰

It is true that politics of scale also existed in the Gulf of Thailand when the UNEP/GEF SCS Project commenced as the Cambodians and Vietnamese working in central and provincial government departments sought to advance their interests in gaining coastal management, legal, and technical expertise from UNEP. The agendas pursued, however, were not conflicting as with the example in the Amazon region given above. In actual fact, an opportunistic scalar narrative emerged from the case study of the UNEP/GEF SCS Project in Kampot and Kien Giang provinces. The eventual signing of the MoA between the two provinces is the clearest evidence of this opportunistic scalar approach (outlined in previous sub-section) in the strengthening of institutional arrangements. This is an interesting departure from the usual manifestation of scalar politics where troubling power relations unfold in environmental conflicts.²¹

Moreover, fieldwork on both sides of the border has revealed that even though the MoA between Kien Giang and Kampot provinces ended in December 2012, a second MoA independent of UNEP was signed between both provinces focusing on the management of their transboundary fisheries resources.²² This is impressive given that some of the personnel involved in the original MoA have gone on to assume new positions, such as the former manager at the Phu Quoc demonstration site, who is now deputy director of the Science and Technology Department of Kien Giang Province. According to the former manager at the Kampot demonstration site, the Governors of Kampot and Kien Giang provinces meet regularly to discuss existing and potential cooperation on not just marine issues, but also agriculture and tourism matters.²³ It is abundantly clear from the above observations that the institutional framework and cordial relationships have been well established between the two provinces.

Based on research into Pacific small island developing States’ strategies to attract international recognition and support for their marine biodiversity conservation at the tenth

²⁰ Ibid.

²¹ See, for examples, Steven E. Silvern, “Scales of Justice: Law, American Indian Treaty Rights and the Political Construction of Scale,” *Political Geography* 18 (1999): 639-668; Hilda E. Kurtz, “Scale Frames and Counter-Scale Frames: Constructing the Problem of Environmental Injustice,” *Political Geography* 22 (2003): 887-916; Chris Sneddon, “Reconfiguring Scale and Power: the Khong-Chi-Mun project in Northeast Thailand,” *Environment and Planning A* 35 (2003): 2229-2250; Philip Hirsch and Andrew Wyatt, “Negotiating Local Livelihoods: Scales of Conflict in the Se San River Basin,” *Asia Pacific Viewpoint* 45 (2004): 51-68; Chris Sneddon and Coleen Fox, “Rethinking Transboundary Waters: A Critical Hydropolitics of the Mekong Basin,” *Political Geography* 25 (2006): 181-202; Xavier A. de Sartre and Romain Taravella, “National Sovereignty vs. Sustainable Development Lessons from the Narrative on the Internationalization of the Brazilian Amazon,” *Political Geography* 28 (2009): 406-415; Vanessa Lamb, “Making Governance ‘Good’: The Production of Scale in the Environmental Impact Assessment and Governance of the Salween River,” *Conservation and Society* 12 (2014): 386-397; Diana Suhardiman and Mark Giordano, “Legal Plurality: An Analysis of Power Interplay in Mekong Hydropower,” *Annals of the Association of American Geographers* 104 (2014): 973-988.

²² Plan of Cooperation in Fisheries Management between Kampot Administrative Committee (Kingdom of Cambodia) and The Provincial People’s Committee of Kien Giang Province (S.R. Vietnam), *Implementing the Cooperation in Fisheries between Kampot Fishery Department and Kien Giang Fishery Department*, Kampot, Cambodia, 29 May 2014. This is explored in greater detail in Chapter 5.

²³ Interview in Kampot province, March 2013.

meeting of the Conference of the Parties (CoP10) to the Convention on Biological Diversity (CBD), Gruby and Campbell argue that “subaltern groups may have an opportunity to reframe – indeed rescale – their positions within global imaginations and the global environmental governance agenda’ in the presence of bigger regional and global players”.²⁴ Following this argument, the author concurs that the subnational and to some extent, the national actors of Cambodia and Vietnam, have succeeded in reframing and rescaling their transboundary marine environmental issues as more significant and warranting greater attention. The relevant parties have seized the opportunity to capitalise on an established global/regional organisation’s (UNEP) experience and expertise to develop close working ties during the UNEP/GEF SCS Project, and further consolidated cooperative mechanisms learnt from the project experience in establishing a current working partnership involving their transboundary fisheries resources.

The above scalar narratives allow us to consider alternate views away from the usual conflicting environmental agendas between various actors at different scales, widening the spectrum of views on environmental politics of scale by including a rare example of cordial cooperation among the different actors. This particular departure from conventional outcomes of environmental politics in the Gulf of Thailand is also important in the context of offering key practical lessons on engaging in cordial transboundary environmental cooperation where environmental challenges transcend national boundaries. This would be more helpful albeit rare in relative occurrence, to understand not just challenges that deter environmental progress, but also the factors that could contribute to environmental cooperation and ecological improvement to the environment.

4.2.2 Koh Kong (Cambodia) and Trat (Thailand)

There were weak laws and enforcement for the environmental governance of mangroves in both Cambodia and Thailand as uncovered by UNEP’s Legal Task Force. For example, UNEP discovered that only 8,820 ha of Cambodia’s mangroves out of 58,800 ha currently not regulated under the law are considered as being exploited in a sustainable manner.²⁵ The SEAs gathered in both States were tasked with tackling the institutional gaps on this issue between Koh Kong and Trat provinces. In Cambodia, the Department of Nature Conservation and Protection-Ministry of Environment handled issues pertaining to mangroves, and the Department of Planning and Legal Affairs – Ministry of Environment handled legal matters. In Thailand, the Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment, and the Office of Natural Resources and Environmental Policy and Planning dealt with matters of mangroves and environmental law respectively.²⁶ The plans for the strengthening of institutional arrangements included “exchanging experiences, information and experts between both provinces and countries; organising workshops and

²⁴ Rebecca L. Gruby and Lisa M. Campbell, “Scalar Politics and the Region: Strategies for Transcending Pacific Island Smallness on a Global Environmental Governance Stage,” *Environment and Planning A* 45 (2013), pages 2060-2061.

²⁵ Si Tuan Vo, John C. Pernetta and Chris Paterson, “Status and Trends in Coastal Habitats of the South China Sea,” *Ocean and Coastal Management* 85B (2013), page 157.

²⁶ In addition, Ramkhamhaeng University was enlisted to oversee the coral reef habitat demonstration site in Mu Ko Chang at Ko Chang (refer to Figure 2), but this is not the main transboundary site of focus between Koh Kong and Trat provinces.

study tours; disseminating and enforcing the existing laws and regulations of both provinces and countries concerning coastal resources and marine environment management”.²⁷

4.2.2.1 Presence and Absence of UNEP and the Central Governments at Different Spatial Scales

UNEP played a key role. Before this UNEP/GEF SCS Project, the only significant collaboration Cambodia and Thailand had was on the economy. There was no focus on the transboundary marine environment... With UNEP’s help, we were able to share marine environmental data with Thailand. We now understand more about fisheries migration. We also know that we have to reduce commercial exploitation of mangroves for charcoal from Thailand which is not good for the coastal environment.²⁸

UNEP came out with the idea of having demonstration sites to facilitate cooperation between Trat and Koh Kong. This is very good because transboundary mangroves need cooperation on both sides of the border.²⁹

In terms of evaluating the role of UNEP in the strengthening of institutional arrangements, a similar narrative of support arose among the central government officials in Phnom Penh and Bangkok. Generally, there appear to be very positive endorsements of the value of UNEP’s technical expertise and relevant experience in strengthening of institutional arrangements in this UNEP/GEF SCS Project on the national scale.

In Trat province, however, a different scenario emerges as far as attitudes to the strengthening of institutional arrangements on the ground are concerned. Through interviews with the local government officials and former demonstration site leaders, they recounted unenthusiastic efforts from the Thai central government in executing the UNEP/GEF SCS Project in Trat province. An exchange with a former demonstration site leader draws out the ‘tensions’ between provincial (subnational) and central (national) authorities well³⁰:

The main problems I encountered came from the central government. There was a lack of financial support. I did my best to organise meetings and workshops for the sharing of data with Cambodians. The Cambodians did not have much in their budget to travel frequently though... I think the local government don’t have much power to persuade the central government. You see Pred Nai (demonstration site) is small, Trat province is small, but the central government is big. They [central government] have the power to decide whether to help us.

The explicit reference to the smaller spatial scales of Pred Nai demonstration site and Trat province in relation to the bigger spatial scale of the central government in Bangkok not

²⁷ *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, above n 5, page 20.

²⁸ Interview with former national focal point leader based in the Ministry of Environment, Phnom Penh, March 2013.

²⁹ Interview with former national focal point leader based in the Department of Coastal and Marine Resource, Bangkok, January 2013.

³⁰ Interview with former demonstration site leader of Pred Nai, Bangkok, December 2012.

only sums up the ‘frustration’ of the respondent, but also strongly indicates that the ‘middlemen’ (central government) cannot be discounted as a relevant linkage between the global/regional actor of UNEP and subnational actors of the province. This observation is also underscored by the former chairman of Pred Nai Mangrove Development and Conservation Group³¹:

Working with the central government has its own problems. There are so many provinces in Thailand fighting to seek Bangkok’s attention... I feel UNEP’s presence helped us to get some support in terms of budget from the central government... With UNEP gone now, there is hardly any help to preserve what we have done in Trat, let alone serious collaboration with Koh Kong on marine environmental protection.

The above statement delivers a strong message on post-UNEP involvement. In a visit to the Pred Nai demonstration site, dilapidated signs were encountered beside the walking path (see Plates 1 and 2) that capture the lack of interest and financial support from the Thai central government after the UNEP/GEF SCS Project ended. Parts of the walkway were also difficult for walking as mangroves and leaf litter crept in from the sides.



Plate 1 Post-UNEP/GEF SCS Project: Dilapidated sign (1) in Pred Nai demonstration site, Trat province
(Source: Author’s photograph, 2013)

³¹ Interview in Trat province, January 2013.



Plate 2 Post-UNEP/GEF SCS Project: Dilapidated sign (2) in Pred Nai demonstration site, Trat province
(Source: Author's photograph, 2013)

A focus group interview conducted with provincial environmental officials in Koh Kong expressed similar perspectives that strengthening of institutional arrangements were largely missing on the ground³²:

Provincial environmental official (A): We were just called by the provincial government whom received orders from the central government in Phnom Penh to get involved in this so-called UNEP project. There was hardly any action taken on the ground. We just went for meetings in Thailand.

Interviewer: So you all were unsure what was going on between the marine environmental cooperation between Koh Kong and Trat provinces?

Provincial environmental official (A): I think this project was good at a larger picture. But there was no real involvement on the ground... I also remember one of the rivers was wrongly named in the report.

Provincial environmental official (B): Yes. We were unsure. I think villagers and some of the local officials are still not that clear about this project till today. There is no real feedback.

³² Focus group interview in Koh Kong province, March 2013.

Provincial environmental official (C): I don't even know my role well in this project. I just tagged along with others.

Interviewer: So who or what factor do you think contributed to this confusion and lack of action for the UNEP/GEF SCS Project's implementation in the province?

Provincial environmental official (A): I guess there were miscommunication and a lack of effort from the central government... And I don't think this UNEP/GEF SCS Project was that important. We will still be interested in the marine environment even without UNEP or the central government. Villagers here know the importance of the coastal environment and its resources, so we are not worried. Our Peam Krasop National Park is in good condition. Mangroves are managed well overall. What I see as the real environmental problem is the building of dams inland in Koh Kong. I'm not sure whether that will be properly managed by the Chinese.³³

Provincial environmental official (B): I'm not sure. It is hard to say who is at fault here [referring to UNEP and central government in Phnom Penh].

Sentiments of confusion over the clarity of the UNEP/GEF SCS Project were echoed across the room when the focus group interview was conducted. Perceived frustration towards the central government in Phnom Penh and to a certain extent, UNEP, indicates that the province should spearhead its own environmental initiatives in the absence of those parties on the ground. One of the local officials asked the author how he came to know about this UNEP/GEF SCS Project in Koh Kong province. This undoubtedly reflects the fact that the subnational authorities in Koh Kong province are unaware of the existence of online material highlighting UNEP's goal of encouraging marine environmental protection cooperation in the South China Sea and Gulf of Thailand.

Whilst the views in Koh Kong and Trat provinces may be disparate in relation to UNEP's involvement in the strengthening of institutional arrangements, the collective response in the two provinces reflects a dismissive attitude to their respective central governments' agencies. It seems that opinions surrounding the UNEP/GEF SCS Project bring to light how the central governments failed to integrate UNEP's expertise to improve institutional arrangements on the provincial (subnational) scale. The lack of integration of UNEP's expertise and the provinces' motivation by the respective central governments' agencies may explain why there was little achieved at the subnational scale. This could at least partially explain why the MoA was prepared in the UNEP third joint meeting document but not signed given the lack of consolidation of what was envisaged. As the following discussion will demonstrate, the process to strengthen the institutional arrangements based on the different actors' expectations is fraught with conflicting vertical interplay of institutional narratives (elaborated in next sub-section).

4.2.2.2 Conflicting Vertical Interplay of Institutional Narratives

³³ China is helping Cambodia to build a dam on the Tatay River in Koh Kong province. The detrimental environmental impacts of the hydropower project remain a matter of great concern among locals and environmental activists. See, for examples, Denis D. Gray and Elaine Kurtenbach, "China is Top Dam Builder, Going Where Other Won't," *Associated Press* (19 December 2012); May Kunmakara, "China Power Plant Open," *Phnom Penh Post* (15 August 2014).

Institutional interactions may either be driven by the inherent condition of the environmental problem at stake, or by the intentions of intervening actors.³⁴ There were institutions at different levels of organisation and spatial scales that sought to interact and strengthen the institutional arrangements in marine environmental cooperation between Koh Kong and Trat provinces. It is argued that institutional performance should be based on examining the linkages and interactions among distinct institutional arrangements vertically across spatial scales.³⁵ Understanding these particular interactions across spatial scales is critical to reduce misfits of environmental management between ecosystems and institutions.³⁶ Young provides a useful framework for analysing these institutional interactions across spatial scales in the form of vertical interplay.³⁷

Thus, vertical interplay of institutional interactions is the materialisation of various discourses, and can capture different (and possibly conflicting) sets of knowledge produced at the various scales. Here, based on empirical findings from the provincial officials above, the relative absences of ‘real action’ taken by the central government agencies, and UNEP, to a smaller extent in Koh Kong province, are the dominant narratives revealed. On the other hand, the specific narratives from the central government authorities in both countries indicate that UNEP’s presence was significant for the improvement of institutional arrangements.

The vertical interplay narratives revealed are indeed imbued with a scalar disconnect³⁸ between the subnational and national scales in strengthening institutional arrangements on marine environmental protection. However, given a common attitude on both sides of the border which lamented the puny efforts of their respective central government agencies, it sets the stage for a deeper interrogation into the roles played by the authorities from Bangkok and Phnom Penh.

It is now necessary to examine how the roles played by the central government authorities were seen by UNEP’s personnel in order to shed some light on the claims made by provincial authorities and demonstration site leaders. The following interview with the Project Director shows what issues and problems UNEP officials faced while working with the central government agencies³⁹:

³⁴ Catarina Grilo, “Institutional Interplay in Networks of Marine Protected Areas with Community-Based Management,” *Coastal Management* 39 (2011), page 443.

³⁵ Junni Paavola, Andrew Gouldson and Tatiana Kluvánková-Oravska, “Interplay of Actors, Scales, Frameworks and Regimes in the Governance of Biodiversity,” *Environmental Policy and Governance* 19 (2009): 148-158.

³⁶ Carl Folke, Lowell Pritchard Jr., Fikret Berkes, Johan Colding and Uno Svedin, “The Problem of Fit between Ecosystems and Institutions: Ten Years Later,” 12 (2007): 30.

³⁷ Oran R. Young, “Institutional Interplay: the Environmental Consequences of Cross-Scale Interactions,” in Elinor Ostrom, Thomas Dietz, Nives Dolšák, Paul C. Stern, Susan Stonich, Elke U. Weber (eds.), *The Drama of the Commons*, (Washington DC: National Academy Press, 2002): 263-292; Oran R. Young, “Vertical Interplay among Scale-Dependent Environmental Resources Regimes,” *Ecology and Society* 11 (2006): 27.

³⁸ Diana Suhardiman, Mark Giordano and François Molle, “Scalar Disconnect: The Logic of Transboundary Water Governance in the Mekong,” *Society and Natural Resources* 25 (2012): 572-586.

³⁹ Interview with John Pernetta, Project Director, Bangkok, April 2013.

Thailand was supposed to take the lead in this project. They are much more experienced than Cambodia... Thailand did not work well with Trat and Koh Kong. I mean there is so much UNEP can do, a lot depends on the government to push for things to take place eventually.

What is evident from this example is that UNEP's involvement, though important, is not the most decisive factor in ensuring that strengthening of institutional arrangements are implemented thoroughly on the ground.

Thailand's central government, in particular, was singled out as a 'missing' actor. The Project Director's observation of Thailand not working well at the subnational scale is also verified by the fact that the central authorities appointed an individual⁴⁰ and not a provincial agency to assist the demonstration site leader in Pred Nai. The leader of Pred Nai's demonstration site in turn was also pushing for study tours to impart relevant experiences and skills to the Cambodians over in Koh Kong province. Whilst the author does not suggest that this decision actually diminishes or nullifies the supposed strengthening of institutional arrangements in any way, it does appear to be insensitive to the magnitude of the task, and therefore reflective of the fact that Thailand favours a centralised as compared to community-based (provincial) approach toward institutional arrangements.⁴¹ Additionally, there is a case to be made then for the respondents in Koh Kong province who received unclear instructions from higher government authorities in Phnom Penh, and seemed vexed at attending meetings in Thailand that were inherently lacking in direction.

In short, the conflicting vertical interplay of institutional narratives highlighted in this empirical section reflects how national institutions can still impact the eventual process and effectiveness of subnational ones, irrespective of whether a regional or international institution is involved in initiating the environmental project. Clearly and demonstrably, such vertical interplay echoes the call for more attention to be paid to the politics of environment or everyday struggles over environmental meanings experienced at the subnational scale,⁴² and in the broader workings of environmental scalar politics, represents an obstacle to effective subnational cooperation between Koh Kong and Trat provinces.

4.2.3 Comparing the Scalar Narratives: Central Governments as the Key Interveners in Joint Cooperation

⁴⁰ The individual appointed was the former chairman of Pred Nai Mangrove Development and Conservation Group.

⁴¹ Patrick Christie and Alan T. White, "Trends in Development of Coastal Area Management in Tropical Countries: From Central to Community Orientation," *Coastal Management* 25 (1997): 155-181.

⁴² Philip Hirsch and Carol Warren (eds.) *Politics of Environment in Southeast Asia: Resources and Resistance*, (London: Routledge, 1998); Philip Hirsch, "Globalisation, Regionalisation and Local Voices: The Asian Development Bank and Rescaled Politics of Environment in the Mekong Region," *Singapore Journal of Tropical Geography* 22 (2001): 237-251.

While the Kampot and Kien Giang provinces' case illustrates an opportunistic scalar narrative of a harmonious kind,⁴³ the study in Koh Kong and Trat provinces outlines the intricacies of conflicting vertical interplay of institutional narratives. The mixed results from the two subnational transboundary sites offer an interesting comparison for evaluation. As seen above, the focus of the central government as a key intervener to joint cooperation amongst the respective provinces is noticeably influential. Being mindful of this, this subsection discusses the 'middle' actor between UNEP and the respective provinces from two salient angles.

First, the strengthening of institutional arrangements is strongly associated with the capacity to learn from UNEP at the national scale given that SEAs were appointed by the international organisation, so it necessitates obtaining the working experiences of UNEP's personnel through the central government agencies. Second, because there is a situation where one transboundary site saw the development of a signed and enforced MoA, and the other did not, the role in which the bilateral relationship of the central governments influenced the outcomes in each case can be contrasted.

4.2.3.1 The View from UNEP

One of the major objectives of the UNEP/GEF SCS Project is capacity building. Capacity building is defined as "enhancing the capacity of the participating governments to integrate environmental considerations into national development planning".⁴⁴ It is also "intended to be promulgated in the policy, legal, administrative, scientific and technical sectors of participating countries".⁴⁵ Therefore, it is important to consider UNEP's view on the central governments' capacity to learn about the strengthening of institutional arrangements.

John Pernetta, Project Director, gave his candid assessments of the three States when he was asked to comment on the relative competence of each State's central government institutions and officials in getting the institutional arrangements strengthened⁴⁶:

Vietnam,

I would say Vietnam is the best performing country. Vietnam has a rich and sound history of marine management. If you go visit their Vietnam Institute of Oceanography in Nha Trang, you can see that their local knowledge is good. What they lacked was international exposure. The SCS Project was a bridge to the external regional

⁴³ The word 'opportunistic' suggests exploitation, but it does not mean it is always done unethically. For example, in an article on the development of river basin management practice across North America and Europe, Molle observed that from the late 1940s onwards, Mexico had established four river-basin commissions partly through the opportunistic capture of the symbolic power of the US Tennessee Valley Authority's (TVA) success story to gain cooperation across governments agencies for regional development in their own country. Therefore, the word 'opportunistic' does not contradict a harmonious outcome.

⁴⁴ See Pernetta, above n 8; J. Michael Bewers and John C. Pernetta, "Outcomes of the SCS Project and their Applicability to Multilateral Cooperative Initiatives for the Management of Coastal Seas and Marine Basins," *Ocean and Coastal Management* 85B (2013), page 271.

⁴⁵ Ibid.

⁴⁶ Interview in Bangkok, April 2013.

environment for them. They were very serious in working with UNEP. They were also supportive of the transfer of knowledge to the Cambodians who were poorer in technical know-how in the Kampot-Phu Quoc cooperation.

Cambodia,

Cambodia would come in second. Cambodia clearly knew that it lacked expertise and money. They needed to build their capacity so they were very willing to learn from us [UNEP] and Vietnam who are ahead of them in marine science data collection.

Thailand,

Thailand comes in last simply because they under-achieved. They are the most experienced of all three countries working with international organisations and they do have a high level of marine science knowledge and trained marine scientists. But I saw little effort from the central government. They could have achieved much more...

In particular, the statement on Cambodia stands out. Considering that the central government of Cambodia was eager in its capacity building efforts, the failure of one Cambodian province (Koh Kong) in its cooperation with its neighbouring Thai province (Trat) merits closer attention. The next sub-section covers plausible reasons for this failure and sheds further light on the successful cooperation between Kampot (Cambodia) and Kien Giang (Vietnam) based on bilateral relations.

4.2.3.2 The Take on MoA: Success and Failure Based on Bilateral Relations

Yes. The MoA was signed between Kampot and Kien Giang but without the support of the central governments [Cambodia and Vietnam], it would not be easy to implement. There must be an agreement reached at the higher level even though it's enacted at the local level.⁴⁷

The above quote reflects the political reality of joint cooperation in marine environmental cooperation coming to fruition in the Gulf of Thailand. Whilst the UNEP/GEF SCS Project can be represented as a global/regional scale initiated project executed on a subnational scale in selected provinces, it is perhaps common to reduce the significance of the national scale. However, as Becky Mansfield avers, the national scale is still capable of "playing an important role both as a regulatory framework and an idea around which people build political strategies".⁴⁸ In other words, the central governments of the three littoral States are capable of determining the execution of joint cooperation on the ground.

In particular, questions to provincial officials and technical experts about their impressions of the central governments' bilateral working relationship and its impact on the respective MoAs, produced interesting accounts on the maritime geography of the transboundary sites:

⁴⁷ Interview with Vo Si Tuan, UNEP's Senior Expert in UNEP/GEF SCS Project, Nha Trang, April 2013.

⁴⁸ Becky Mansfield, "Beyond Rescaling: Reintegrating the 'National' as a Dimension of Scalar Relations," *Progress in Human Geography* 29 (2005), pages 459-460.

Cambodia and Vietnam,

I think it's also because the coastal waters of Kampot and Phu Quoc island are situated in the joint historic waters of Cambodia and Thailand, so maybe it's easier for both central governments to support the provinces to sign the MoA.⁴⁹

Cambodia and Thailand,

It is true that Thais and Cambodians are similar in terms of religion and culture but the political relationship between both countries is not good. We have border conflicts with Cambodia. On land and on sea. Thai trawlers still fish in Koh Kong waters sometimes. Cambodians are not happy about this. Even if things were to go well in Trat and Koh Kong, the overall political problem at the higher level may hinder them to sign the MoA.⁵⁰

As discussed in Chapter 2, the larger geopolitical picture of pre-existing maritime claims and conflicts cannot be ignored in environmental cooperation despite UNEP's strategy to de-politicise it.⁵¹ The Cambodia/Vietnam case is contrasted with the experience of Cambodia/Thailand, which illustrates how the maritime geography in the Gulf of Thailand (refer back to Figure 3 in Chapter 2) supports or challenges the bilateral working relationship to some extent.

The transboundary waters of Kampot and Kien Giang falling within the joint historic waters of Cambodia and Vietnam provides further encouragement for the two provinces to proceed to sign the MoA besides their excellent working relationship with the central governments and UNEP. Conversely, the politics of overlapping maritime claims between Cambodia and Thailand throws light onto the complex Cambodia-Thailand relationships constituting part of what Chachavalpongpun describes as “embittered history and unending conflicts”,⁵² and offers a partial explanation of why the MoA did not eventuate considering institutional arrangements were already in disarray at the subnational scale. Altogether, joint cooperation on the marine environment is never straightforward even at a small spatial scale involving provinces, and as shown here, entails the interests of the bilateral relationship between respective central governments.

With the two contrasting examples, the above accounts show that central governments, particularly their bilateral relations, were the key intervener for joint cooperation amongst the respective provinces. This was pointed out by the technical experts, and UNEP personnel in the previous sub-section. It is, therefore, not surprising to see Cambodia having mixed results in their two provinces involved in the UNEP/GEEF SCS

⁴⁹ Interview with former national focal point leader based in the Fisheries Conservation Department, Phnom Penh, March 2013.

⁵⁰ Interview with coral reef technical expert, Bangkok, January 2013.

⁵¹ Sulan Chen, “Environmental Cooperation in the South China Sea: Factors, Actors and Mechanisms,” *Ocean and Coastal Management* 85B (2013): 131-140.

⁵² Pavin Chachavalpongpun, “Embedding Embittered History: Unending Conflicts in Thai-Cambodian Relations,” *Asian Affairs* 43 (2012): 81-102. It should be noted that this is based purely upon a Thai perspective.

Project. On one hand, despite Cambodia's willingness to learn from UNEP and Thailand to build up their marine knowledge capacity, their more experienced Thai central government counterparts put in little effort to take the lead on the subnational scale in Koh Kong and Trat provinces because of the enduring overlapping maritime claims between their countries seen as the key deterrent to marine environmental cooperation. As also noted by the Project Director, he recounted quiet atmospheres in the joint meetings where the experienced Thai officials seemed reluctant to initiate collaborative measures with their Cambodian counterparts. All these factors then possibly suggest why UNEP and to a smaller extent, the Cambodian central government, were viewed not that favourably particularly in Koh Kong province because their 'absence' was resulted by a lack of central government support coordination from Thailand.

On the other hand, Kampot province enjoyed a much higher degree of success compared to Koh Kong province. The maritime geography and politics were viewed as influential between Kampot and Kien Giang provinces where it was believed that the subnational joint cooperation in marine environmental protection materialised into a signed MoA because it took place in the joint historic waters of Cambodia and Vietnam. The Project Director further added that the collaboration between Kampot and Kien Giang provinces saw great synergy between the Cambodians and Vietnamese with lots of exchanges among the local officials and technical experts, and attributed it to the support and guidance of the SEAs appointed at the national scale. These favourable conditions also resulted in UNEP being more involved at the subnational scale, and gained more prominent attention.

4.3 Scalar Narratives in Practice: Learning from the Strengthening of Institutional Arrangements to Prevent Transboundary Harm on a Subnational Scale

Institutional arrangements are not concerned only with political systems, governmental agencies, or laws, but also with the dynamic functions of society, politics, and legal systems.⁵³

The statement by Wang *et al* above eloquently summarises the essence of institutional arrangements research. This chapter has so far unveiled the dynamic functions stressed above in scalar narrative schema examples. This sub-section attempts to generate a more comprehensive understanding of the scalar narratives in an applied manner. In other words, I seek to draw on and analyse the scalar narratives on the strengthening of institutional arrangements presented in this chapter to provide some practical lessons to be learned in subnational joint cooperation.⁵⁴ In particular, the principle of duty to prevent transboundary harm⁵⁵ is examined as an integral avenue for further analysis.

The concept of duty to prevent transboundary harm is extensively utilised at regional and national scales where cooperation to protect marine resources and environment are core

⁵³ Chi-Ming Wang, Li-Shu Chen, Kuo-Huan Ting, Kun-Lung Lin, Hao-Tang Jhan, Jau-Yu Chen, Wen-Hong Liu, "Institutional Arrangements for the Management of Marine Protected Areas in Taiwan," *Ocean and Coastal Management* 98 (2014), pages 63-64.

⁵⁴ Policy recommendations are not provided in this sub-section. These are being explored in Chapter 6.

⁵⁵ The duty to prevent transboundary harm was introduced together with sustainable development and fisheries *refugia* in section 3.4 of Chapter 3 as the key principles/concepts of this thesis

obligations under the LOSC and other international marine environmental law instruments. This is strongly signified in Article 194 of the LOSC:

There is a requirement for States to take individual or joint measures as are necessary to prevent, reduce and control pollution of the marine environment from any source (1)

States are to ensure that activities under their jurisdiction or control are conducted in a manner that does not cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas subject to their sovereign rights (2)

States are to take the measures necessary to deal with such matters as the release of toxic, harmful or noxious substances; pollution from vessels; pollution from installations and other devices used in the exploration and exploitation of the natural resources of the sea-bed and subsoil; and pollution from other installations and devices operating in the marine environment (3)

However, the evidence of the concept's potential on a subnational scale is less pronounced. The UNEP/GEF SCS Project, to some extent, indirectly attested to how the idea of duty to prevent transboundary harm could be incorporated into the strengthening of the institutional arrangements carried out by the respective cross-border provinces in conjunction with UNEP and their central government agencies. In the case of Kampot and Kien Giang provinces, the provincial authorities were able to capitalise on the cordial working relationships with their central government agencies and UNEP to strengthen the institutional arrangements and prevent further transboundary harm in their shared waters to a large extent. Koh Kong and Trat provinces, however, were poorly led by their central government agencies to strengthen institutional arrangements in averting transboundary pollution and degradation of the marine environment.

Although in reality there may not be an external party like UNEP facilitating subnational marine environmental cooperation always, an opportunity for provinces to work with an international/regional organisation could be an instrument to boost law enforcement in relation to transnational environmental harm.⁵⁶ As stated by most respondents during fieldwork in Kampot and Kien Giang provinces, they believe UNEP's presence helped to develop better law enforcement on the protection of the marine environment and resources in their provinces. Furthermore, those provincial authorities and technical experts seized the chance to learn from UNEP's expertise, and improved their knowledge of managing the transboundary waters between them. This reveals that the duty to prevent transboundary harm can be deconstructed from its dominant regional and national inclinations in the LOSC framework and be promoted at the subnational scale.⁵⁷

There are, however, some cautionary lessons to take heed of in subnational joint cooperation in marine environmental protection. First, according to Tan-Mullins, the unequal power relations at the national and provincial scales can easily create divergent interests and

⁵⁶ Michael Mason, "Transnational Environmental Obligations: Locating New Spaces of Accountability in a Post-Westphalian Global Order," *Transactions of the Institute of British Geographers* 26 (2001): 407-429.

⁵⁷ Michael Mason, "The Governance of Transnational Environmental Harm: Addressing New Modes of Accountability/Responsibility," *Global Environmental Politics* 8 (2003): 8-24.

regulations in environmental resource management.⁵⁸ For instance, interviews with respondents in Koh Kong and Trat provinces disclosed that the failure to strengthen institutional arrangements effectively at the subnational scale were very much influenced by indifferent actors in their political capitals of Phnom Penh and Bangkok respectively. In particular, the central government of Thailand takes more of the blame here based on fieldwork investigation.

Second, the roles of the central government agencies remain stronger than international/regional organisations even if the latter were to initiate environmental cooperation between provinces. Drawing from a similar example in West Africa to explain⁵⁹:

In conclusion, the development of international institutions has influenced the national policy choices of Senegal, but not in a deterministic way. National actor constellations are free to move within the frame indicated by international institutions and determine the final result by facilitating or distorting national implementation.

This phenomenon of where the central government agencies determine the final result (distorting implementation in this sense) was also evident in the case of Koh Kong and Trat provinces because strengthening of institutional arrangements was basically inadequate in this case despite UNEP's best intentions to initiate facilitation.

The few learning experiences outlined above provide insights to the dynamism of subnational joint cooperation in marine environmental protection, and provide some lessons to better prevent transboundary harm on a subnational scale. It is admittedly difficult to prevent transboundary harm on a subnational scale, as the provinces are often away from the central governments' eye, but the success of Kampot and Kien Giang provinces in strengthening their institutional arrangements is encouraging in this regard.

4.4 Conclusion

This chapter has explored how the scalar narratives surrounding the strengthening of institutional arrangements among UNEP (global/regional), central government agencies (national), and provincial officials (subnational) have impacted on subnational joint cooperation in the eastern part of the Gulf of Thailand. Such an approach is important, for as Neil Brenner points out, it is helpful to analyse the politics of scale in a "plural connotation", where the strategic discursive and symbolic relationships among different geographical scales are intertwined.⁶⁰ There are several main findings based on fieldwork.

First, scalar narrations gathered from the study of Kampot and Kien Giang provinces revealed that an opportunistic scalar narrative had emerged. The subnational scale (the two aforementioned provinces) and to a smaller extent, the national scale (central government

⁵⁸ May Tan-Mullins, "The State and its Agencies in Coastal Resources Management: the Political Ecology of Fisheries Management in Pattani, southern Thailand," *Singapore Journal of Tropical Geography* 28 (2007): 348-361.

⁵⁹ Gianluca Ferraro, Marleen Brans, Moustapha Dème and Pierre Failler, "The Establishment of Marine Protected Areas in Senegal: Untangling the Interactions between International Institutions and National Actors," *Environmental Management* 47 (2011), page 570.

⁶⁰ Neil Brenner, "The Limits to Scale? Methodological Reflections on Scalar Structuration," *Progress in Human Geography* 36 (2001): 591-614.

agencies of Cambodia and Vietnam), capitalised on the involvement of the global/regional scale (UNEP) to strengthen their institutional arrangements and sign an MoA to jointly cooperate in managing their transboundary coastal ecosystems and natural resources. This finding reveals that environmental politics of scale may not necessarily be struggles over the mismatch of objectives and interests as often seen in previous scholarly literature on these issues.

Second, the case of Koh Kong and Trat provinces is fraught with conflicting vertical interplay of institutional narratives among the different spatial scales. This reveals that the central government agencies (especially Thailand) were largely the impediment in this subnational collaboration where their top-down approach and lacklustre efforts in coordination with Cambodia proved to be the main cause of the failure of the UNEP/GEF SCS Project at the subnational scale. This is in stark contrast to the case study of Kampot and Kien Giang provinces.

Third, a comparison of the two subnational transboundary sites was made. It is apparent that central governments (national scale) serve as the key intervener for joint cooperation, based on their respective working competence with UNEP, and respective bilateral relations. Fourth, there is an attempt to engage the scalar narratives in an applied manner for lessons to be gleaned in preventing transboundary harm on a subnational scale of joint cooperation. Based on the opinions and experiences disclosed from this specific UNEP/GEF SCS Project, this sub-section suggests some practical lessons for any similar subnational joint cooperation in marine environmental protection in future.

In conclusion, this chapter has sought to provide some lines of inquiry on the strengthening of institutional arrangements via the subnational and national narratives. This is crucial because UNEP Project documents, minutes of meetings, and even the peer-reviewed special issue of UNEP/GEF SCS Project in *Ocean Coastal and Management*⁶¹ tend to contain mostly the perspectives of UNEP working personnel involved in this subnational joint cooperation in the Gulf of Thailand. This is not to make an indirect claim that their views are wrong or inaccurate, but even when there is an inclusion of national and subnational sentiments in Project documents, they are mainly in short descriptions of the obstacles faced and tasks fulfilled or to be followed up.

Instead, what is witnessed by the respondents at the national and subnational scales is that individuals relate to the strengthening of institutional arrangements in this UNEP/GEF SCS Project differently, based on their working experiences with the people across different spatial scales. Thus, these are potent sites for the study of joint cooperation in marine environmental protection and politics of scale. Therefore, the study of such scalar narratives is arguably more useful, being ethnographic in nature, in complementing and supplementing the primary and secondary sources on UNEP. Accordingly, this should be balanced with logical engagement with theory to help unpack and frame the various relations and interactions in such spatial scales, laying the foundations for spaces of joint cooperation in marine environmental protection to emerge. The next chapter tackles the second aim of the thesis' objectives in examining how politics of scale was used by different actors to enhance public awareness on marine conservation and sustainable resource use.

⁶¹ The articles on "Environmental Cooperation in South China Sea" and "Review of the Legal Aspects of Environmental Management" are two of the more relevant secondary sources in this chapter. See Chen above n 51, and Basiron and Lexmond above n 3.

Chapter 5

SCALAR NARRATIVES OF ENHANCING PUBLIC AWARENESS ON MARINE CONSERVATION

5.1 Introduction

Community-based natural resource management programs are based on the premises that local populations have a greater interest in the sustainable use of resources than do state or distant corporate managers; that local communities are more cognizant of the intricacies of local ecological processes and practices; and that they are more able to effectively manage those resources through local or "traditional" forms of access... Community-based natural resource management is imagined differently by different advocates. Conservationists, both indigenous and foreign, hope to involve local people in transnational conservation and resource management goals as a means of protecting biological diversity and habitat integrity.¹

Engaging local communities via their livelihood concerns and knowledge of the coastal environment, and thus gaining their support, is highly essential for a successful conservation venture to take place.² In order to gain a better understanding of UNEP's enhancement of public awareness on marine conservation and sustainable resource use among local communities in terms of its success and challenges faced, perspectives from UNEP personnel, local communities, and other relevant parties such as central and provincial government officials, technical experts, and demonstration site leaders, who spearheaded or were part of the public awareness process during the UNEP/GEF SCS Project were gathered.

This chapter aims to address the second of the thesis' objectives by revealing the motivations, strategies, and reactions among the different actors that helped frame the scalar politics of enhancing public awareness in marine conservation and sustainable resource use in the two transboundary sites providing the primary case studies for this thesis. It is organised into three main sections. It starts with the unpacking of the various scalar narratives of the enhancement of public awareness in marine conservation in Kampot and Kien Giang provinces, followed by Koh Kong and Trat provinces. These two sections further engage the concepts of sustainable development and fisheries *refugia* (introduced in Chapter 3) in the analysis of the scalar narratives uncovered. In particular, one of the key components of the

¹ J. Peter Brosius, Anna Lowenhaupt Tsing and Charles Zerner, "Representing Communities: Histories and Politics of Community-based Natural Resource Management," *Society & Natural Resources* 11 (1998), page 158.

² This has been a consistent feature of the relevant literature. See, for examples, Tim Stojanovic, Rhoda C. Ballinger, Chandra S. Lalwani, "Successful Integrated Coastal Management: Measuring it with Research and Contributing to Wise Practice," *Ocean and Coastal Management* 47 (2004): 273-298; Sebastian Ferse, María Mánez Costa, Kathleen Schwerdtner Manez, Ded Adhuri and Marion Glaser, "Allies, not Aliens: Increasing the Role of Local Communities in Marine Protected Area Implementation," *Environmental Conservation* 37 (2010): 23-34; Edward J. Hind, Malcolm C. Hiponia and Tim S. Gray, "From Community-based to Centralised National Management- A Wrong Turning for the Governance of the Marine Protected Area in Apo Island, Philippines?," *Marine Policy* 34 (2010): 54-62; Nathan J. Bennett and Philip Dearden, "Why Local People Do Not Support Conservation: Community Perceptions of Marine Protected Area Livelihood Impacts, Governance and Management in Thailand," *Marine Policy* 44 (2014): 107-116; Madeline Davey and Josephine Gillespie, "The Great Barrier Reef World Heritage Marine Protected Area: Valuing Local Perspectives in Environmental Protection," *Australian Geographer* 45 (2014): 131-145; Robert E. Katikiro, Edison D. Macusi, K.H.M Ashoka Deepananda, "Challenges Facing Local Communities in Tanzania in Realising Locally-Managed Marine Areas," *Marine Policy* 51 (2015): 220-229.

enhancement of public awareness on marine conservation was the need to protect and manage marine biodiversity for sustainable development.

It is, therefore, crucial to take note of two aspects. The first aspect focuses on how the goal for sustainable development was delivered and shaped by the several actors from the subnational scale to the regional scale during the UNEP/GEF SCS Project. The second aspect examines how successful the enhancement of public awareness in marine conservation among the local coastal communities was when the UNEP/GEF SCS Project ended in late 2008.³ The attention given to the aftermath of the UNEP/GEF SCS Project is important because the four provinces have seen more infrastructure and tourism development taking place that may challenge the goal for sustainable development in their respective transboundary coastal ecosystems.⁴ Finally, the chapter ends by comparing the scalar narratives between the two transboundary sites where useful lessons are garnered from the subnational joint cooperation in the enhancement of public awareness in marine conservation and sustainable resource use.

5.2 Kampot (Cambodia) and Kien Giang (Vietnam)

The enhancement of public awareness on marine conservation in this case was mainly concentrated on seagrass conservation because of the large connected seagrass meadows (approximately 37,000 ha) between the transboundary waters of Kampot province and Phu Quoc island (Kien Giang province) that serve as a crucial ecological habitat for fisheries and play a significant role in regional food security.⁵ UNEP developed three action plans that include, strengthening education capacity and communication, development and distribution of public awareness materials and the implementation of communication programmes regarding ecosystem importance and sustainable use of coastal resources, as well as the organisation of exchange programmes between the two provinces.⁶ For example, knowing that locals depend on fisheries for subsistence consumption and extra income, the fisheries *refugia* initiative carried out by UNEP in Kampot and Kien Giang provinces saw the involvement of local fisher people in helping to identify spawning and nursery areas along with technical experts.⁷ The science background of the technical experts assisted in the interpretation of ‘local’ environmental knowledge provided by the local communities.⁸ This

³ This is up to the point of fieldwork conducted in 2013.

⁴ This is based on fieldwork observation from January to July 2013.

⁵ *National Reports on Seagrass in South China Sea*, UNEP/GEF/SCS Technical Publication No. 12 (UNEP, Bangkok, Thailand, 2008); Si Tuan Vo, John C. Pernetta and Chris Paterson, “Status and Trends in Coastal Habitats of the South China Sea,” *Ocean and Coastal Management* 85B (2013): 153-163; Christopher J. Paterson, John C. Pernetta, Somboon Siriraksophon, Yasuhisa Kato, Noel C. Barut, Pirochana Saikliang, Ouk Vibol, Phiak Ean Chee, Thi Trang Nhung Nguyen, Nilanto Perbowo, Trian Yunanda and Nygiel B. Armada, “Fisheries *Refugia*: A Novel Approach to Integrating Fisheries and Habitat Management in the Context of Small-scale Fishing Pressure,” *Ocean and Coastal Management* 85B (2013): 214-229.

⁶ Memorandum of Agreement between The Provincial People’s Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), *Policy Framework for Cooperation in the Management of Coastal Ecosystems and Natural Resources*, Kampot, Cambodia, 27 March 2008, pages 41-42.

⁷ Si Tuan Vo, John C. Pernetta, Christopher J. Paterson, “Lessons Learned in Coastal Habitat and Land-based Pollution Management in the South China Sea,” *Ocean and Coastal Management* 85B (2013): 230-243.

⁸ Somboon Siriraksophon, “Fisheries *Refugia*: A Regional Initiative to Improve the Integration of Fisheries and Habitat Management,” *Journal of the Marine Biological Association of India* 56 (2014): 55-64.

led to the selection of two fisheries *refugia* demonstration sites. Prek Ampil in Koh Toch commune was selected in Kampot province, and Ham Ninh commune was chosen in Phu Quoc island. There was a study tour held in June 2007 that saw the Kampot management team, consisting of leaders of fishing villages, commune councils, and technical experts, visiting the Ham Ninh demonstration site on Phu Quoc island to exchange ideas on the fisheries *refugia* concept.⁹

5.2.1 Overcoming Challenges and Raising Public Awareness on Fisheries *Refugia* Successful

It [doing public awareness on marine conservation] was very difficult at the start. It's common to see villagers worried about their fish catch. So when I told them we need to conserve the seagrass habitat for the fish, some of them did not understand and asked me why they should protect the seagrass because they were catching the fish and not seagrass.¹⁰

Given the tendency for seagrass ecosystems to receive less media attention and less public awareness as compared to coral reefs and mangroves,¹¹ the local fisheries official's account is unsurprising. Chris Paterson, former UNEP Fisheries Expert in the UNEP/GEF SCS Project, shared his experience on overcoming the challenges in implementing fisheries *refugia*¹²:

Getting the 'right' approach is important. After getting the local fisher people involved in helping to identify spawning sites for the implementation of fisheries *refugia*, we [UNEP and local officials] discussed targeted activities with them and tailored to their needs... The setting up of the pilot demonstration sites was crucial. I mean you can conduct a lot of classroom training workshops for them [fisher people], but without a demonstration site, you are unable to fully translate the concept of fisheries *refugia* to them. Technical experts can show the local fisher people that fish spawn on the seagrass beds and cuttlefish usually attached their eggs on the seagrass... The demonstration sites in Kampot and Phu Quoc served as visual tools for local fisher people in understanding fish life cycle and fisheries habitats.

The collective efforts of UNEP and the local officials had a positive effect over some months among the local fishing communities whom the author interviewed. Many fisher people described the demonstration sites as useful and practical learning locations, and also cited the sites as providing confidence to them because the fisheries *refugia* project did not

⁹ Memorandum of Agreement between The Provincial People's Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia), above n 6, page 12.

¹⁰ Interview with fisheries official from Kampot Fisheries Cantonment, March 2013.

¹¹ Robert J. Orth, Tim J.B. Carruthers, William C. Dennison, Carlos M. Duarte, James W. Fourqurean, Kenneth L. Heck Jr., A. Randall Hughes, Gary A. Kendrick, W. Judson Kenworthy, Suzanne Olyarnik, Frederick, T. Short, Michelle Waycott and Susan L. Williams, "A Global Crisis for Seagrass Ecosystems," *BioScience* 56 (2006): 987-996; Richard K.F. Unsworth and Leanne C. Cullen, "Recognising the Necessity for Indo-Pacific Seagrass Conservation," *Conservation Letters* 3 (2010): 63-73.

¹² Interview in Bangkok, July 2013.

stop them from fishing. The following quotes from local fishing communities on both sides of the border exemplified the positive sentiments:

Before the fisheries *refugia* project began, I never thought that seagrass habitats are that important to fisheries. The illegal fishing done by Vietnamese trawlers in the past had damaged our [Kampot] seagrass habitats. It was not just “our” fish taken away but the coastal environment had also suffered... UNEP personnel and local officials stressed to us the importance of restoring the seagrass habitats because then the fish would have a good chance of returning. After some months of protection of the seagrass, things were better because we had more fish to catch than before... No seagrass, no fish!¹³

I had the chance to go to Phu Quoc to learn about the use of poles in protecting seagrass habitats, so that I could teach my local fishing community about it after the trip. The poles create a protected area as seagrass is important for fish spawning and the marine ecological system (see Plate 3). Some of the fish spawning include endangered species too... I think the fisheries *refugia* idea is good for small fishing communities to accept and practise it in reality. It's not that complicated as some may think it is.¹⁴

Seagrass is important to our fishing livelihood. We can catch more fish now. Some species like the sea turtles that ‘disappeared’ for a period of time came back when we started to protect and conserve the seagrass.¹⁵

Of course when we first started the fisheries *refugia* project, some fisher people were sceptical. I think this was expected... But when the seagrass increased in quantity and subsequently fish catch increased as well, people became more interested in the project and could see the benefits from sustaining and protecting the marine environment. Now it's possible to get 5-10 kg of fish from long line fishing.¹⁶

¹³ Interview with one of the chief of community fisheries, Kampot province, March 2013.

¹⁴ Interview with a fisheries community leader, Kampot province, March 2013.

¹⁵ Interview with local fisherman, Phu Quoc island, Kien Giang province, April 2013

¹⁶ Interview with fishing village head, Phu Quoc island, Kien Giang province, April 2013



Plate 3 Use of poles in protecting seagrass habitats, Kampot province
(Source: Author's photograph, 2013)

Furthermore, one of the fisher people in Kampot province told the author that “the environmental collaboration on enhancing public awareness on marine conservation between the two provinces is important because of the migratory fish that straddle the transboundary waters”.¹⁷ He went on to add that even though it was Cambodia that had to learn more from Vietnam in fisheries management, “Cambodia now has even better seagrass than Vietnam because it’s less sandy”. As positively described and recounted by these local fisher people, the fisheries *refugia* project implemented in Kampot and Kien Giang provinces illuminates the importance of thoroughly engaging and not downplaying the concerns and opinions of local fishing communities.¹⁸

Simply put, the interview responses highlight that the goals of public awareness on marine conservation and sustainable resource use among the local fishing communities had largely been attained. Here, it is worthy to note that the fisheries *refugia* project on both demonstration sites not only prioritised marine conservation, but also emphasised social goals

¹⁷ Interview with local fisherman, Kampot province, March 2013.

¹⁸ Ian Perry and Rosemary E. Ommer, “Scale Issues in Marine Ecosystems and Human Interactions,” *Fisheries Oceanography* 12 (2003): 513-522; Mark Helvey, “Seeking Consensus on Designing Marine Protected Areas: Keeping the Fishing Community Engaged,” *Coastal Management* 32 (2004): 173-190; Kevin St. Martin, “The Impact of “Community” on Fisheries Management in the US Northeast,” *Geoforum* 37 (2006): 169-184; Kevin St. Martin and Madeleine Hall-Arber, “The Missing Layer: Geo-technologies, Communities, and Implications for Marine Spatial Planning,” *Marine Policy* 32 (2008): 779-786.

that relate to the fisher peoples' economic well-being and needs.¹⁹ If the fisheries *refugia* project had no take zones or restricted local fisher people from fishing in certain areas, it would disproportionately constraint the livelihoods of most of the fishing communities, leaving them vulnerable.²⁰ Consequently, it is highly unlikely that the fisheries *refugia* project would have then garnered as much support.

To some extent, the interview responses also reflect how local fishing communities exploited the opportunities presented to them in the form of UNEP's technical expertise and government officials' coordination in the fisheries *refugia* project to improve their livelihoods. This demonstrates how a subnational scale issue was pragmatically engaged with actors from larger spatial scales.²¹ Likewise, this 'exploitation' was widely acknowledged among the officials who worked with UNEP in educating the general public on marine conservation. Both demonstration site managers (Prek Ampil and Ham Ninh) commented that they learnt how to disseminate information on marine conservation better with UNEP's expertise, especially in targeting the younger population.²² The former national focal point leader based in the Fisheries Conservation Department, Phnom Penh, also asserted his strong support for UNEP's initiated fisheries *refugia* project²³:

Fisheries *refugia* is not any other fisheries conservation project that tells people to stop fishing in certain places or a period of few months... I learnt so much from this UNEP/GEF SCS Project because we would not have developed this kind of marine conservation idea on our own... There is no way we could have made the local fisher people be supportive of fisheries *refugia* without UNEP personnel accompanying us to the demonstration sites.

Such an explicit comment on UNEP's presence and capability in the fisheries *refugia* project draws critical attention to the ways in which local and central government officials can be opportunistic in exploiting learning and practice openings to inculcate marine conservation values among the local fishing communities.

¹⁹ See, for examples, Grant D. Murray, "Multifaceted Measures of Success in Two Mexican Marine Protected Areas," *Society and Natural Resources* 18 (2005): 889-905; Jean-Francis Noel and Jean-Yves Weigel, "Marine Protected Areas: From Conservation to Sustainable Development," *International Journal of Sustainable Development* 10 (2007): 233-250.

²⁰ Simon Foale and Bruno Manale, "Social and Political Barriers to the Use of Marine Protected Areas for Conservation and Fishery Management in Melanesia," *Asia Pacific Viewpoint* 45 (2004): 373-386; Joshua E. Cinner, Stephen G. Sutton and Trevor G. Bond, "Socioeconomic Thresholds That Affect Use of Customary Fisheries Management Tools," *Conservation Biology* 21 (2007): 1603-1611; Merle Sowman, Maria Hauck, Lance van Sittert and Jackie Sunde, "Marine Protected Area Management in South Africa: New Policies, Old Paradigms," *Environmental Management* 47 (2011): 573-583; Cheryl Chen and David Lopez-Carr, "The Importance of Place: Unravelling the Vulnerability of Fisherman Livelihoods to the Impact of Marine Protected Areas," *Applied Geography* 59 (2015): 88-97.

²¹ Kevin R. Cox, "Spaces of Dependence, Spaces of Engagement and the Politics of Scale, or: Looking for Local Politics," *Political Geography* 17 (1998): 1-23; Andrew P Kythreotis and Andrew E.G. Jonas, "Scaling Sustainable Development? How Voluntary Groups Negotiate Spaces of Sustainability Governance in the United Kingdom," *Environment and Planning D: Society and Space* 30 (2012): 381-389.

²² Interview in Kampot province, March 2013; Interview in Rach Gia, Kien Giang province, April 2013.

²³ Interview in Phnom Penh, March 2013.

All in all, the fisheries *refugia* project can be seen as a success in the two demonstration sites. This was because participatory development from the local fishing communities and provincial government officials took place under the close guidance of UNEP technical personnel along with the help of key central government officials. There were efforts to ensure that participatory development had been carefully conceived and implemented for the success of community-based conservation.²⁴ Indeed, the clear success of the fisheries *refugia* project reinforces the idea that execution of marine conservation plans is ultimately helping people to manage their coastal environment and resources, and not managing people.²⁵

5.2.2 Sustaining the Success and Taking It Further

During the course of conducting fieldwork, the author observed that Kampot province and Phu Quoc island were going through some major infrastructure upgrades for economic and tourism development respectively. In Kampot province, the author was told that the construction of a port was to facilitate the logistics of a special economic zone (see Plate 4). Local fisher people and the provincial fisheries officials expressed some worries that the port's construction could affect the coastal environment. In Phu Quoc island, the Vietnamese government decided that it should be promoted as an international beach holiday destination, and built a new airport to attract more foreign tourists.²⁶

²⁴ Lisa M. Campbell and Arja Vainio-Mattila, "Participatory Development and Community-Based Conservation: Opportunities Missed for Lessons Learned?," *Human Ecology* 31 (2003): 417-437; Carolyn J. Lundquist and Elise F. Granek, "Strategies for Successful Marine Conservation: Integrating Socioeconomic, Political, and Scientific Factors," *Conservation Biology* 19 (2005): 1771-1778; Chris Sneddon and Coleen Fox, "Power, Development, and Institutional Change: Participatory Governance in the Lower Mekong Basin," *World Development* 35 (2007): 2161-2181.

²⁵ Chasca Twyman, "Rethinking Community Resource Management: Managing Resources or Managing People in Western Botswana?," *Third World Quarterly* 19 (1998): 745-770.

²⁶ Vietnam Airlines launched international flights from Phu Quoc to Siem Reap (Cambodia) and Singapore in November 2014.



Plate 4 Environmental concern: Port development in Kampot province
(Source: Author's photograph, 2013)

Seeing that these developments do affect the marine environment and the local fishing communities, the researcher asked what measures to educate the public about marine conservation were taken when the UNEP/GEF SCS Project ended in December 2008. In Phu Quoc island, enhancing public awareness on marine conservation via poster materials among the local communities continues even without UNEP's presence. Environmental conservation messages were found at the entrance of a fishing village (see Plates 5 and 6). The author also found out that fish farms have started near shore to supply the island's seafood restaurants where local and foreign tourists like to dine (see Plate 7). One of the fisher people who invested in the fish farms said that "though tourism has taken off, not many of us can cross over to the service industry because we don't speak any English at all... but we can make fishing linked to tourism, we supply the food to tourists".²⁷ In addition, two fisheries *refugia* pilot demonstration sites emerged in Bai Thom and Hon Roi (south of Phu Quoc island) after consultations with local communities at each fishing village.²⁸ This illustrates how fisheries *refugia* have become a viable establishment for small-scale fisheries management and marine conservation.

²⁷ Interview in Phu Quoc island, Kien Giang province, April 2013.

²⁸ Si Tuan Vo and Van Long Nguyen, "Establishment and Management of Fisheries *Refugia* in Phu Quoc Marine Protected Area, Vietnam," *Journal of the Marine Biological Association of India* 56 (2014): 41-45.



Plate 5 Educating the public for a sustainable marine environment (1), Phu Quoc island, Kien Giang province
 (Source: Author's photograph, 2013)



Plate 6 Educating the public for a sustainable marine environment (2), Phu Quoc island, Kien Giang province
 (Source: Author's photograph, 2013)



Plate 7 Small fish farms: Generating more income for local fisher people in Phu Quoc island, Kien Giang province
(Source: Author's photograph, 2013)

Although the author did not encounter such visible measures in Kampot province, it would, however, be unfair to say that public awareness on marine conservation has stalled there. As noted earlier, Kampot province has continued to interact regularly with Kien Giang province on matters of their transboundary marine environment even after the MoA signed under the UNEP/GEF SCS Project ceased in December 2012. The regular meetings resulted in a workshop held in Kampot province on 20 February 2014 to summarise the last few years of implementing their cooperation through the UNEP/GEF SCS Project, and decide on the details of future cooperation in the management of their transboundary fisheries resources. Perhaps the most compelling 'official' output of this ongoing cooperation is that, on 29 May 2014, the Kampot Fishery Department and Kien Giang Department of Agriculture and Rural Development signed a plan of cooperation in fisheries management in improving the management of the fisheries resources of the two provinces in the Gulf of Thailand for the period of 2014 to 2020.²⁹

The key purposes of the fisheries cooperation are to 'raise the communities' awareness of fisheries policies of the two provinces and the need to protect the aquatic resources from overexploitation; to develop and share marine management experiences; to

²⁹ Plan of Cooperation in Fisheries Management between Kampot Administrative Committee (Kingdom of Cambodia) and The Provincial People's Committee of Kien Giang Province (S.R. Vietnam), *Implementing the Cooperation in Fisheries between Kampot Fishery Department and Kien Giang Fishery Department*, Kampot, Cambodia, 29 May 2014. See Appendix 4 for this primary document is provided in the appendices.

implement new technologies and use the findings of scientific research to improve fisheries management; and to enhance the relationship and develop new ways of cooperation of the two provinces'.³⁰ The new plan of cooperation also focuses on aquaculture, where training for technology and technical transfer for aquaculture, consultation of suitable locations along the coastline for investment in shrimp farming, and joint approaches between the two provinces to improve export trade and profits from aquaculture, are to be developed.³¹ Kampot and Kien Giang provinces will take turns to organise a meeting for the reporting of the results, lessons learnt and to develop a plan for the following year, with Kampot province taking the lead in the first year (2014).³²

It clearly appears that the managerial and marine scientific aspects gleaned from UNEP personnel and technical experts during the UNEP/GEF SCS Project have helped Kampot and Kien Giang provinces to make progress in developing their own fisheries cooperation plan independently of UNEP.³³ The positive fisheries *refugia* experience gained has also heightened marine conservation awareness among the public, and fostered joint cooperation in protecting the marine environment between the two cross-border provincial governments. Although economic and tourism growth may bring about some environmental degradation in Kampot and Kien Giang provinces, the close subnational working connections between the two provinces suggest that marine conservation and sustainable resource use in their transboundary waters are taken seriously in practice.

5.3 Koh Kong (Cambodia) and Trat (Thailand)

The extension of public awareness on conservation of coastal resources and marine environment was largely related to the mangroves that straddle between the coasts of Koh Kong and Trat provinces. The mangrove demonstration sites chosen were Pred Nai in Trat province and Peam Krasop Wildlife Sanctuary (PKWS) in Koh Kong province. There was also public awareness focus on the protection of coral reefs in Ko Chang (Trat) as an independent fisheries *refugia* demonstration site was developed in Mu Ko Chang. This specific demonstration site, however, was not the core transboundary site of marine conservation between the two provinces. UNEP helped to develop four action plans to enhance public awareness on marine conservation. They aimed to strengthen capacity in education and communication systems, producing and disseminating relevant materials, establishing exchange programmes between youth and students of both provinces, and strengthening exchange and sharing of data and information between both countries and maintaining a database for use in the management of coastal resources and the marine environment.³⁴

³⁰ Ibid, page 1.

³¹ Ibid, page 2.

³² Ibid, page 3.

³³ As it will be shown in Sections 5.4 and 5.5, UNEP personnel, though important, is not important factor for success at one site and not the other. The central governments (national scale) play the most significant role in determining whether subnational cooperation in marine conservation matters truly takes off.

³⁴ *Report on The Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites*, UNEP/GEF South China Sea Project, Trat Province, Thailand, (18-20 February 2008), pages 20-21

5.3.1 Limited Success in Spatial Context

When asked to recount their experience in leading the enhancement of public awareness on marine conservation and the problems faced during the UNEP/GEF SCS Project, the interviewees pointed out:

When Pred Nai was chosen as the UNEP/GEF SCS Project demonstration site in Trat province to promote mangrove conservation, coastal villages in other sub-districts did not show much interest and some of the villages were unhappy that Pred Nai might interfere with their everyday livelihood by enforcing conservation. In particular, Pak Khlong village wanted to clear the mangroves to build more shrimp farms and to sell the mangrove wood as charcoal. They [villagers of Pak Khlong] were worried that conservation plans would impinge upon their immediate livelihoods because fish catch was already not that good for them... It was only when they saw Pred Nai doing well in fish catch and people started to praise Pred Nai's conservation efforts, then they showed some interest in mangrove conservation... So you can see that there were a lot of village dynamics back then.³⁵

So we [local environmental officials] were told by the central government from Phnom Penh to spread the message on marine conservation in Koh Kong province among village heads and teachers so they can educate their fellow villagers and students respectively. We also attended meetings and technical workshops on mangrove conservation in Trat province so we can learn to better manage our mangroves in Peam Krasop... But actually we do not know much about this UNEP/GEF SCS Project. We just followed orders.³⁶

The comments presented here document the key problems that provincial figures faced, namely initial local resistance toward marine conservation and confusion over the direction of the UNEP/GEF SCS Project's objectives. This prompted the author to ask the interviewees to state the cause of the problems and how they overcame those problematic issues. There was common agreement among the interview respondents that they felt their central government authorities were not supportive enough to aid them in spreading public awareness on marine conservation in the two involved provinces by not effectively engaging UNEP personnel and related technical experts. Thus, this lack of effort was seen by provincial authorities as the key to the limited success gained because they could not have done much on their own given their inexperience.

Echoing the sentiments articulated above, the former chairman of Pred Nai Mangrove Development and Conservation Group shared his observations³⁷:

This UNEP/GEF SCS Project had taught me that we cannot just rely on the central government [referring to Bangkok] to manage our mangroves. Maybe in terms of getting central government funding, it's still possible but very tough to achieve. But for the

³⁵ Interview with former demonstration site leader of Pred Nai, Bangkok, December 2012.

³⁶ Focus group interview with provincial environmental officials in Koh Kong province, March 2013.

³⁷ Interview in Trat province, January 2013.

scientific know-how and educating the villagers, we ourselves [local officials] have to learn from the technical experts to protect the mangroves of Trat province.

Interviews among local villagers from both provinces also reveal that the vast majority feel that the success of public awareness on marine conservation from the UNEP/GEF SCS Project was small in spatial context and not widespread. Some quotes reflect this factor below:

For me, I think there was success for public awareness on marine conservation from the UNEP/GEF SCS Project. But it was not 100 percent. This was because other villages were not as successful as Pred Nai [demonstration site]. Other villages in the district were not that keen on conservation. They wanted to chop the mangroves down to expand shrimp farms and to sell the wood as charcoal... Only Pred Nai was serious on conservation. We organised camps for the students to learn more about mangrove conservation in Baan Pred Nai school and brought them to see the coastline where we placed tyres to prevent mangrove degradation and allow the fish to seek refuge in (see Plates 8, 9 and 10)... Now it's common to have people requesting to come to Pred Nai and learn about mangrove conservation from us.³⁸

Public awareness on marine conservation among the coastal communities in Koh Kong is generally high. But whether people want to conserve the marine resources remains another matter. There are still some villagers who are not keen on conservation and are more into taking the resources, be it the fish from the waters or wood from the mangroves.³⁹

In my opinion, around 70 percent of the people in Koh Kong coastal villages want to protect the mangroves. The other 30 percent will find ways to clear the mangroves. Some say they need to chop down the mangroves to build houses so they will get permission from local authorities, but I don't think all of it is true.⁴⁰

³⁸ Interview with assistant village chief, Trat province, January 2013.

³⁹ Interview with commune chief, Koh Kong province, March 2013.

⁴⁰ Interview with community chief, Koh Kong province, March 2013.



Plate 8 Mangrove conservation for public awareness in Baan Pred Nai School, Trat province
(Source: Author's photograph, 2013)

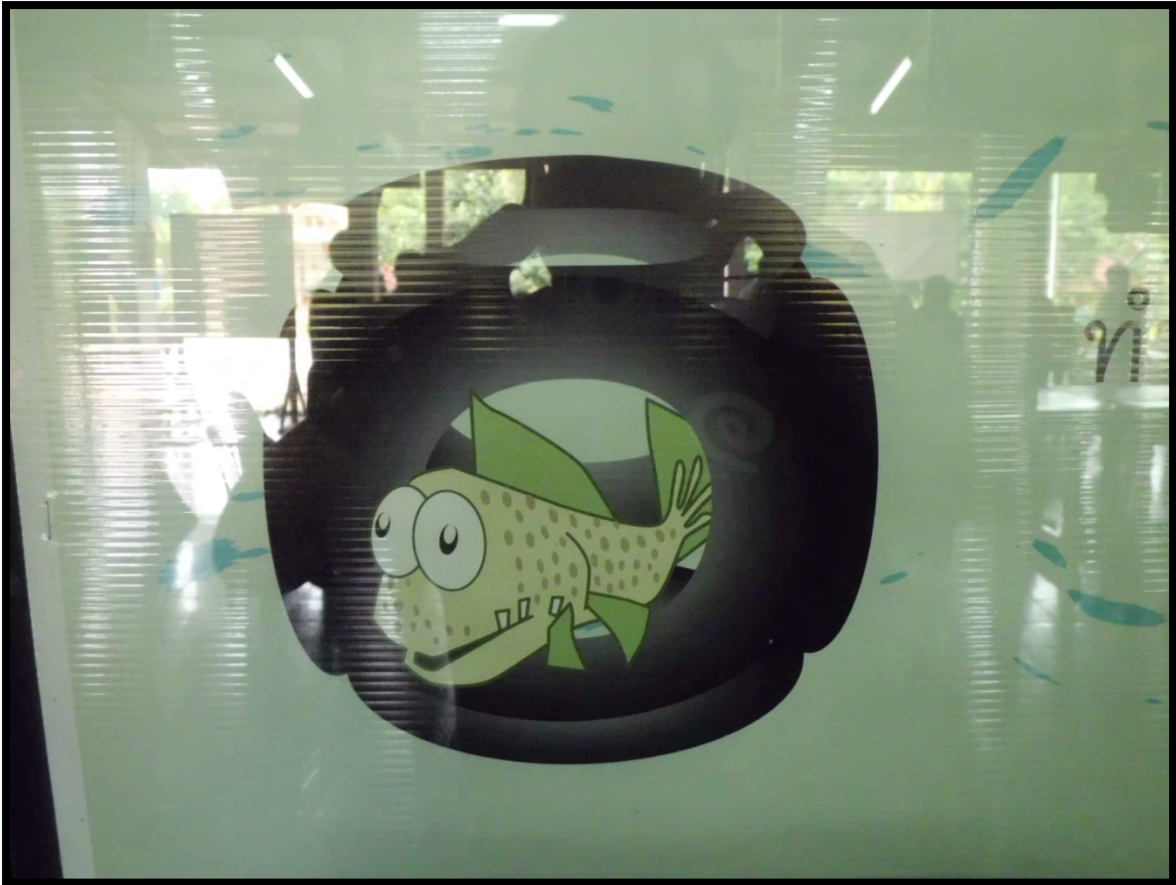


Plate 9 Educating the public: Tyres to serve as refuge for fish, Baan Pred Nai School, Trat province
(Source: Author's photograph, 2013)

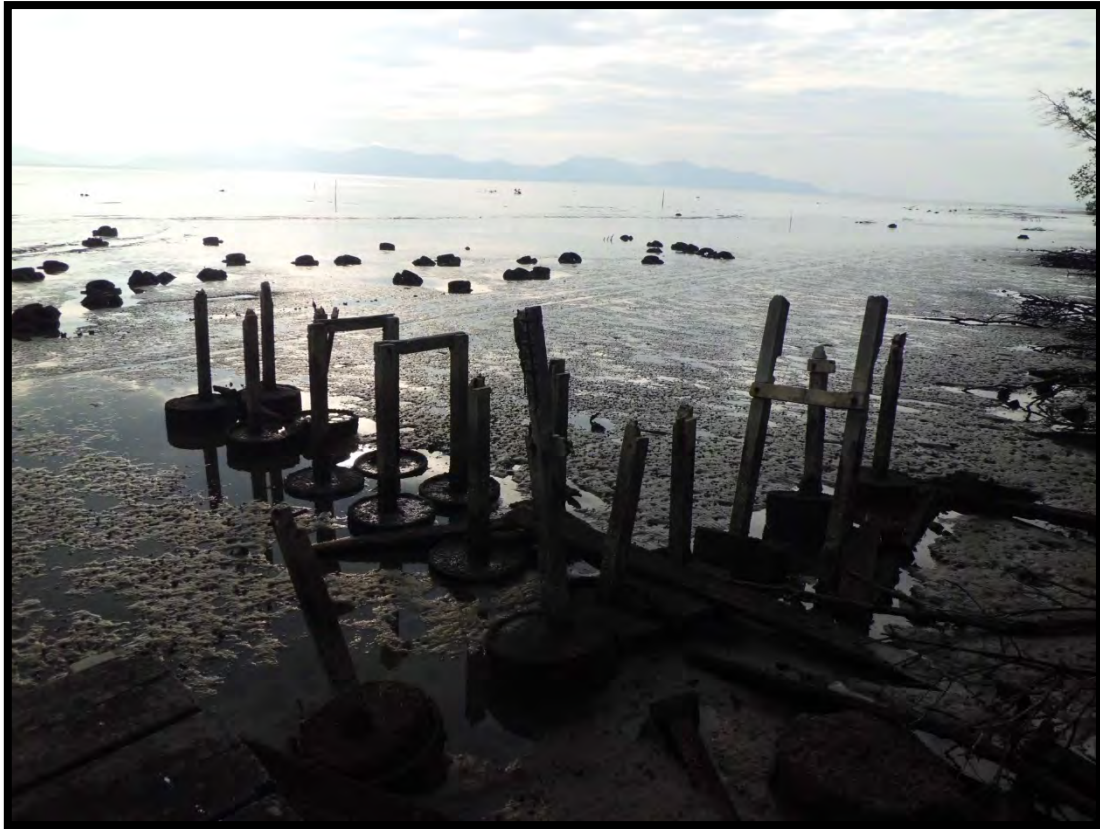


Plate 10 Use of tyres to slow down coastal erosion and provide refuge for marine animals, Trat province
(Source: Author's photograph, 2013)

Whilst it is admittedly difficult to conserve mangroves given that private property rights to mangrove ecosystems favour 'unsustainable' practices such as conversion to shrimp farming⁴¹ or clearing mangroves for the wood to sell as charcoal (in the case of Pak Klong village mentioned above), the collective interview responses, nevertheless, reveal little semblance of interaction between the various actors. The lack of governmental coordination from the central government authorities to link the actors in the provinces (subnational scale) with the UNEP personnel and technical experts (global/regional scale) was reportedly indicative that public awareness on marine conservation at the ground level was largely limited to the demonstration sites. Hence, in this way, subnational marine environmental cooperation between the provinces could not progress far, and was restricted mainly to technical workshops for the Cambodians to learn more about mangrove conservation from their relatively more experienced Thai counterparts. Significantly, this specific case study on enhancing public awareness on marine conservation and sustainable resource use reinforces the fact that the delivery of sustainable development in practice matters much more than the intended plan.⁴²

⁴¹ See, for example, Joshua Farley, David Batker, Isabel de la Torre and Tom Hudspeth, "Conserving Mangrove Ecosystems in the Philippines: Transcending Disciplinary and Institutional Borders," *Environmental Management* 45 (2010): 39-51.

⁴² See, for examples, Chasca Twyman, "Participatory Conservation? Community-Based Natural Resource Management in Botswana," *The Geographical Journal* 166 (2000): 323-335; Thomas C. Beierle, David M. Konisky, "What are We Gaining from Stakeholder Involvement? Observations from Environmental Planning in the Great Lakes," *Environment and Planning C: Government and Policy* 19 (2001): 515-217; Andrew Jordan,

5.3.2 Little Progress after the UNEP/GEF SCS Project

The lack of a proper long term approach in enhancing public awareness on marine conservation and sustainable resource use in the transboundary waters of Koh Kong and Trat provinces was aptly described by many of the village and local government respondents living in the two provinces. One villager from Koh Kong province explained what marine conservation meant to him⁴³:

After UNEP left, we have IUCN [International Union for Conservation of Nature] who came to talk to us about sustainable management of coastal resources.⁴⁴ So many NGOs [non-governmental organisations] come and go... But does everyone understand and support marine conservation?

The local environmental and government officials in both provinces claimed that they tried their best on their own to boost public awareness on marine conservation in their respective provinces:

Koh Kong province,

We see that ecotourism is very popular now. So we encourage villagers to conserve the mangroves so that tourists can see the natural beauty in Peam Krasop by walking on the nature trail or take a boat ride (See Plate 11). Some of the villagers earn extra income by being guides and offering boat ride services.⁴⁵

Trat province,

Now that I'm a sub-district governor, I try to use my influence and my experience from the UNEP/GEF SCS Project to get the six coastal *tambons* [sub-districts] of the main district of Trat province to conserve and protect the mangroves. Although getting external funding is tough, we can still afford to put tyres along the coast on our own to slow down coastal erosion (refer to Plate 10 above).⁴⁶

"The Governance of Sustainable Development: Taking Stock and Looking Forwards," *Environment and Planning C: Government and Policy* 26 (2008): 17-33.

⁴³ Interview with coastal villager, Koh Kong province, 18 March 2013.

⁴⁴ International Union for Conservation of Nature's (IUCN) involvement in Koh Kong province is part of a bigger project named "Building Resilience to Climate Change Impacts: Coastal Southeast Asia". Refer to <http://www.iucn.org/about/union/secretariat/offices/asia/regional_activities/building_coastal_resilience/> for more details.

⁴⁵ Focus group interview with provincial environmental officials in Koh Kong province, March 2013.

⁴⁶ Interview with former chairman of Pred Nai Mangrove Development and Conservation Group, January 2013.



Plate 11 Promoting ecotourism in Peam Krasop National Park, Koh Kong province
(Source: Author's photograph, 2013)

Technical experts interviewed also gave frank admissions that central government authorities will only lend financial and technical support to the provinces if it is of economic significance in their opinions. One of the coral reef technical experts recounted an experience that the central government proved to be very selective in extending a helping hand to Trat province⁴⁷:

It was only when Ko Chang experienced serious coral bleaching in 2010, then the Thai central government gave money to help resolve the issue. Ko Chang to them is like the next Phuket and Ko Samui, beach resort islands that pull in tourists and make money for the government... Coastal villages on mainland Trat province won't have this help. Mangroves don't make as much money as compared to corals which are more visually attractive.

There is further evidence to support that the two provinces are very much left on their own in their marine conservation measures. Interviews with both former national focal point leaders in Bangkok and Phnom Penh indicated that it is better for Trat and Koh Kong provinces to seek help directly from NGOs for financial and technical expertise with regard to marine

⁴⁷ Interview with coral reef technical expert, Bangkok, January 2013.

conservation because both provinces would receive far more help as compared to their central governments.⁴⁸

Whilst it is understandable that central governments cannot fully support all marine conservation programmes in their coastal provinces, it is evident from the fieldwork that the central government authorities can choose to downplay marine environmental concerns in certain areas and focus on other interests and preferences.⁴⁹ Scalar narratives surrounding public awareness on marine conservation and sustainable resource use from the provinces that are deemed crucial by local villagers and officials, and technical experts, can be discursively sidelined and disregarded as of no national significance by the central government.⁵⁰ This draws our attention to the fact that ‘the subsequent disillusionment and frustration felt by local communities risks credibility gap and subsequent withdrawal’ from their central governments and possibly even external environmental agencies.⁵¹ As such, significant subnational cooperation in marine environmental cooperation between Trat and Koh Kong provinces’ transboundary waters remains a chimera.

5.4 Comparing the Scalar Narratives and Lessons Learnt

A clear contrast between the two transboundary sites on enhancing marine conservation is observed. It was noticeably very successful between Kampot and Kien Giang provinces, and partial success only was attained between Koh Kong and Trat provinces. Comprehending the reasons for the difference in success has two significant implications. First, we can better understand the scalar narrative towards enhancing public awareness on marine conservation among the various actors from the different spatial scales. The scalar narratives then shed light on lessons to be learnt for the three littoral States on improving their practical approaches to marine environmental cooperation at the subnational scale.⁵²

One stark message from the two case studies was that subnational interactions and cooperation relied heavily on the involvement of the central government authorities. Cambodia and Vietnam had demonstrated a cohesive effort in political support of Kampot province’s Fisheries Cantonment and Kien Giang province’s Fishery Department respectively in their marine conservation efforts with the public during the UNEP/GEF SCS Project. This led to frequent fruitful exchanges at the fisheries *refugia* demonstration sites, ensuring that UNEP’s technical and management practices were well executed at the subnational scale and led to the eventual signing of the MoA.

⁴⁸ Interview in Bangkok, 18 January 2013; Interview in Phnom Penh, 11 March 2013.

⁴⁹ Henrik Larsen, “Scaling the Baltic Sea Environment,” *Geoforum* 39 (2008): 2000-2008; Chia-Chi Wu, “Cross-scale and Multi-Level Mismatch Problems in Marine Natural Resources Management: Case Studies in the Penghu Archipelago, Taiwan,” *Regional Environmental Change* 14 (2014): 2079-2087.

⁵⁰ Leila Sievanen, Rebecca L. Gruby and Lisa M. Campbell, “Fixing Marine Governance in Fiji? The New Scalar Narrative of Ecosystem-based Management,” *Global Environmental Change* 23 (2013): 206-216.

⁵¹ Philip Goodwin, “Hired Hands or ‘Local Voice’: Understandings and Experience of Local Participation in Conservation,” *Transactions of the Institute of British Geographers* 23 (1998), page 491.

⁵² Policy recommendations are not provided in this sub-section. These are being explored in Chapter 6.

The signing of the MoA during the UNEP/GEF SCS Project indirectly boosted the two provinces' working relationship, and partially contributed to the culmination of a second cooperative interaction in managing their transboundary fisheries resources. Although there was no explicit information from fieldwork interviews and secondary sources to indicate that central government support was crucial in securing the current plan of cooperation in fisheries management between Kampot and Kien Giang provinces in 2014, it can be convincingly argued that at least, the previous political support shown during the UNEP/GEF SCS Project experience had helped to indirectly contribute to the sustained success of transboundary marine conservation awareness at the subnational scale.

On the other hand, findings on poor involvement of central government authorities in Koh Kong and Trat provinces' UNEP/GEF SCS Project resulted in limited provincial exchanges, and inconsistent public awareness on marine conservation. Thus, it is unsurprising that both provinces are not engaging each other much on their transboundary coastal environment after the UNEP/GEF SCS Project. These observations add empirical weight to Mirumachi and Van Wyk' argument that the State still plays an influential role in decision-making on final cooperation at different scales, despite other actors such as regional institutions being more visible but having limited decision-making power.⁵³ It is also undeniable that scale in its socio-political role matters in conservation efforts.⁵⁴

Although it could be argued that it is simply easier to conserve seagrass as compared to mangroves which have far more tangible economic benefits to not do so (in terms of conversion to shrimp farms or the sale of mangrove wood as charcoal), this biophysical argument alone ignores the dynamics of the politics of scale at play mentioned above. Additionally, Vietnam, in particular, has also been described by the former UNEP/GEF SCS Project Director that she is serious in learning more about marine and coastal conservation and improving institutional arrangements (an opportunistic scalar approach observed in Chapter 4).⁵⁵ There are scholarly literatures to further suggest that Vietnam takes its coastal and marine environmental challenges seriously not just in the Gulf of Thailand,⁵⁶ thereby augmenting the point that States can clearly make the difference in the outcome of subnational marine environmental cooperation. Therefore, even though there are different sets of pressure in the two distinct transboundary marine sites, a sole biophysical explanation that seagrass is easier to conserve as compared to mangroves would not yield the full picture of subnational marine environmental cooperation investigated in this study.

Another key message from the empirical observations is to empower the provincial officials and coastal villagers towards enhancing public awareness on marine conservation

⁵³ Naho Mirumachi and Ernita Van Wyk, "Cooperation at Different Scales: Challenges for Local and International Water Resource Governance in South Africa," *The Geographical Journal* 176 (2010): 25-38.

⁵⁴ Lisa M. Campbell, "Local Conservation Practice and Global Discourse: A Political Ecology of Sea Turtle Conservation," *Annals of the Association of American Geographers* 97 (2007): 313-334.

⁵⁵ Refer to section 4.2.3.1 of Chapter 4 for further details.

⁵⁶ See, for example, in the Gulf of Tonkin, Yunjun Yu and Yongtong Mu, "The New Institutional Arrangements for Fisheries Management in Beibu Gulf," *Marine Policy* 30 (2006): 249-260; for example, in the Mekong Delta, see Robin Warner, Olivia Dun, Kerrylee Rogers, Mary Kaidonis, Yubing Shi, Thang T.X. Nguyen and Colin Woodroffe, "Challenges and Opportunities for Improving Mangrove Carbon Sequestration in the Mekong River Delta in Vietnam," *Sustainability Science* forthcoming.

for greater project success. The fisheries *refugia* success seen in Kampot province and Phu Quoc island (Kien Giang province) saw active participation of local fisher people in helping to identify fish spawning areas, and local officials drawing on UNEP's technical expertise and coastal management to upgrade their working knowledge. The sharing of indigenous knowledge by the local fisher people and having their inputs taken into account exemplify what Brown calls a critical contribution to a process of empowerment.⁵⁷ There was also the technical knowledge transferred to local fisher people from technical experts, creating relevant operational skills for fishing communities and leading to further community empowerment. This was a crucial contribution that led to economic empowerment where the local fisher people could sustain their livelihood by continuing fishing, and not just short-term political empowerment where their indigenous knowledge were valued by the local authorities and external technical experts.⁵⁸

Local environmental officials in the two provinces were also appointed as demonstration site managers to oversee the implementation of the fisheries *refugia* project. First, this ensured continuity of provincial officials who were familiar with the local coastal communities and marine environmental issues.⁵⁹ Second, it acted as an empowerment for the local environmental and fisheries officials to carry out the demands of the UNEP/GEF SCS Project because of the significance and pride attached to those appointments.⁶⁰ The overall empowerment to the provincial officials and coastal villagers has arguably led to sustained exchanges with regular mutual working visits between the two provinces until the present day. The cooperation plan on joint fisheries management signed between Kampot and Kien Giang provinces in May 2014 is a clear indication that the MoA signed between them under the UNEP/GEF SCS Project is not a one-off working partnership.⁶¹

Although this largely successful empowerment phenomenon was not witnessed between Koh Kong and Trat provinces and partially explains the overall subnational cooperation failure, the enhancement of public awareness on marine conservation under the UNEP/GEF SCS Project, however, provided some provincial officials with a critical opportunity to play an active role in protecting their transboundary coastal environment. An example comes from the efforts of the former chairman of Pred Nai Mangrove Development and Conservation Group in his new capacity and greater social influence as a sub-district governor in improving provincial legislation on mangrove conservation in mainland Trat

⁵⁷ Katrina Brown, "Innovations for Conservation and Development," *The Geographical Journal* 168 (2002): 6-17.

⁵⁸ Brown and Rosendo argue that it is important to distinguish two dimensions of empowerment - political and economic for local communities. Economic empowerment, however, is more critical in addressing local communities' immediate and future livelihood concerns. See, Katrina Brown and Sérgio Rosendo, "Environmentalists, Rubber Tappers and Empowerment: The Politics and Economics of Extractive Reserves," *Development and Change* 31 (2000): 201-227.

⁵⁹ In Trat province, however, the Thai central government tasked a mangrove specialist from Bangkok to be Pred Nai's demonstration site manager. In this sense, there was no initial advantage of familiarity with local villagers and the local coastal environment.

⁶⁰ Respondents in Kampot and Kien Giang provinces were quick to draw to the researcher's attention how 'locally' the UNEP/GEF SCS Project was administered and were proud of it. See section 4.2.1.1 in Chapter 4 where it elaborates more on this particular issue.

⁶¹ It is worth noting that the Director of the Kampot Fisheries Cantonment oversaw both marine environmental collaborations between Kampot and Kien Giang provinces.

province. The UNEP/GEF SCS Project may have ended, but this does not mean that key local individuals cannot take the lead in doing something beneficial for marine conservation and sustainable resource use based on their previous exposure. It is certainly the case that these key local individuals may not galvanise large scale conservation execution given the paucity of central government or NGOs' funding, but their attempts are nevertheless useful to slow down environmental degradation in selected coastal villages.

5.5 Conclusion

This chapter has shown how the enhancement of public awareness on marine conservation during the UNEP/GEF SCS Project had been executed and received by the various stakeholders. There were two different sets of scalar narratives emerging from both transboundary sites, with one (Kampot and Kien Giang provinces) being clearly successful in implementation, and the other (Koh Kong and Trat provinces) reflecting contested sustainability issues and diverging plans, therefore delivering limited gains. The reasons for their contrasting tales were revealed through the interviews with various stakeholders.

The chapter has also presented how provincial stakeholders mobilised their experience from the UNEP/GEF SCS Project in present day conservation efforts. The development and execution of a second subnational working marine environmental conservation plan independent of UNEP between Kampot and Kien Giang provinces proves that provinces can continue to punch above their weight in the absence of a regional scale actor. However, the central government (national scale) plays the most significant role in determining whether subnational cooperation in marine conservation matters truly takes off. Kampot and Kien Giang provinces would not have achieved such good progress without the approval and support from their respective central governments. In the case of Trat and Koh Kong provinces, the almost non-existent subnational marine conservation interactions and cooperation in their transboundary waters looks set to persist until their respective central governments step in to enable them.

Overall, the findings in this chapter broaden the perspectives of enhancing public awareness on marine conservation by eliciting from the local participant experiences at the subnational and national scales. Although primary sources from UNEP/GEF SCS Project documents and available secondary literature do provide lessons learnt in enhancing public awareness on marine conservation, they do not encompass a wide breadth or depth of important views from the ground. This is understandable given the technical brevity required for policy-oriented audiences. Hence, the scalar narratives of enhancing public awareness on marine conservation uncovered in this chapter are meant to augment and complement those technically-oriented documents and secondary literature.

Through the scalar narratives revealed at both transboundary sites, we are able to understand how subnational joint cooperation on marine environmental protection is supported or restricted during and also after the UNEP/GEF SCS Project. The relevance of the various views gathered at the subnational and national scales plays a key role in helping us comprehend the complex webs of politics of scale engaged across different spatial scales. More importantly, the insights gained give us a critical reminder that enhancing public awareness on marine conservation is very much influenced by politics of scale which determines its overall success or limitation. The next chapter discusses the policy recommendations towards better subnational joint cooperation in marine environmental protection.

Chapter 6

TOWARDS BETTER SUBNATIONAL JOINT COOPERATION IN MARINE ENVIRONMENTAL PROTECTION

6.1 Introduction

Cooperation could be used to effectively solve cross-border commons issues and thus has the potential to substantially ameliorate the degradation of the marine environment and restore living resources and habitats.¹

The preceding two chapters have detailed the scalar narratives of the strengthening of institutional arrangements and the enhancement of public awareness on marine conservation in the UNEP/GEF SCS Project. This penultimate chapter addresses the last aim of the thesis' objectives: how can we improve joint cooperation of marine environmental protection at the subnational scale based on the scalar narratives gathered? There were some ideas to address this objective based on the lessons learnt that were critically examined in Chapters 4 and 5. However, these ideas are now being explicitly exemplified here in order in this chapter to offer recommendations to the three littoral States of Cambodia, Thailand and Vietnam, and to explore their applicability beyond the eastern part of the Gulf of Thailand.

Chapter 6 delivers only the applied lessons of subnational cooperation in marine environmental protection and does not engage the politics of scale theory which are already engaged in depth in the key empirical chapters of 4 and 5. This chapter is divided into three sections. The first section analyses how the four provinces of Kampot, Kien Giang, Koh Kong, and Trat, and their respective central governments can overcome political and financial challenges to strengthen institutional arrangements and boost subnational joint cooperation in the two transboundary sites. The second section discusses how the enhancement of public awareness on marine conservation can be improved by further empowering key individuals and groups, and creating more economic incentives for local fisher people and coastal villagers in the three countries. The last section examines, in greater depth, how effectively we can transfer the insights from the two transboundary sites to carry out subnational cooperation in marine environmental protection in other areas.

6.2 Recommendations to Strengthen Institutional Arrangements for Subnational Cooperation in the Four Researched Provinces

As noted in Chapter 4, the contrasting scalar narratives from the two subnational transboundary sites indicated that the key catalyst for joint cooperation amongst the respective provinces during the UNEP/GEF SCS Project was the central government. For Kampot and Kien Giang provinces, the engagement and support by the central governments of Cambodia and Vietnam were instrumental in the successful strengthening of institutional arrangements, and the eventual signing of the MoA between the two provinces to cooperate in the management of their transboundary coastal ecosystems and natural resources in March 2008. On the other hand, the absence of central governments' support in Koh Kong and Trat provinces was keenly felt. As a result, the strengthening of institutional arrangements

¹ Shih-Ming Kao, Nathaniel Sifford Pearre and Jeremy Firestone, "Regional Cooperation in the South China Sea: Analysis of Existing Practices and Prospects," *Ocean Development & International Law* 43 (2012), page 285.

between these two provinces was highly limited. For this reason, joint cooperation was minimal.

Hence, this section delivers recommendations on two broad aspects at different scales. The first aspect is to be led by the four provinces, where they would need to raise their transboundary coastal issues to national significance in their countries. The second aspect is to be tackled by the central governments of the three States, where they would need to engage in adaptive capacity to strengthen institutional arrangements. These two aspects are not to be seen as different options for consideration, but to be conceived as options that can be taken up together. It is also worth noting that even though Kampot and Kien Giang provinces achieved commendable results on their strengthening of institutional arrangements in the UNEP/GEF SCS Project, recommendations are given on how to sustain the success. Overall, it is hoped that the suggested recommendations to strengthen the institutional arrangements would prevent or reduce transboundary harm on the subnational scale, benefitting the coastal communities who experience adverse environmental impacts first hand on the ground.

6.2.1 Raising Transboundary Coastal Issues to National Significance

6.2.1.1 Kampot (Cambodia) and Kien Giang (Vietnam)

As mentioned earlier in Chapter 4, the subnational authorities in Kampot and Kien Giang provinces adopted an opportunistic scalar approach to draw on the expertise and experience of UNEP and their national governments during the UNEP/GEF SCS Project. Based on fieldwork interviews, both provinces had dedicated provincial officials that were clear on the concerns of their transboundary marine environment and respective coastal communities. These encouraging signs have continued until today. The close networking and regular exchanges maintained between the two provinces cemented strong trust between local officials in both provinces. The subnational cooperative efforts may matter in future especially if a new central government comes in and adopts a different approach to foreign policy and transboundary marine environmental issues.²

Whilst ongoing cross-border interactions are present, Kampot and Kien Giang provinces face increasing challenges for their transboundary marine environment. Phu Quoc island in Kien Giang province has already emerged as an international destination for beach holidays. This tourism development for Phu Quoc island is set to intensify as investment from mainland Vietnam pours in. Kampot province faces similar tourism growth with a ferry terminal planned to further stimulate economic activity.³ According to Khoy Khun Huor, governor of Kampot province, the ferry terminal is expected to boost regional tourism⁴:

² It is argued that if a new government changes its position on previous marine environmental protection initiatives, trust gained in years of work between officials and resources users could be eroded. See, for example, Gabriela W. de Morais, Achhim Schlüter and Marco Verweij, “Can Institutional Change Theories Contribute to the Understanding of Marine Protected Areas?,” *Global Environmental Change* 31 (2015): 154-162.

³ May Kunmakara, “New Ferry Terminal Planned in Kampot,” *Phnom Penh Post* (26 November 2014)

⁴ Ibid.

We really need a tourism port to link the tourism industry of our three countries – Cambodia, Laos and Thailand. When it is finished, we can attract more tourists from not only Vietnam but also Thailand. It will serve as the tourism hub at this coastal area.

It is clear that both provinces are developing rapidly and strongly. It is in the context of this rapid development that their transboundary marine environment merits closer attention. Coastal tourism development in the form of increased domestic and international tourists, and infrastructure expansion to accommodate those visitors, is likely to result in coastal and marine pollution if left unchecked. Given the close proximity (less than 20km) between Phu Quoc island and Kampot province's coastlines, transboundary marine pollution affecting the shared seagrass environment from poorly managed coastal tourism development would not be surprising.

In this sense, relevant agencies in Kampot and Kien Giang provinces would need to escalate beyond the opportunistic scalar approach employed in the UNEP/GEF SCS Project in managing their transboundary waters in light of rapid coastal tourism development. In order to do so effectively, both provinces first need to stress the significance of the extensive seagrass meadows in supporting fisheries habitats in their transboundary waters to their respective central governments. In particular, this would require the Kampot Fisheries Cantonment and Kien Giang Fishery Department to take the lead in explaining because they were the key agencies that played major roles in the execution of the MoA developed from the UNEP/GEF SCS Project. The two agencies are also leading actors that implement the cooperation in the current transboundary fisheries management.⁵

Some forms of evidence will be required in the explanation to their central governments so relying on past documentary environmental assessments from the UNEP/GEF SCS Project will certainly be helpful. Additionally, in terms of presenting more recent environmental assessment outputs, Kampot and Kien Giang provinces could refer to another externally funded environmental project that took place in their provinces after the UNEP/GEF SCS Project. This is the International Union for Conservation and Nature's (IUCN) "Building Resilience to Climate Change Impacts: Coastal Southeast Asia" Project (IUCN-BCR Project) which began in January 2011 and was completed in December 2014.⁶ Specific project documents from the IUCN-BCR Project such as the importance of seagrass beds to coastal communities would be useful supplements in stressing coastal issues to their national governments.⁷

⁵ Plan of Cooperation in Fisheries Management between Kampot Administrative Committee (Kingdom of Cambodia) and The Provincial People's Committee of Kien Giang Province (S.R. Vietnam), *Implementing the Cooperation in Fisheries between Kampot Fishery Department and Kien Giang Fishery Department*, Kampot, Cambodia, 29 May 2014.

⁶ This specific climate change project was targeted to help the local governments of Cambodia, Thailand and Vietnam, and their coastal communities to plan for, and adapt to sea level rise with regard to coastal erosion in the Gulf of Thailand. Eight provinces in those three countries were selected by IUCN to take part in this project. The eight provinces selected were: Kampot and Koh Kong in Cambodia, Chanthaburi and Trat in Thailand, and Ben Tre, Can Gio, Kien Giang and Soc Trang in Vietnam. Refer to <http://www.iucn.org/about/union/secretariat/offices/asia/regional_activities/building_coastal_resilience/> for more details.

⁷ See, for example, Agne Karleep, "Socioeconomic survey on the importance of seagrass beds to coastal communities in Kampot Province," *IUCN Report* (2014)

Unplanned coastal tourism development is likely to result in poor solid waste management and water quality management that would have a detrimental effect on the eco-health of seagrass meadows, and in turn affect fisheries catch for local fisher people and seafood supplies for local restaurants serving visitors. Kampot and Kien Giang provinces would need to ensure that there is proper planning and building of new hotels and beach resorts, and ensure that tourism projects, such as their waste disposal management, are subjected to environmental impact assessments (EIAs). These measures are most likely to be enhanced with their States' administrative support, hence subnational cooperation between Kampot and Kien Giang provinces would need to go beyond cross-border exchanges and demand greater attention on a national scale.

6.2.1.2 Koh Kong (Cambodia) and Trat (Thailand)

It was revealed in Chapter 4 that Koh Kong and Trat provinces experienced a conflicting interplay of institutional narratives during the UNEP/GEF SCS Project. There was a paucity of financial support from central government authorities to facilitate meaningful exchanges between UNEP and the provinces, which resulted in the MoA prepared during the UNEP/GEF SCS Project being shelved. It would be timely now to consider how Koh Kong and Trat provinces can enhance the national significance of their mangrove ecosystem together to improve institutional arrangements support from their respective States in protecting their transboundary mangrove ecosystem. In proposing this recommendation, it is important to recognise that Cambodia and Thailand are highly unlikely to fund and support joint subnational mangrove protection schemes between the two provinces if there are no perceived financial benefits as fieldwork has revealed. Therefore, both provinces would need to widen their conception and of the monetary value of mangroves and promote their economic importance in order to garner more national interest and eventual central governments' financial investment.

In the words of Carolyn Stewart, 'more frequently or not, a destination area's natural resources are its tourism industry's *raison d'être*'.⁸ Consequently, Koh Kong and Trat provinces could play active roles in promoting cross-border ecotourism centred on their mangroves. Both provinces could create and promote eco-tourism day trips and/or stays in Peam Krasop National Park, the offshore islands off Koh Kong, and Trat's mainland coast. The main target for tourists should be visitors to Ko Chang, an island with coral reef surroundings off Trat's mainland coast that is the most popular tourist destination in the transboundary marine area of the two provinces. The reason for this is that it is easier to tap into an existing pool of tourists by providing them an alternative ecotourism experience not far from Ko Chang.

This would ideally be done in coordination with travel and transport companies from both provinces, and be promoted in Bangkok and Phnom Penh from where most tourists to Ko Chang would come. Tourists travelling by bus or plane from Bangkok to Ko Chang have to take about an hour in the ferry ride from Trat province's mainland coast to reach their holiday destination.⁹ This is the same situation for tourists coming in by bus from Phnom

⁸ M. Carolyn Stewart, "Sustainable Tourism Development and Marine Conservation Regimes," *Ocean and Coastal Management* 20 (1993), page 202.

⁹ There is no airport in Ko Chang. The airport is at Trat province's mainland.

Penh, Cambodia, after they cross into Thailand. Hence, for example, day trips to the mangrove sites could be further broken down into a two to three hours short tour for tourists travelling along the way towards Ko Chang or returning to Bangkok/Phnom Penh. The two provinces would also have to spend some money on improving walkways in the mangroves for visitors to enjoy their eco-tourism experience.

Beyond joint efforts in promoting cross-border eco-tourism, there are domestic challenges for both provinces to overcome individually that require real and active commitment. For Koh Kong province, local environmental officials would need to stress coastal issues to the central government in Phnom Penh along with the controversial building of dams inland where relocation of villagers has taken place.¹⁰ Although interviews from Koh Kong provincial officials expressed confidence in the eco-health of the mangroves, ignoring or downplaying coastal environmental concerns may not be wise in the long run considering the province's ecotourism attractions are very much centred on the Peam Krasop National Park and offshore islands near the coastline. For Trat province, efforts by local officials to promote the value of mangroves at the mainland coast to the Thai central government should be continued and intensified for coastal management fund raising despite Ko Chang's higher economic significance as a popular tourist destination in the eyes of the State. Local officials in Trat province may choose to consider approaching Bangkok Airways who owns the domestic airport in supporting the cross-border ecotourism as it is a major player in the province's tourism market.

There is a potential problem that could arise from the proposed cross-border ecotourism that requires careful management by Koh Kong and Trat provinces. Sidangoli et al. draw attention to a problematic issue around power-sharing between central and provincial governments at Bunaken National Park, Indonesia, where ownership and management of tourist entrance fees were disputed, resulting in uneven development of the national park that dissatisfied local communities.¹¹ This specific account is useful as a reminder for Koh Kong and Trat provinces engaging in cross-border ecotourism to have clear definitions of which institutions will administer the development and management of the ecotourism sites. This is especially important in the context where the central governments of both provinces provide financial funding to improve environmental and tourism logistical issues, and demand a share of the ecotourism revenue in return. The provinces involved in the cross-border ecotourism are required to negotiate well with their respective central governments to avoid commercial management disputes.

To sum up, the proposed cross-border ecotourism initiative serves as a feasible option for Koh Kong and Trat provinces to integrate tourism development within the ambit of coastal management. It is with this in mind that both provinces can help their respective central governments develop a more socio-economic view on how mangroves provide significant ecosystem services.¹² Anticipated economic returns from the proposed cross-

¹⁰ See, for example, Daniel Pye and Taing Vida, "Dam Foes Stay Strong," *Phnom Penh Post* (26 February 2015); Daniel Pye, "Mixed Signals on Areng Dam," *Phnom Penh Post* (9 March 2015).

¹¹ Marmelda Sidangoli, David Lloyd and William E. Boyd, "Institutional Challenges to the Effectiveness of Management of Bunaken National Park, North Sulawesi, Indonesia," *Asia Pacific Viewpoint* 54 (2013): 372-387.

¹² Fredrik Moberg and Patrik Rönnbäck, "Ecosystem Services of the Tropical Seascape: Interactions, Substitutions and Restoration," *Ocean and Coastal Management* 46 (2003): 27-46.

border ecotourism cooperation could then create renewed interest among the Cambodian and Thai central governments to lend their institutional and financial support to the two provinces in conserving the transboundary resources on which the cross-border ecotourism industry depends.

6.2.3 Engaging in Adaptive Capacity

In Chapter 4, adaptive learning in capacity building and bilateral relations were found to be the key mechanisms through which institutional arrangements were strengthened between the three States during the UNEP/GEF SCS Project. This sub-section focusses particularly on the strengthening of institutional arrangements between Cambodia and Thailand given that joint cooperation was minimal and beset with problems.

An important step towards the strengthening of institutional arrangements in subnational joint cooperation in marine environmental protection is engaging in adaptive capacity. As Derek Armitage explains¹³:

Adaptive capacity in an ecological context refers to selected operational (technical, financial, social, institutional, and political) and strategic (power, scale, knowledge, community, and culture) issues that respond to and cope with changes.

At the national scale, Cambodia and Thailand are encouraged to commit to this adaptive capacity in implementing their transboundary marine environmental management.

6.2.3.1 Supporting Provincial Initiatives

With respect to supporting subnational cooperative initiatives, both States could engage in the strategic issues of adaptive capacity in terms of developing cross-border ecotourism in the two provinces. For example, Thailand could conduct knowledge sharing of tourism development and management with Cambodia as it is the more experienced State. For countries to remain competitive in the tourism trade, it is imperative for them to monitor carefully not only the tourist flows but also the types of tourists and influencing factors to visit.¹⁴ It would be more appropriate for both States to support the cross-border ecotourism because the coastal attractions in Koh Kong and Trat provinces are not catered for large tourist groups like Sihanoukville (Cambodia) or Ko Samui, Pattaya, and Phuket (Thailand). Tourists also take a relatively shorter time to reach the other destinations mentioned above.¹⁵ In short it is harder to ‘sell’ Ko Chang, mainland Trat province, Peam Krasop National Park, and the offshore islands off Koh Kong province in the same beach tourism manner as those other more accessible destinations.

¹³ Derek Armitage, “Adaptive Capacity and Community-Based Natural Resource Management,” *Environmental Management* 35 (2005), pages 708-709.

¹⁴ Poh Poh Wong, “Tourism Development in Southeast Asia: Patterns, Issues and Prospects,” in Lin Sien Chia (ed.), *Southeast Asia Transformed: A Geography of Change*, (Singapore, Institute of Southeast Asian Studies, 2003): 409-442.

¹⁵ Ko Samui and Phuket have airports that serve domestic and international flights. Pattaya and Sihanoukville are two to three hours by car from Bangkok and Phnom Penh respectively.

Grilo et al. have observed in East Africa that where national interests between Mozambique and South Africa in environmental tourism-led economic development are aligned, success in joint cooperation in transboundary marine environmental protection took place.¹⁶ Hence, Cambodia and Thailand should be motivated to cooperate with each other in the development of the cross-border ecotourism because sustainable development of the ecotourism sector needs to be government led and requires States to balance the competing interests of potential powerful tourism stakeholders.¹⁷ The tourism strengths of Koh Kong and Trat provinces lie in the ecotourism niche which both States could draw on to further develop their tourism markets. In this sense, the strategic aspect of adaptive capacity would require Cambodia and Thailand to support stronger subnational institutional links in preserving the transboundary mangrove ecosystem on which the proposed cross-border ecotourism relies.

6.2.3.2 Setting Aside Differences

If Cambodia and Thailand are to establish any form of subnational marine environmental cooperation between Koh Kong and Trat provinces, they might seriously consider setting aside their differences. This is because marine environmental cooperation does not imply any dilution of their claims to sovereignty or sovereign rights.¹⁸ It is worth noting elsewhere in Southeast Asia that a lack of a delimited maritime boundary did not deter marine environmental cooperation, as seen from the transboundary collaboration between Malaysia and Philippines on their Turtle Islands Heritage Protected Area in the Sulu Sea.¹⁹ Furthermore, Cambodia and Thailand do not have disputes concerning sovereignty over islands in the Gulf of Thailand that would pose daunting challenges to any form of marine environmental cooperation between them.

In this context, Cambodia and Thailand are strongly encouraged to engage in the operational issues of adaptive capacity. The two littoral States would need to display strong political will on the national scale to inspire subnational marine environmental cooperation between Koh Kong and Trat provinces. Both countries could also use this specific subnational cooperation as a positive step forward in their bilateral cooperation on joint development of their overlapping seabed oil and gas reserves in the Gulf of Thailand that has seen slow progress in negotiations.²⁰

¹⁶ Catarina Grilo, Aldo Chircop and José Guerreiro, “Prospects for Transboundary Marine Protected Areas in East Africa,” *Ocean Development and International Law* 43 (2012): 243-266.

¹⁷ Regina Scheyvens, “The Challenge of Sustainable Tourism Development in the Maldives: Understanding the Social and Political Dimensions of Sustainability,” *Asia Pacific Viewpoint* 52 (2011): 148-164.

¹⁸ Ian Townsend-Gault, “Managing South China Sea Disputes: The Legal Basis for Cooperation,” *RSIS Commentaries* No. 105 (2014)

¹⁹ 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 (eds.), *Ocean Yearbook* 24, (Leiden: Martinus Nijhoff Publishers, 2010): 115-150.

²⁰ See, for further elaboration, in section 2.4.1 in Chapter 2.

6.3 Recommendations to Enhance Public Awareness on Marine Conservation for Subnational Cooperation in the Four Researched Provinces

As illustrated in Chapter 5, scalar narratives gathered from fieldwork interviews and observations pointed to a stark difference in the success achieved in enhancing public awareness on marine conservation and sustainable resource use in the two transboundary sites. Once again, the role of the central government at the national scale proved to be a decisive factor in influencing the degree of subnational cooperation between the four provinces. Kampot and Kien Giang provinces achieved better results in enhancing public awareness on marine conservation as compared to Koh Kong and Trat provinces due to ample administrative and coordination support received from the national scale. Therefore, the ensuing recommendations to enhance public awareness on marine conservation for subnational cooperation focus on Koh Kong and Trat provinces instead of Kampot and Kien Giang provinces.

6.3.1 Supporting Key Provincial Departments and Individuals

The preceding chapter highlighted that efforts from provincial authorities and coastal villagers towards enhancing public awareness can have important roles in galvanising institutional change and making the necessary links between different organisations and institutional levels.²¹ Cambodia and Thailand would need to identify these supportive elements in Koh Kong and Trat provinces, and extend their political support in aiding the relevant local authorities and villagers to spearhead marine conservation education.

The key challenge lies chiefly in pushing Thailand to adopt this option. Thailand's coastal management record has been criticised as not being robust enough for decentralisation to take place and allow their provinces who are more likely to understand the local marine environmental challenges to have a greater say in the direction of alleviating the pressing environmental problems.²² In the case of Trat province, it is understood from fieldwork that the former chairman of Pred Nai Mangrove Development and Conservation Group in his new capacity and greater social influence as a sub-district governor is trying to improve provincial legislation on mangrove conservation in mainland Trat province. Thailand, therefore, has a very suitable candidate to support in enlarging the spatial extent of the UNEP/GEF SCS Project demonstration site in Pred Nai across the Trat mainland province's coastline of mangroves.

This opportunity to work with a key individual in Trat province would greatly benefit from his continuing service and local leadership, ensuring that momentum of marine conservation efforts could be maintained and be successful over time. This could also potentially boost Trat province's collaboration with Koh Kong province on the conservation of their transboundary mangrove ecosystem. The ensuing discussion will illustrate how the support for key provincial authorities and individuals in enhancing public awareness on

²¹ Franciska Rosen and Per Olsson, "Institutional Entrepreneurs and Global Networks, and the Emergence of International Institutions for Ecosystem-based Management: The Coral Triangle Initiative," *Marine Policy* 38 (2013): 195-204.

²² Aaron Zazueta and Jeneen R. Garcia, "Multiple Actors and Confounding Factors: Evaluating Impact in Complex Social-ecological Systems," in Juha Uitto (ed.), *Evaluating Environment in International Development*, (Abingdon, Oxon, New York, Routledge, 2014): 194-207.

transboundary marine conservation in Koh Kong and Trat provinces could be executed via the fisheries *refugia* initiative.

6.3.2 Expanding Fisheries *Refugia* in Koh Kong and Trat Provinces

Fisheries *refugia* proved to be an effective concept in ensuring marine conservation and sustainable resource use being practiced by local coastal fishing communities in Kampot and Kien Giang provinces. A perennial concern among the coastal villagers residing in Koh Kong and Trat provinces is about declining fish catch that affects their economic livelihood. Clearance of mangroves by coastal villagers to engage in the expansion of shrimp farming and selling of mangrove wood as charcoal is therefore hardly surprising. Here, fisheries *refugia* is further expounded as a potential option in the transboundary mangrove ecosystem to enhance public awareness on marine conservation between the two provinces.²³

The proposed fisheries *refugia* project in Koh Kong and Trat provinces needs to be buttressed by overarching political support from the central governments of Cambodia and Thailand. Provincial efforts alone are insufficient because of the lack of funding and relevant technical expertise. It should be stressed that political support from the two States does not mean just providing financial funding to provincial authorities in getting technical training and developing marine conservation programmes. According to Chircop, in order for transboundary marine environmental cooperation to work well, science and management need to cross paths, engaging in strong research and local and indigenous knowledge to understand root causes of regional marine environmental problems.²⁴

The first step would require Cambodia and Thailand to gather technical experts specialising in mangrove biology from their countries. It is recommended that the two States then invite the technical experts involved in the fisheries *refugia* project in Kampot and Kien Giang provinces to share their learning and operational experiences gained with the chosen mangrove technical specialists working on this proposed development in Koh Kong and Trat provinces. This would then be helpful in assisting local environmental officials and fisheries departments in developing the fisheries *refugia* demonstration sites.

Another case in point is relying on the transboundary diagnostic analysis (TDA) carried out on the transboundary mangrove ecosystem from the UNEP/GEF SCS Project to comprehend relatively recent scientific and technical assessments of the environmental issues, but follow up assessments would then be required to address the latest environmental concerns. An updated TDA could serve as a basis for a Strategic Action Plan (SAP) similar to the one employed in the period of the UNEP/GEF SCS Project, albeit now in a fisheries *refugia* context. Relating to the experiences in Kampot and Kien Giang provinces, the first execution of the proposed fisheries *refugia* project requires working with local fisher people in identifying fish spawning sites and choosing potential fisheries *refugia* demonstration pilot sites at Koh Kong and Trat provinces.

²³ As mentioned in Chapters 2 and 4, a fisheries *refugia* project was carried out in a coral reef demonstration site in Ko Chang (Trat province) during the UNEP/GEF SCS project, but the concept of fisheries *refugia* was not applied in the transboundary mangrove ecosystem of Koh Kong and Trat provinces.

²⁴ Aldo Chircop, "Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation," *Ocean Development and International Law* 41 (2010): 334-356.

From the identification of fish spawning sites, the second step would be running those sites in a way that conveys the concept of fisheries *refugia* to the local fisher people. As Chris Paterson, former UNEP Fisheries Expert in the UNEP/GEF SCS Project observed: ‘the demonstration sites in Kampot and Kien Giang provinces served as visual tools for fisher people in understanding fish life cycle and fisheries habitats’.²⁵ Conducting meetings at demonstration sites would ensure learning and reviewing on the spot for local fisher people and technical experts and through a centralised location enables cost savings via reduced follow-up meetings.²⁶

Whilst education is necessary to raise the awareness of local communities on the multiple economic, social and food security benefits of mangrove ecosystems as well as their function in protecting the coastline from severe weather events and storing carbon in their biomass, this could prove difficult if there are no incentives. Shelley Lexmond from the UNEP/GEF SCS Project’s Legal Task Force firmly reiterates that marine conservation success may not be replicated if there are no incentives for local fisher people.²⁷ Reports from fieldwork have also shown that local communities will only engage in conserving mangroves if they can see economic benefits from it. The success of the proposed fisheries *refugia* project, therefore, further depends on thoroughly enforcing its operational aspect. In this instance, stressing the importance of restoring and protecting the mangrove habitats at the demonstration sites to improve fish spawning and not restricting fishing access temporally or spatially for local fisher people are vital incentive measures. Gradual support for the fisheries *refugia* project would be more likely in these circumstances.

It is further argued here that creating disincentives for the clearance of mangroves in Koh Kong and Trat provinces would augment and complement the fisheries *refugia* proposal. For Barbier and Sathirathai, reducing current incentives for excessive mangrove conversion to shrimp farming and charging replanting fees for farms that convert mangroves are useful measures to combat mangrove loss and boost mangrove conservation.²⁸ This particular measure would be suitable for implementation to dissuade coastal villagers who are keen on expanding existing shrimp farms in the mangrove habitats.²⁹ As Turner et al. contend: “within the coastal zone, habitat loss is an ongoing problem, particularly small-scale developments which individually do not have a significant effect on the habitat levels but cumulatively may lead to long-term degradation of natural assets”.³⁰

²⁵ Interview in Bangkok, July 2013.

²⁶ John C. Pernetta, *Terminal Report of the UNEP/GEF Project Entitled: Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand* (2009).

²⁷ Interview in Singapore, May 2013.

²⁸ Edward B. Barbier and Suthawan Sathirathai, “*Shrimp Farming and Mangrove Loss in Thailand*,” (London: Edward Elgar, 2004).

²⁹ Shrimp farming is far more prominent in Trat province as compared to Koh Kong province.

³⁰ R. Kerry Turner, Irene Lorenzoni, Nicola Beaumont, Ian J. Bateman, Ian H. Langford and Anne L. McDonald, “Coastal Management for Sustainable Development: Analysing Environmental and Socio-Economic Changes on the UK Coast,” *The Geographical Journal* 164 (1998), page 279.

The fisheries *refugia* proposal illustrates how both Koh Kong and Trat provinces can work together to enhance public awareness on marine conservation and sustainable resource use in their transboundary mangrove ecosystem. In brief, support from the Cambodian and Thai central governments and transfer of relevant technical expertise have been identified as the key factors in aiding Koh Kong and Trat provinces to improve their subnational cooperation on marine conservation. Key provincial authorities and fisheries community leaders also have to seize the chance to learn as much as possible from technical experts, and sustain the mangrove conservation efforts over time. This specific fisheries *refugia* proposal also has the potential to work hand in hand with the recommended cross-border mangrove ecotourism stated earlier as both proposals advocate for the conservation of mangroves.

6.4 Transferring Insights from the Gulf of Thailand for Subnational Cooperation Applicability in Other Marine Areas

As stated in Chapter 1, one of the key objectives of the thesis is to speak beyond the immediate States concerned and engage a broader audience of scholars and policy-makers interested in marine environmental protection, joint cooperation in maritime spaces, and politics of scale in coastal environments. This section heeds the call to provide solutions and input variables for better conservation of marine resources and marine environmental cooperation rather than only focusing on outcomes and impacts.³¹

UNEP personnel provided useful insights into the successful development and implementation of the UNEP/GEF SCS Project and the applicability of these insights to multilateral cooperative initiatives for environmental protection and remediation in other coastal and regional waters.³² UNEP personnel from the Regional Task Force - Legal (RTF-L) also contributed options consisting of a broad range of soft and hard-law instruments for a regional cooperative management framework among the SCS States.³³ This section expands the scope of these insights by incorporating additional ‘voices’ from the technical experts, central and provincial government officials, and coastal villagers gathered from fieldwork findings. These additional ‘voices’ reveal the intricate scalar narratives between the different actors from the different spatial scales (regional, national, subnational) involved in the subnational cooperation in marine environmental protection at the two researched transboundary sites.

6.4.1 Securing External Financial Funding

³¹ Nathan James Bennett and Philip Dearden, “From Measuring Outcomes to Providing Inputs: Governance, Management, and Local Development for More Effective Marine Protected Areas,” *Marine Policy* 50 (2014): 96-110; Dang Vu Hai, “*Marine Protected Areas Network in the South China Sea: Charting a Course for Future Cooperation*,” (Leiden: Martinus Nijhoff Publishers, 2014).

³² See, for example, J. Michael Bowers and John C. Pernetta, “Outcomes of the SCS Project and their Applicability to Multilateral Cooperative Initiatives for the Management of Coastal Seas and Marine Basins,” *Ocean and Coastal Management* 85B (2013): 268-275. Also see, John C. Pernetta and J. Michael Bowers (eds.), “Special Issue on South China Sea,” *Ocean and Coastal Management* 85B (2013): 125-276, regarding the general experiences and insights gained from the UNEP/GEF SCS project.

³³ See, for examples, Shelley M. Lexmond, “Review of Instruments and Mechanisms for Strengthening Marine Environmental Co-operation in the South China Sea,” *UNEP/GEF/SCS Technical Publication No. 17* (2008); M. Nizam Basiron and Shelley M. Lexmond, “Review of the Legal Aspects of Environmental Management in the South China Sea and Gulf of Thailand,” *Ocean and Coastal Management* 85B (2013), 257-267.

It was highlighted earlier that the central governments of Cambodia and Thailand were not keen to lend a helping hand in strengthening cross-border institutional arrangements and enhancing public awareness on marine conservation between Koh Kong and Trat provinces because there were no perceived financial benefits. Interviews revealed from both provinces indicated that local environmental officials and villagers continue to face great challenges in securing central government funding to tackle their coastal environmental concerns. Securing external financial funding for transboundary marine environmental protection is therefore arguably a more feasible option.

The idea of promoting cross-border ecotourism which was explored for Koh Kong and Trat provinces could be employed by provinces from two different countries that share a transboundary marine environment with similar physical conditions to strengthen institutional arrangements and public awareness on marine conservation among them. This is especially suitable in a transboundary coral reef area where these environmental features are strong motivating factors in their preferred holiday choices.³⁴ In transboundary mangrove areas where shrimp farming is prevalent and proving to be unsustainable, provinces could consider the cross-border ecotourism too. The rationale behind supporting cross-border ecotourism is that such cooperative arrangements engaged by interested provinces stand a chance of attracting not just State but also private investments for the establishment and management of the ecotourism sites; and helping to protect and possibly restore biological diversity and ecological balance in the transboundary marine environment.³⁵ The increased cross-border exchanges via ecotourism could potentially lead to greater economic integration and deepen their shared interests to protect their respective coastal 'assets' against transboundary environmental degradation. The revenue collected from the joint ecotourism growth could also be used partially by the provincial and central governments to enhance law enforcement against activities like illegal trawling that harm the transboundary marine environment.

With external funding from organizations such as UNEP and IUCN to support joint cooperation in marine environmental protection in transboundary waters or local coastal management programmes, environmental officials and local villagers in those provinces should recognise that such funding is likely to be relatively short-term. Provinces should focus on the sustainability of the external project process where key experiences and lessons gained from outside experts are retained and developed to attract, identify, and generate future funding.³⁶ This is a challenging but necessary requirement for any subnational cooperation in marine environmental protection to be effective and lasting.

³⁴ See, for example, Maria C. Uyerra, Isabelle M. Côté, Jennifer A. Gill, Rob R.T. Tinch, David Viner and Andrew R. Watkinson, "Island-specific Preferences of Tourists for Environmental Features: Implications of Climate Change for Tourism-dependent States," *Environmental Conservation* 32 (2005): 11-19.

³⁵ Alan Collins, "Tourism Development and Natural Capital," *Annals of Tourism Research* 26 (1999): 98-109; Stefan Gössling, "Ecotourism: A Means to Safeguard Biodiversity and Ecosystem Functions," *Ecological Economics* 29 (1999): 303-320; Frederico Neto, "A New Approach to Sustainable Tourism Development: Moving Beyond Environmental Protection," *Natural Resources Forum* 27 (2003): 212-222.

³⁶ Nicole Milne and Patrick Christie, "Financing Integrated Coastal Management: Experiences in Mabini and Tingloy, Batangas, Philippines," *Ocean and Coastal Management* 48 (2005): 427-449; John McKenna and Andrew Cooper, "Sacred Cows in Coastal Management: The Need for a 'Cheap and Transitory' Model," *Area* 38 (2006): 421-431.

Lessons learnt from Kampot and Kien Giang provinces should be opportunistic and leverage the technical and legal expertise provided by external agencies from the regional/international scales. The UNEP/GEF SCS Project saw both provinces strengthening their institutional arrangements and enhancing public awareness on marine conservation. In particular, the second working agreement on fisheries management signed between Kampot and Kien Giang provinces in 2014 attests to the growth and development of marine environmental protection schemes after the MoA signed during the UNEP/GEF SCS Project ceased in December 2012. The second working agreement on fisheries management features external technical support from Australian research institutions.³⁷ This is a clear example of progression and reflects how subnational cooperation in marine environmental protection can be sustainable in operation over time. This case study reinforces the idea that progress of environmental efforts should be documented to attract international/regional recognition and boost chances of external financial funding.³⁸

6.4.2 Engaging and Empowering Locals

The empirical chapters of 4 and 5 have highlighted that the differences in outcome in carrying out subnational joint cooperation in marine environmental protection at both transboundary sites in the Gulf of Thailand was affected by the degree of support given to engage and empower locals in the four researched provinces. Scalar narratives that emerged from Koh Kong and Trat provinces lamented receiving minimal central government support in coordinating the execution of the UNEP/GEF SCS Project. This resulted in a scalar disconnect between the subnational and national scales where the local environmental officials and coastal villagers felt frustrated with the lack of national support from their respective States. The lesson related to this experience suggests that any aspiring subnational joint cooperation in marine environmental protection cannot be just led and executed by a NGO or central governments alone. The active involvement of local environmental and fisheries officials, and local villagers, is essential for effective cooperative measures across the transboundary marine environment.

The success seen in Kampot and Kien Giang provinces in engaging and empowering the locals in marine conservation awareness and strengthening institutional arrangements are key characteristics of the UNEP/GEF SCS Project that are highly transferable to other transboundary marine sites. Subnational joint cooperation in marine environmental protection would benefit from proper engagement and empowerment to the locals, particularly the fisher people (as seen in the fisheries *refugia* project in Kampot and Kien Giang) in the provinces. This would then most likely to translate into support given to local environmental officials and external technical experts from the local communities. However, this must be led by the central governments involved. This point is strongly reiterated by Whitty in her analysis of marine governance, where she argues even if local institutions are active in mobilising local communities and are supported by external organisations, the

³⁷ Plan of Cooperation, above n 5.

³⁸ See, for example, Rebecca L. Gruby and Xavier Basurto, “Multi-level Governance for Large Marine Commons: Politics and Polycentricity in Palau’s Protected Area Network,” *Environmental Science & Policy* 36 (2014): 48-60.

disconnect with higher government levels limits the extent to which communities can address the marine environmental problems.³⁹

6.4.3 Fisheries *Refugia*

This sub-section draws upon the implementation of fisheries *refugia* in Kampot and Kien Giang provinces and its resounding success to transpose those relevant experiences elsewhere. It is perhaps the best component of the SAP from the UNEP/GEF SCS Project to be transferred to other marine sites given its scientific background and record of reversing environmental degradation. According to Lexmond, the SAP remains the primary cooperative instrument between States as it is “a scientifically sound instrument, grounded with the lessons learnt from the demonstration sites and promoting ecologically sound actions”.⁴⁰

On the scientific aspect of fisheries *refugia*, Chris Paterson, UNEP Fisheries Expert, has indicated for any aspiring cross-border provinces interested in employing fisheries *refugia* to address declining fisheries catch, relying on the results of the TDA is primary to understand the environmental and fisheries contexts in detail.⁴¹ Drawing from his experience in Kampot and Kien Giang provinces, he added that any fisheries *refugia* action plan needs to be very specific in the long term by having well-defined outputs and activities such as targeting certain fish species in the demonstration site that are deemed most important to the local fisher people. This view is supported by Rossiter and Levine who note that fisheries management requires narrow and targeted goals to stand a greater chance of success.⁴²

It is argued that the application of fisheries *refugia* is particularly appropriate in Southeast Asia, particularly the Gulf of Thailand, where habitat destruction by trawling is prevalent.⁴³ This is where the science of fisheries *refugia* matters in expanding this reality and in promoting subnational cooperation similar to Kampot and Kien Giang provinces. It is noted that a fisheries *refugia* workshop was conducted for fisheries and environmental professionals from SCS countries involved in the UNEP/GEF SCS Project, and these participants subsequently conducted seminars on the fisheries *refugia* concept involving staff of national and provincial fisheries and environmental agencies.⁴⁴ Although workshops can be conducted periodically provided there is funding, the working potential of fisheries *refugia* needs to rely upon accurate and relevant fisheries data sets. There are calls for much needed

³⁹ Tara S. Whitty, “Governance Potential for Cetacean Bycatch Mitigation in Small-scale Fisheries: A Comparative Assessment of Four Sites in Southeast Asia,” *Applied Geography* 59 (2015), page 139.

⁴⁰ Lexmond, above n 33, page 36.

⁴¹ Interview in Bangkok, July 2013.

⁴² Jaime S. Rossiter and Arielle Levine, “What Makes a “Successful” Marine Protected Area? The Unique Context of Hawaii’s Fish Replenishment Areas,” *Marine Policy* 44 (2014): 196-203.

⁴³ Si Tuan Vo, John C. Pernetta, Christopher J. Paterson, “Lessons Learned in Coastal Habitat and Land-based Pollution Management in the South China Sea,” *Ocean and Coastal Management* 85B (2013): 230-243.

⁴⁴ A joint UNEP/GEF SCS Project-SEAFDEC (Southeast Asia Fisheries Development Centre) ‘Regional Training Workshop on the Establishment and Management of Fisheries *Refugia*’ was convened at the SEAFDEC Training Department from 28 October to 10 November 2007. See, Somboon Siriraksophon, “Fisheries *Refugia*: A Regional Initiative to Improve the Integration of Fisheries and Habitat Management,” *Journal of the Marine Biological Association of India* 56 (2014): 55-64.

improvement of fish life-cycle and critical habitat linkages in Southeast Asia's regional fisheries statistics where information about the fishing gear and practices used and specific locations in which fish species are harvested should be properly recorded.⁴⁵ This is critical in the scientific application of fisheries *refugia* in the long run. In fact, proper regional fisheries statistics are crucial for subnational cooperative measures in fisheries *refugia* implementation as demonstration sites are subjected to transboundary environmental degradation and could be affected by destructive trawling activities.

On the management front of fisheries *refugia*, the lessons from the transboundary marine site of Kampot and Kien Giang provinces demonstrate that the success achieved in enhancing public awareness on marine conservation must focus on the people and not just the ecosystems. Technical experts and provincial officials made repeated visits to local fishing villages and worked closely with local fisher people in identifying fish spawning sites. The harmonious relationship shared between the locals (villagers and officials) at the subnational scale and designated officials at the national scale also ensured the fisheries *refugia* project was delivered smoothly. All this ensured that educating the public about marine conservation awareness did not yield temporary achievements.

The management experiences of fisheries *refugia* from Kampot and Kien Giang provinces are applicable in Southeast Asia as well because most local fisher people largely depend on fisheries for subsistence and small-scale market trade. Fisheries *refugia* does not prohibit fishing which will encourage local fisher people in Southeast Asia to support them. It tackles the core concerns of many fisher people of not having enough to fish by restoring natural habitats for fish reproduction. Furthermore, as pointed out in other areas within Southeast Asia, creating alternative livelihoods for the local communities as incentives to enhance marine conservation may not always yield positive results.⁴⁶ This is because many of the fisher people do not have ample education or training to make seamless adjustments to other occupations. Additionally, fisheries *refugia* can be an option for provinces to complement their tourism. Increased catches over time could see some fish supplied to local restaurants that cater to large tour groups.

The concept of fisheries *refugia* does have the capability to tackle pressing socio-economic concerns of coastal communities and coastal environmental degradation as seen from the successes in Kampot and Kien Giang provinces. It was developed as a fisheries component of the UNEP/GEF SCS Project SAP. It is scientifically informed and has been ecologically tested on selected demonstration sites. It is not a legally-binding regional instrument which States may not be willing to have their provinces implement if there are unresolved overlapping maritime claims. Therefore, fisheries *refugia* should be actively

⁴⁵ Christopher J. Paterson, "Procedure for Establishing a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand in the Context of the UNEP/GEF Project Entitled: Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand," *South China Sea Knowledge Document No. 4* (2007); Christopher J. Paterson, John C. Pernetta, Somboon Siraraksophon, Yasuhisa Kato, Noel C. Barut, Pirochana Saikliang, Ouk Vibol, Phiak Ean Chee, Thi Trang Nhung Nguyen, Nilanto Perbowo, Trian Yunanda and Nygiel B. Armada, "Fisheries *Refugia*: A Novel Approach to Integrating Fisheries and Habitat Management in the Context of Small-scale Fishing Pressure," *Ocean and Coastal Management* 85B (2013): 214-229.

⁴⁶ Patrick Christie, "Marine Protected Areas as Biological Successes and Social Failures in Southeast Asia," *American Fisheries Society Symposium* 42 (2004): 155-164; Elin Torell, Brian Crawford, Dawn Kotowicz, Maria D. Herrera, "Moderating our Expectations on Livelihoods in ICM: Experiences from Thailand, Nicaragua, and Tanzania," *Coastal Management* 38 (2010): 216-237.

promoted given the appropriate institutional support in supporting subnational joint cooperation in marine environmental protection.

6.5 Conclusion

This chapter has provided an assessment based on fieldwork scalar narratives on the various options that could be undertaken for better subnational joint cooperation in marine environmental protection. The chapter not only considered the failures but also successes in strengthening institutional arrangements and enhancing public awareness on marine conservation seen in the four provinces and made recommendations for future cross border marine environmental protection initiatives. It proposed various measures such as promoting cross-border ecotourism and expanding the fisheries *refugia* project that the four provinces at the subnational scale could undertake. Yet, as this chapter has argued, the recommendations cannot be solely carried out by provinces given the lack of funding and political clout, the prime responsibility lies with central governments to support the recommendations. Hence, high levels of ongoing cooperation are needed among various institutional levels at different spatial scales of government to address coastal and marine environmental concerns.⁴⁷

The chapter also made some general recommendations based on lessons learnt from the two transboundary marine sites in the Gulf of Thailand for broader application elsewhere. The recommendations augment the proposed transfer of environmental policies and legal frameworks for regional environmental cooperation published by UNEP personnel on two aspects. First, scalar narratives from the four researched provinces provide a wider view of the environmental policies executed on the subnational scale where opinions from the locals indicate the extent of success and offer some suggestions for improvement. Second, the proposed legal frameworks for regional environmental cooperation do not encompass enough depth and context about the subnational scale where provincial efforts matter more in the day-to-day operations of subnational cooperation in marine environmental protection. The proposed recommendations in the previous section may be broad but nevertheless provide some policy direction in exploring subnational cooperation in marine environmental protection beyond the eastern part of the Gulf of Thailand. To this extent, it is hoped that these subnational efforts can scale up local priorities and develop a network for bigger formal and informal learning opportunities among provinces/States facing common marine environmental concerns.⁴⁸

⁴⁷ Nadine Heck, Philip Dearden, Adrian McDonald, "Insights into Marine Conservation Efforts in Temperate Regions: Marine Protected Areas on Canada's West Coast," *Ocean and Coastal Management* 57 (2012): 10-20.

⁴⁸ Kem Lowry, Alan T. White and Patrick Christie, "Scaling Up to Networks of Marine Protected Areas in the Philippines: Biophysical, Legal, Institutional, and Social Considerations," *Coastal Management* 37 (2009): 274-290; Noella J. Gray, Rebecca L. Gruby and Lisa M. Campbell, "Boundary Objects and Global Consensus: Scalar Narratives of Marine Conservation in the Convention on Biological Diversity," *Global Environmental Politics* 14 (2014): 64-83.

Chapter 7 CONCLUSION

7.1 Introduction

As outlined in Chapter 1, this thesis sets out to examine critically the scalar narratives arising from subnational joint cooperation in marine environmental protection in the Gulf of Thailand during the UNEP/GEF SCS Project (2002-2008). This analysis has been conducted within an international law and politics of scale framework, and is informed by a mixed methodology of documentary research and ethnographical approaches such as interviews and participant observation. The core objective of the thesis' research is to provide an informed scalar narrative analysis on how a common platform could be reached to carry out effective joint cooperation on the management of transboundary coastal ecosystems in the eastern part of the Gulf of Thailand and inform policy development at other sites in the future.

The particular need for subnational marine environmental cooperation between Koh Kong and Trat provinces is increasingly urgent. Despite Thailand's efforts in grounding illegal fishing vessels at ports to meet the European Union's (EU) standard on illegal, unregulated and unreported (IUU) fishing, Koh Kong and Trat provinces have already been subjected to the environmental damages of illegal fishing and trawling in their transboundary waters for years. The grounding measure is also seen as temporary because those illegal fishing vessels are negotiating for proper legal registration by upgrading their vessels and gear.¹ As for Kampot and Kien Giang provinces, the tourism proposal put forth by the Cambodian government to the Asian Development Bank (ADB) in creating an international ferry service between Kampot province and Phu Quoc island (Kien Giang province) suggests that there will be increasing incentives and challenges to deepen their subnational cooperation relationship with regard to fishery resources in their shared waters.² These problems in the eastern part of the Gulf of Thailand are also experienced in similar fashion elsewhere in the Gulf. This situation demands attention from the littoral States and most importantly, joint cooperation in marine environmental protection among them.

The following section will provide an overview of the findings of the research undertaken and their key contributions to the academic literature and policy. Last, the thesis concludes with a few thoughts on subnational joint cooperation in marine environmental protection in the academic literature and in the Gulf of Thailand.

7.2 Overview of Findings and Their Contributions

After outlining the scope of the thesis and methodologies adopted in the introductory chapter, Chapter 2 gave detailed background information on the Gulf of Thailand and researched field sites. The physical setting, maritime claims and political geography, shared living and non-living resources of the Gulf of Thailand, and environmental threats to the Gulf were highlighted. This was followed by focusing on the eastern part of the Gulf of Thailand

¹ Jakkrit WaewkraiHong and Muhammad Ayub Pathan, "New Rules Scare Away Illegal Cambodian Fishing Boats," *Bangkok Post* (2 July 2015); Veera Prateepchaikul, "A Reprieve, So They Can Continue to Plunder?," *Bangkok Post* (3 July 2015)

² Tourism Demand Analysis, *Greater Mekong Subregion Tourism Infrastructure for Inclusive Growth Project: Report and Recommendation of the President*, (Asian Development Bank, 2014).

(Cambodia, Thailand and Vietnam). Lastly, the geographical and ecological profiles of the UNEP/GEF SCS Project field sites at the four provinces were presented. It was argued that the unresolved overlapping maritime claims between Cambodia and Thailand may influence and impede joint cooperation on management of their transboundary coastal ecosystem between the provinces of Koh Kong and Trat.

Chapter 3 reviewed the literature on the different spatial scales (global, regional, national-bilateral and subnational) of joint cooperation on marine environmental protection. It was argued that much of the literature on joint cooperation in marine environmental protection remains ensconced in the spatial scales of global, regional, and to some extent national. It is abundantly clear that the lacuna of academic work in joint cooperation in marine environmental protection comes primarily from the subnational spatial scale. Filling the gap through the thesis' study would help to formulate new rapprochements of academic knowledge and potential marine policy recommendations in the relevant fields of environmental politics of scale and marine environmental protection policies respectively. In particular, Christie argues that the particularities of specific case studies (which the thesis offers) remain appealing to marine and coastal practitioners and policy makers who are not into general studies like the scientific community.³

Chapter 4 addressed the scalar narratives of the strengthening of institutional arrangements. The politics of scale engaged to strengthen institutional arrangements between UNEP, the three States' central governments, and respective researched provinces were discussed. There were several important theoretical findings in this chapter. Specifically, the politics of scale engaged by the Cambodians and Vietnamese were scalar strategies to tap on UNEP's presence and know-how to address transboundary marine environmental concerns, thus asserting their specific local concerns at a wider scale. Therefore, an opportunistic scalar narrative emerged from the case study of the UNEP/GEF SCS Project in Kampot and Kien Giang provinces. The subnational and to some extent, the national actors of Cambodia and Vietnam, had seized the opportunity to capitalise on an established global/regional organisation's (UNEP) experience and expertise to develop close working ties during the UNEP/GEF SCS Project. The eventual signing of the MoA between the two provinces is the clearest evidence of this opportunistic scalar approach in the strengthening of institutional arrangements. Thus, this specific case study on Kampot and Kien Giang provinces allows us to consider alternate views away from the usual conflicting environmental agendas between various actors at different scales, widening the spectrum of views on environmental politics of scale.

As for Koh Kong and Trat provinces, it was largely a different story. There was a conflicting interplay of institutional narratives between the subnational and national scales. Based on empirical findings from the provincial officials, the relative lack of 'real action' taken by the central government agencies, and UNEP, to a smaller extent at Koh Kong province, was the dominant narratives revealed. On the other hand, the specific narratives from the central government authorities in both countries reflected the fact that UNEP's presence was significant for the improvement of institutional arrangements. Interviews conducted with UNEP personnel revealed that Thailand, as the more experienced State as compared to Cambodia, had failed to take the lead and was singled out as a 'missing' actor. This resulted in the institutional arrangements being hardly strengthened. The conflicting

³ Patrick Christie, "Creating Space for Interdisciplinary Marine and Coastal Research: Five Dilemmas and Suggested Resolutions," *Environmental Conservation* 38 (2011): 172-186.

vertical interplay of institutional narratives highlighted reflects how national institutions can still impact the eventual process and effectiveness of subnational ones, irrespective of whether a regional or international institution is involved in initiating the environmental project. The vertical interplay of institutional narratives reinforces the call for more attention to be paid to the politics of environment or everyday struggles over environmental meanings experienced at the subnational scale.

With the two contrasting examples, the chapter shows that central governments were the key intervener for joint cooperation amongst the respective provinces. This was pointed out by the technical experts and UNEP personnel. Technical experts suggested that the overlapping maritime claims between Cambodia and Thailand were the key deterrent to marine environmental cooperation between Koh Kong and Trat provinces. The maritime geography and politics were also seen as influential between Kampot and Kien Giang provinces where it was believed that the subnational joint cooperation in marine environmental protection materialised into a signed MoA because it took place in the joint historic waters of Cambodia and Vietnam. Perspectives from UNEP on the relative competency of the three States in strengthening institutional arrangements in the UNEP/GEF SCS Project revealed that the eagerness of Vietnam's central government to support UNEP was encouraging. Cambodia was viewed to be willing to learn from UNEP and Vietnam to build up their marine knowledge capacity. Thailand was seen as the most experienced of the three States, but the transboundary cooperation there under-achieved because the central government put in little effort to take the lead on the subnational scale in Koh Kong and Trat provinces.

Chapter 4 also reflected on the collective scalar narratives in light of the concept of duty to prevent transboundary harm. The concept of the duty to prevent transboundary harm is extensively utilised at regional and national scales where cooperation to protect marine resources and environment are core obligations under the LOSC. Here, we saw some evidence of how the concept of duty to prevent transboundary harm could be applied on a subnational scale. The UNEP/GEF SCS Project, to some extent, had indirectly attested to how the idea of the duty to prevent transboundary harm could be incorporated into the strengthening of the institutional arrangements carried out by the respective cross-border provinces in conjunction with UNEP and their central government agencies. In the case of Kampot and Kien Giang provinces, the provincial authorities were able to capitalise on the cordial working relationships with their central government agencies and UNEP to strengthen the institutional arrangements and prevent further transboundary harm in their shared waters to a large extent. Koh Kong and Trat provinces, however, were poorly led by their central government agencies to strengthen institutional arrangements in averting transboundary pollution and degradation of the marine environment.

Chapter 5 explored the scalar narratives that emerged from the enhancing of public awareness in marine conservation and sustainable resource use in the two transboundary sites. A distinctive feature in the two transboundary sites was primarily the huge difference in success achieved between them. It was noticeably very successful between Kampot and Kien Giang provinces, and partial success only was attained between Koh Kong and Trat provinces. The chapter has shown that subnational interactions and cooperation relied heavily on the involvement of the central government authorities.

Cambodia and Vietnam had demonstrated a cohesive effort in political support of Kampot province's Fisheries Cantonment and Kien Giang province's Fishery Department

respectively in their marine conservation efforts with the public during the UNEP/GEF SCS Project. This led to frequent fruitful exchanges at the fisheries *refugia* demonstration sites, ensuring that UNEP's technical and management practices were well executed at the subnational scale and led to the eventual signing of the MoA. The signing of the MoA during the UNEP/GEF SCS Project indirectly boosted the two provinces' working relationship, and partially contributed to the culmination of a second cooperative interaction in managing their transboundary fisheries resources independent of UNEP.

On the other hand, findings on poor involvement of central government authorities in Koh Kong and Trat provinces' UNEP/GEF SCS Project resulted in limited provincial exchanges, and inconsistent public awareness on marine conservation. There was also little progress recorded after the UNEP/GEF SCS Project, with a lack of a proper long term approach in enhancing public awareness on marine conservation and sustainable resource use in the transboundary waters of Koh Kong and Trat provinces acknowledged by local officials and villagers. It is also argued that though it is simply easier to conserve seagrass as compared to mangroves which have far more tangible economic benefits to not do so (in terms of conversion to shrimp farms or the sale of mangrove wood as charcoal), this biophysical argument alone ignores the dynamics of the politics of scale at play mentioned above. Therefore, even though there are different sets of pressure in the two distinct transboundary marine sites, a sole biophysical explanation that seagrass is easier to conserve as compared to mangroves would not yield the full picture of subnational marine environmental cooperation investigated in this study.

Chapter 5's main contribution comes from incorporating the perspectives of the provincial officials and coastal villagers towards enhancing public awareness on marine conservation. The fisheries *refugia* success seen in Kampot province and Phu Quoc island (Kien Giang province) saw active participation of local fisher people in helping to identify fish spawning areas, and local officials drawing on UNEP's technical expertise and coastal management to upgrade their working knowledge. As mentioned in Chapter 1, this thesis echoes Papanicolopulu's call to further develop the international legal regime and provide an adequate place for persons in the LOSC.⁴ Barnes has also noted that the LOSC lacks the institutional capacity to accommodate a wider range of participants (such as the individuals who engage the ocean on a day-to-day basis) and to structure their input into the management of ocean space.⁵ Hence, the fisheries *refugia* case study in this thesis bridges the gaps in the LOSC which Papanicolopulu and Barnes have raised to a small extent.

Chapter 6 discussed the policy recommendations towards better subnational joint cooperation in marine environmental protection. Recommendations were suggested for the four provinces of Kampot, Kien Giang, Koh Kong, and Trat, and their respective central governments on how they can overcome political and financial challenges to strengthen institutional arrangements and boost subnational joint cooperation in the two transboundary sites. Next, it was discussed how the enhancement of public awareness on marine conservation can be improved by further empowering key individuals and groups, and creating more economic incentives for local fisher people and coastal villagers in the three

⁴ Irini Papanicolopulu, "The Law of the Sea Convention: No Place for Persons?," *The International Journal of Marine and Coastal Law* 27 (2012): 867-874.

⁵ Richard Barnes, "The Law of the Sea Convention and the Integrated Regulation of the Oceans," *The International Journal of Marine and Coastal Law* 27 (2012), page 862.

countries. It was also strongly argued that the central governments of the three researched coastal States need to support the provincial initiatives to ensure a higher rate of success of subnational joint cooperation in marine environmental protection.

Lastly, Chapter 6 offered some general recommendations based on the scalar narratives and lessons learned from the two transboundary marine sites in the Gulf of Thailand to transfer the insights for application elsewhere. This is an important contribution because the legal and policy insights provided by UNEP are largely regional in outlook and do not encompass enough depth on the subnational scale where provincial efforts matter more in the day-to-day operations of subnational cooperation in marine environmental protection.

7.3 A Few Closing Thoughts

First, the author has dedicated a good deal of attention in this thesis to discussing the scalar narratives of the subnational joint interactions on transboundary marine environmental issues in the Gulf of Thailand during (and to some extent, after) the UNEP/GEF SCS Project. The ethnographical and legal approaches undertaken in this thesis also complement recent emerging works on socio-legal research in the Mekong River⁶ which help us to grasp a better understanding of how various actors from different spatial scales negotiate their interests on environmental governance through legal instruments and institutions. Hitherto, there are only a selected few serious studies on subnational joint cooperation in environmental protection.⁷ It is hoped that this thesis' contribution inspires more emerging academic studies on subnational joint cooperation in marine and even terrestrial environmental protection.

Second, the thesis' focus on subnational joint cooperation in marine environmental protection in the Gulf of Thailand is salient in light of increasingly urgent transboundary environmental concerns. This demands cooperative measures among the littoral States to tackle the root cause of the problem. Furthermore, in the context of the Gulf of Thailand, Article 123 of the LOSC indicates the obligation to cooperate on ocean resource management issues in the context of enclosed and semi-enclosed seas.

⁶ Fleur Johns, Ben Saul, Philip Hirsch, Tim Stephens and Ben Boer, "Law and the Mekong River Basin: A Socio-legal Research Agenda on the Role of Hard and Soft Law in Regulating Transboundary Water Resources," *Melbourne Journal of International Law* 11 (2010): 154-174; Ben Boer, Philip Hirsch, Fleur Johns, Ben Saul and Natalia Scurrah, "*The Mekong: A Socio-Legal Approach to River Basin Development*," (London: Routledge, forthcoming).

⁷ In general, see, for examples, Emma S. Norman and Karen Bakker, "Transgressing Scales: Water Governance across the Canada-U.S. Borderland," *Annals of the Association of American Geographers* 99 (2009), 99-117; Sanders Happaerts, "Are You Talking to Us? How Subnational Governments Respond to Global Sustainable Development Governance," *Environmental Policy and Governance* 22 (2012): 127-142; Holley Andrea Ralston, "*Subnational Partnerships for Sustainable Development: Transatlantic Cooperation between the United States and Germany*," (Cheltenham: Edward Elgar Publishing Limited, 2013). On the marine aspect, see, for examples in the Gulf of Maine, Aldo Chircop, David VanderZwagg and Peter Mushkat, "The Gulf of Maine Agreement and Action Plan: A Novel but Nascent Approach to Transboundary Marine Environmental Protection," *Marine Policy* 19 (1995): 317-333; Lawrence P. Hildebrand, Victoria Pebbles and David A. Frasers, "Cooperative Ecosystem Management Across the Canada-US Border: Approaches and Experiences of Transboundary Programs in the Gulf of Maine, Great Lakes and Georgia Basin/Puget Sound," *Ocean and Coastal Management* 45 (2002): 421-457; Lawrence P. Hildebrand and Aldo Chircop, "A Gulf United: Canada-U.S. Transboundary Marine Ecosystem-Based Governance in the Gulf of Maine," *Ocean and Coastal Law Journal* 15 (2010): 339-380.

Lebel et al. have argued that regional environmental cooperation need not be about mega-projects, but rather could start with sharing of knowledge and experience around smaller, locally tested, social and technological innovations.⁸ The subnational experiences recounted in this thesis could be the stepping stones for progress to be made and further developed on a larger spatial scale. Considering the Gulf of Thailand itself is host to two fully-fledged joint development agreements between Malaysia and Thailand and Malaysia and Vietnam and a further joint arrangement in the Cambodia-Vietnam Historic Waters Agreement,⁹ subnational joint cooperation in marine environmental protection in the Gulf of Thailand should not be seen as daunting or insurmountable challenges. Echoing Schofield and Tan-Mullins in their ocean governance study of the Gulf of Thailand, “it remains up to the coastal States to seize the initiative and take the bold steps necessary to achieve these goals”.¹⁰

⁸ Louis Lebel, Po Garden, Masao Imamura, “The Politics of Scale, Position, and Place in the Governance of Water Resources in the Mekong Region,” *Ecology and Society* 10 (2005): Article 18.

⁹ Clive Schofield, “Unlocking the Seabed Resources of the Gulf of Thailand,” *Contemporary Southeast Asia* 29 (2007): 286-308.

¹⁰ Clive Schofield and May Tan-Mullins, “Maritime Claims, Conflicts and Cooperation in the Gulf of Thailand,” in Aldo Chircop, Scott Coffen-Smout and Moira McConnell (eds.), *Ocean Yearbook* 22, (Leiden: Martinus Nijhoff Publishers, 2008), page 116.

APPENDICES¹

¹ Please note that Appendices 8 – 10 and 13 – 15 are adapted from Clive Schofield, *Maritime Boundary Delimitation in the Gulf of Thailand* (Unpublished PhD Thesis, Durham University, 1999).

Appendix 1 Interview Questions

Interview Schedule

Research questions:

The main objectives of this research project are to first examine, to what extent the subnational joint cooperation in marine environmental protection in the two border regions (Trat province of Thailand and Koh Kong province of Cambodia, and Kampot province of Cambodia and Kien Giang province of Vietnam) at the eastern part of the Gulf of Thailand has strengthened institutional arrangements of the involved provinces for the management of coastal resources and the marine environment. Second, the project also aims to investigate to what extent the subnational joint cooperation has addressed issues of promoting public awareness and participation in marine environmental protection at local and provincial levels in those three countries.

Interview Questions

Interview questions in this interview schedule need not be asked in chronological order but serve as a guide, through which questions on the interview schedule will be asked when appropriate.

All interview questions will be translated into Thai, Khmer and Vietnamese languages in Thailand, Cambodia and Vietnam respectively through a translator.

There are three main groups of people who are involved in this subnational joint cooperation in marine environmental protection that are to be interviewed:

- 1) United Nations Environmental Programme/Global Environmental Facility (UNEP/GEF) personnel who were involved in the South China Sea project that aimed to reverse environmental degradation in the Gulf of Thailand
- 2) Government officials (based in the provinces or capitals)
- 3) Coastal communities

I) UNEP/GEF personnel

Personal Background

- Name
- Sex

- Age
- Nationality/Race/Ethnicity
- Position in UNEP/GEF South China Sea project

Questions

a) Strengthening of institutional arrangements among the involved provinces

- 1) What was your role in the strengthening of institutional arrangements for management of coastal resources and environment among the involved provinces?
- 2) What were the key ministries and locals that you worked with?
- 3) What were the main issues/problems that you faced working with the government officials? How and to what extent did the issues/problems addressed?
- 4) What were the main issues/problems that you faced working with the coastal communities? How and to what extent did the issues/problems get addressed?
- 5) Which group of government officials (those working in the ministries or the provincial representatives) that you think was more influential in strengthening institutional arrangements among the involved provinces? Why so?
- 6) What were the main problems of the legal documents of involved provinces regarding management of resources and environment?
- 7) How would you describe the main challenges of conducting joint meetings between the involved provinces? How and to what extent were the challenges addressed?

b) Enhancement of public awareness on marine conservation and sustainable resource use

- 1) What is your role in the enhancement of public awareness on marine conservation and sustainable resource use among the involved provinces?
- 2) Who were the key stakeholders that you have to work with in those involved provinces?
- 3) What were the main challenges of developing and distributing public awareness materials regarding ecosystem importance and sustainable use of coastal resources among the coastal communities? How and to what extent the challenges were overcome?
- 4) What were the main challenges to organise learning exchange programmes for government officials, scientists and coastal communities in those involved provinces? How and to what extent the challenges were overcome?
- 5) What were the difficulties to educate coastal communities about marine environmental protection? (For example: Mangrove rehabilitation and conservation in Trat/Koh Kong, and fisheries management in Kampot/Kien Giang)

II) Government Officials (Ministry and Province)

Personal Background

- Name
- Sex
- Age
- Position
- Work station: Ministry, Province/District
- How long have you been in this position?

Questions

a) Strengthening of institutional arrangements among the involved provinces

- 1) What was your role working with UNEP/GEF to develop policies for management of coastal resources and environment among the involved provinces?
- 2) How would you describe your experience working with UNEP/GEF to improve marine environmental protection among the involved provinces?
- 3) For government officials in the ministries: What were the challenges in supporting provincial government officials in the implementation of UNEP/GEF marine environmental protection schemes? How and to what extent the challenges were overcome?
- 4) For provincial government officials: What were the challenges in garnering political/financial support from the central government ministries to implement and sustain the UNEP/GEF marine environmental protection schemes? How and to what extent the challenges were overcome?
- 5) For provincial government officials: What were the challenges in working with the officials from the neighbouring province?
- 6) For ministerial and provincial officials: To what extent UNEP as a third party was influential in facilitating cross-border cooperation between the involved provinces?
- 7) For ministerial and provincial officials: To what extent do you think the legislation for transboundary marine environmental protection has improved with UNEP's involvement?
- 8) How effective do you think these cross-border collaborations are?
- 9) Have there been any benefits with such collaborations? What are they and why?
- 10) Have there been any problems with such collaborations? What are they and why?

b) Enhancement of public awareness on marine conservation and sustainable resource use

- 1) What is your role in the enhancement of public awareness on marine conservation and sustainable resource use among the involved provinces?
- 2) Who were the key stakeholders that you have to work with in those involved provinces?
- 3) What were the challenges working with UNEP to create public awareness on marine conservation and sustainable resource use? How and to what extent the challenges were overcome?
- 4) How difficult was it in getting your own coastal communities to be aware on marine conservation and sustainable resources use?
- 5) How would you describe the extent of success in getting cross-border coastal communities to engage in sustainable use of coastal resources? Is the situation improving or worsening between the involved provinces?

III) Coastal Communities

Personal Background

- Sex
- Age
- Employment
- District/Village in the particular researched province

Questions

Enhancement of public awareness on marine conservation and sustainable resource use

- 1) Were you involved in the UNEP's marine environmental protection project? If yes, when and how did you become involved? If no, are you aware of this marine conservation and sustainable resource use in your province and the neighbouring province?
- 2) Do you think these are important? If so, why?
- 3) How did you know that such marine environmental protection projects are necessary and important?
- 4) What do you think are the most critical threats to the Gulf of Thailand and the areas you fish and/or work in?
- 5) How are these marine environmental protection projects related to your livelihood?
- 6) How effective do you think these marine environmental protection projects are?
- 7) How has the area changed since these marine environmental protection projects were put into place?
- 8) Which aspects of your livelihoods have changed ever since these marine environmental protection projects were put into place?
- 9) What have you learnt from these marine environmental protection projects?
- 10) Are the younger generation aware of these marine environmental protection projects? Do they view this as important?
- 11) Does your community interact with people across the border on marine environmental protection projects?
- 12) How important do you think it is for coastal communities on both sides of the border to collaborate on such marine environmental protection projects?

Appendix 2 Memorandum of Agreement between The Provincial People's Committee of Kien Giang Province (S.R. Vietnam) and The Governor of Kampot Province (Kingdom of Cambodia)

MEMORANDUM OF AGREEMENT BETWEEN

THE PROVINCIAL PEOPLE'S COMMITTEE OF KIEN GIANG PROVINCE (S.R. VIET NAM)

AND

THE GOVERNOR OF KAMPOT PROVINCE (KINGDOM OF CAMBODIA)

1. PARTIES.

1.1 This Memorandum of Agreement is entered into between the People's Committee of Kien Giang Province (Viet Nam) and Governor of Kampot Province (Cambodia)

2. BACKGROUND.

2.1 The transboundary waters (see the map in Annex 1) between the two provinces of Kien Giang (Viet Nam) and Kampot (Cambodia) are located in the eastern portion of the Gulf of Thailand. The coastline of the two provinces is 295 km in length, including 95 km in Kampot Province and 200 km in Kien Giang Province.

2.2 The coastal waters are characterised by coastal tropical ecosystems, including seagrass, coral reefs and mangroves. These habitats support high species richness of marine organisms; a large number of spawning and nursery grounds; and shared stocks of migratory species. The rich variety and high productivity of the marine living resources in the area provide livelihoods not only for coastal communities' resident in both provinces but also for fishermen from other areas. Coastal habitats have been used for development of tourism in both sides. The coastal zone and associated marine waters, therefore, play an important role in the socio-economic development of both provinces. In addition, joint management of the ecosystems and associated resources in this area will contribute to regional efforts in environmental management of the South China Sea due to the regionally significant seagrass beds, marine biodiversity and fisheries.

2.3 In the framework of the UNEP GEF Project entitled "*Reversing environment degradation trends of the South China Sea and Gulf of Thailand*", the transboundary demonstration site projects in Phu Quoc (Kien Giang, Viet Nam) and Prek Ampil (Kampot, Cambodia) have been under execution since 2005. An outstanding outcome of these demonstration site projects is the establishment of a mechanism for long-term, joint management in the transboundary waters. The management teams of both demonstration sites, through joint meetings with the participation of provincial leaders, have agreed to develop a policy and framework for cooperation in the management of coastal ecosystems and natural resources between the two provinces.

3. PURPOSE.

3.1 Under this Memorandum of Agreement the two parties agree to implement *the policy and framework for cooperation in management of coastal ecosystems and natural resources between the provinces of Kien Giang (Viet Nam) and Kampot (Cambodia)* in order to strengthen environmental protection, biodiversity conservation, and welfare of each province. The policy and operational framework are attached as Annex I, which forms a part of this Memorandum.

4. EXECUTION ARRANGEMENTS

4.1 The policy and framework are developed on the principles of cooperation, equality and joint development and are intended to reflect the overall goal of the UNEP/GEF project "Reversing Environmental Degradation Trends in South China Sea and Thailand Gulf", namely *"to create an environment at the regional level, in which collaboration and partnership in addressing environmental problems of the South China Sea, between all stakeholders, and at all levels is fostered and encouraged; and to enhance the capacity of the participating governments to integrate environmental considerations into national development planning"*.

4.2 Each province will nominate a focal point group with responsibility for organizing activities in order to fulfil the terms of this agreement that will operate under the guidance of the provincial leaders;

4.3 The initial period of validity of this Memorandum of Agreement is from the date of signature to December 2012 and it may be extended thereafter by mutual consent. At that time the policy and framework may be amended or expanded as considered necessary;

4.4 In the event of problems arising from the execution of this agreement the affected partner will inform the other 60 days in advance of joint discussions to identify appropriate solutions;

4.5 This Memorandum of Agreement does not relate to, nor is it intended as a forum for discussion and/or resolution of any boundary disagreements that might exist between the two countries of Viet Nam and Cambodia;

4.6 This Memorandum of Agreement is made in 12 originals in 3 languages (Vietnamese, Khmer and English) having equal value, in the event of any differences arising from the interpretation of the Khmer or Vietnamese text, the English text shall take precedence.

The Memorandum of Agreement is made in Kampot, on 27th March 2008

H.E. Mr. Le Huu Hung
Chairman
Provincial People's Committee
of Kien Giang Province, Viet Nam

H.E. Mr. Chuong Siv Vuth
Deputy Governor
Kampot Province,
Cambodia

witnessed by

Dr. John C. Pernetta
Project Director
UNEP/GEF South China Sea Project

ANNEX 1

POLICY FRAMEWORK FOR COOPERATION IN THE MANAGEMENT OF COASTAL ECOSYSTEMS AND NATURAL RESOURCES

BETWEEN THE PROVINCES OF KIEN GIANG (VIET NAM) AND KAMPOT (CAMBODIA)

BACKGROUND

The transboundary waters between the Provinces of Kien Giang (Viet Nam) and Kampot (Cambodia) are located in the eastern portion of the Gulf of Thailand (Figure 1). The coastlines of the two provinces totals 295 km, including 95 km in Kampot Province and 200 km in Kien Giang Province.



Figure 1. Map of transboundary waters between the Provinces of Kien Giang, Viet Nam and Kampot, Cambodia (the area covered by this co-operative framework does not include areas under the jurisdiction of Krong Preah Sihanouk – Sihanoukville Municipality)

The coastal waters are characterised by tropical ecosystems, including seagrass, coral reefs and mangroves. These habitats support high species richness of marine organisms; a large number of spawning and nursery grounds; and shared stocks of migratory species. The rich variety and high productivity of the marine living resources in the area provide livelihoods not only for coastal communities' resident in both provinces but also for fishermen from other areas. Coastal habitats have been used for development of tourism on both sides. The coastal

zone and associated marine waters, therefore, play an important role in the socio-economic development of both provinces. In addition, joint management of the ecosystems and associated resources in this area will contribute to regional efforts in environmental management of the South China Sea due to the regionally significant seagrass beds, marine biodiversity and fisheries.

In the framework of the UNEP GEF project entitled "*Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand*", the transboundary demonstration site projects in Phu Quoc (Kien Giang, Viet Nam) and Prek Ampil (Kampot, Cambodia) have been under execution since 2005. An outstanding outcome of these demonstration site activities is the establishment of a mechanism for long-term, joint management in the transboundary waters. The management teams of both demonstration sites, through joint meetings with the participation of provincial leaders, have agreed to develop this policy and framework for cooperation in the management of coastal ecosystems and natural resources between the two provinces.

COASTAL HABITATS AND ASSOCIATED RESOURCES IN THE TRANSBOUNDARY WATERS

Coastal habitats

The transboundary waters between two provinces have favourable physical conditions for development of tropical shallow water ecosystems such as seagrass beds, coral reefs and mangroves and as the result, support abundant living resources. Based on initial assessments, the seagrass area in these transboundary waters is more than 27,000ha including 12,000ha in Kien Giang and more than 25,000ha in Kampot Province, making them the most extensive in the South China Sea. The seagrass meadows in Kampot are located parallel to the coastline of Prek Ampil, extending 150-300m off-shore the widest extent lies in front of Bokor National Park. The area has a gentle slope with seagrass occurring at depths from 1 – 4m. Seagrass beds in Kien Giang Province are mainly distributed in shallow coastal waters of the archipelagos of Hai Tac, Ba Lua and Phu Quoc.

Based on recent taxonomic surveys (Vibol, 2006, Nguyen Xuan Hoa *et al.*, 2006) 10 seagrass species have been identified in the transboundary waters, including: *Enhalus acoroides*, *Halophila decipiens*, *Halophila minor*, *Halophila ovalis*, *Thalassia hemprichii*, *Cymodocea rotundata*, *Cymodocea serrulata*, *Halodule pinifolia*, *Halodule uninervis*, *Syringodium isoetifolium*. Only 18 species of seagrass in total are recorded from the coastal waters of the South China Sea (UNEP, 2004). The data collected in Phu Quoc indicates that richness of associated species of the seagrass beds is high: 113 species of macro-algae; 71 species of mollusc; 26 species of crustaceans; 19 species of Annelids; and 15 species of echinoderms. The preliminary surveys in Kampot have recorded 10 crustaceans, 100 gastropods, 7 sea urchins and 16 seaweed species.

Based on research conducted by staff of the Cambodia Fisheries Administration (FIA) in 2002 the total coral reef area in Kampot occupies 953 ha, forming a flat fringing reef with two areas connecting to the seagrass meadow. The first is located in front of Prek Kdat, which has about 31 ha and the second extends from Prek Kdat in the east to Prek Koh Torch. The average live coral cover for the whole coastline was estimated to be 23% to 58%, consisting of 17 species. The reefs are generally reported to be in poor health, with low species diversity dominated by massive forms (Mam, 2001).

Remote sensing and ground-truthing using manta-tows indicates that the total coral reef area in Phu Quoc waters is more than 470ha, of which 360ha (76%) is located in the southern An Thoi islands. Live coral cover averages 44.5%. A total of 260 species in 49 genera of reef-building corals are recorded in Phu Quoc waters. The list of coral reef fish includes 152 species in 71 genera. The coral reefs of Phu Quoc are very diverse in terms of species of grouper but less diverse in butterfly fishes when compared with other locations in Viet Nam. Recent surveys found 48 species of macro-molluscs, 25 species of echinoderms, including 18 species of holothurians and 53 species of macro-algae.

Mangrove forests are found along much of the coast of Kampot but the most extensive stands are found in the estuarine area of Prek Kampot. Approximately 7,900 ha of mangrove are found in Kampot Province and Kep City compared with an estimated 17,400 hectare in 1970 (FAO, 2004). The major causes of these losses appear to result from over-exploitation for charcoal and firewood and removal for construction of salt pans which cover an area of 3,334 hectares resulting in annual salt production of between seventy and eighty thousand tones of salt. Some reforestation has been undertaken through the DANIDA project.

An initial list of 42 mangrove species belonging to 20 families have been identified from Cambodia whilst a study of the ecology of mangrove conducted in Prek Thanott commune, Kampot District, Kampot Province, recorded 10 species, from 6 families the most extensive being *Rhizophora apiculata*, *Avicennia officinalis*, and *Sonneratia alba*. The forests have a density of 19,479 trees per hectare including saplings and seedlings. The same study reported 30 species from 8 families of gastropods; 2 species from 1 family of bivalve; 9 species from 3 families of crabs, the most abundant being *Perisesarma eumolpe*, *Metaplex sheni*, *Metopograpsus latifrons* and *Perisesarma indiarum*, of the family Grapsidae.

The mangroves of Kien Giang Province have been seriously degraded due to over-exploitation for: stakes used in construction; firewood; charcoal for domestic use; clearance for shrimp ponds; and reclamation for urban construction. Data from a survey in 2006 suggests that only 703.7 ha remain, of which the special-use forest is 54.1 ha, and the protection forest is 649.6 ha. The special-use forest is found in Phu Quoc, and is distributed at the mouth of rivers and streams in the Rach Tram area. Mangrove trees include *Rhizophora apiculata*, *Bruguiera gymnorhiza*, *Sonneratia alba*, *Lumnitzera racemosa* and of special interest, *Lumnitzera coccinea* which is listed in both the Vietnam Red Book and IUCN'S Red Book. The protection forest is distributed on the mainland coast in the districts of: An Bien (138.7 ha), An Minh (130.7 ha), Ha Tien (19.9 ha), Hon Dat (242.0 ha), Kien Luong (118.3 ha). Plant composition: *Avicennia*, *Rhizophora apiculata*, *Bruguiera gymnorhiza*, *Sonneratia alba*, and *Excoecaria agallocha*.

Acid sulphate soils of Kien Giang Province occupy 8,191.1 ha belonging to district-town: An Minh (4,554.7 ha), Hon Dat (95.4 ha), Kien Luong (36.6 ha), Phu Quoc (1,422.8 ha), and the flora is dominated by *Melaleuca cajuputi* which occupies about 4,000 ha on peat soil with mud flat of 1.5 - 2.0 m. *Melaleuca* forest in Kien Giang province is found on 3 types of terrain. (1) On year-round flooded land, which is 6-pH, *Melaleuca* plants show a high density but their diameters are not very big ($D_{1.3} = 13$ cm; H = 14 m). (2) On acid sulphate soil mixed with sand, flooded during the rain season *Melaleuca* is found together with drought resistance grass. The trees are thinly scattered with canopy as big as 30 - 40 m. The other plants in *Melaleuca* forest of forest flooded acid sulphate soils are Bui (*Ilex cymosa*), Mop (*Alstonia spathulata*), Dau dau 3 la (*Euodia lepta*), Say (*Phragmites vallatoria*), Nang (*Eleocharis dulcis*), Sung ma (*Nymphaea nouchali*), Beo tai chuat (*Salvinia cucullata*), Bon Bon (*Typha domingensis*). (3) On fixed sand dunes that are rarely flooded, *Melaleuca* plants are mixed with other species and generally show a slow development.

Endangered species

The most important endangered species found in the transboundary waters is the Dugong (*Dugon dugong*) which is frequently encountered in the north and north-east of Phu Quoc island, and also in Kampot coastal areas. According to reports of the Kien Giang Department of Fisheries (2004 – 2005) 5 species of dolphins were recorded in the waters of Kien Giang, including: *Orcaella brevirostris*, *Tursiops aduncus*, *Sousa chinensis*, *Stenella longirostris*, and *Stenella coeruleoalba*. However, the appearance and movement of dolphin schools in transboundary waters are not well documented.

In addition, 3 sea turtle species have been recorded from the area, including: Green Turtle (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*), of which Green Turtle and hawksbill are more common. Recent surveys in Phu Quoc showed that sea turtles are becoming fewer and that only five nesting beaches are still in use in the Phu Quoc archipelago.

Although no concrete information on endangered species in Kampot waters is available, it is believed that the transboundary waters between the two provinces are critical for the above-mentioned endangered species, which include both migratory species and those which move over considerable distances.

Living resources

Based on the survey conducted in Kampot by Vibol (2007) the majority of the catch is from trawl and mackerel gillnet while the least is from hand push net. The figures show that the catch using motorized fishing boats is stable from January to October and increases from November to December, whilst the catch using non motorized fishing boats or by hand is stable throughout the year.

Based on data analysis the number of fishing households and fishing trips involving motorized fishing boats (motorized trawling boat, mackerel boat, motorized push net boat and beach seine) are stable from January to December, while the number of fishing households and fishing trips for non motorized fishing boats or hand fishing are significantly higher from January to October and lower from November to December.

The average fish catch per fishing household of Kampot is 260 kg. Significantly lower catches are found from July to September (rainy season) and increase significantly in November and December. Based on these figures, an estimated 520 tonnes per month or 6,240 tonnes per year of marine product are harvested from the seagrass beds in Kampot Province. This is equivalent to a value of 7,500,000 USD per year. Based on direct communication with fishing household the catch per unit effort is declining from year to year especially since 2000 due to an increase in the number of fishermen and use of illegal fishing gear. However, the data for total catch in Kampot are not significantly different, ranging from 6,000 – 8,000 tonnes per year.

Phu Quoc is an important landing area and fishing grounds of Kien Giang Province. Total fisheries yield increased from 30,969 tons in 1993 to 50,000 tons in 2000 and 60,246 tons in 2006 (Phu Quoc Department of Agriculture, Forestry and Fisheries, 2006). Together with Nam Du and Tho Chu islands, some large fishing grounds are formed in the area. The main fishing grounds are south of Phu Quoc. The areas of An Thoi and east of Phu Quoc island are important squids and crab spawning ground. The peak fishing season in Phu Quoc region is from November to March.

Finfish are the main contributors to the total fisheries production landed. At least, 67 species of teleost fish are caught in the area, of which representatives from the families Carangidae, Scombridae, Hemirhamphidae, Serranidae, Lutjanidae, Lethrinidae and Synodontidae. Many trevallies, jacks such as *Canrangoides ferdau*, *Caranx sexfasciatus*, *Selaroides leptolepis* and *Atula kalla*, mackerels *Rastrelliger kanagurta* and *Scomberomorus commersonii*, scad *Decapterus* and anchovies *Stolephorus* are the representatives in pelagic fisheries. A total of mackerels and anchovies landed in 2001 was about 3,500 and 12,500 tons respectively (Data from Phu Quoc Department of Agriculture, Forestry and Fisheries, 2001).

Anchovy with two key species *Spratelloides gracilis* and *Stolephorus indicus*, key materials in making fish sauce, occupied the relatively high rate in pelagic fish, especially around Phu Quoc waters. 13,680 tones of anchovy were exploited in Kien Giang province in 2005 (source: Kien Giang Department of Fisheries, 2006). Productions of other resource are quite high with 30,047 tons shrimp and 29,537 tons cuttlefish and 220,799 tons fish caught in 2006 (source: Kien Giang Department of Fisheries, 2007).

In addition to fish invertebrates are important targets to reef fisheries. Pearl oysters *Pinctada mertensi* and *P. maxima*, abalone *Haliotis ovina* and scallops *Chlamys nobilis* and *C. irregularis* were exploited for food and jewelry. Information interviewed from the local fishermen showed that the number of *Pinctada maxima* caught at the depth of 20 - 40 m by four hookah divers reached 50 - 60 kg within 5 days. Lobsters *Panullirus* have also become the important species to the fisheries.

The results of local consultation in the framework of the pilot fisheries refugia of the UNEP/GEF South China Sea Project presented the abundance of resources in seagrass beds of Ham Ninh area with high annual production of swimming crab (196 tons), *Strombus* snail (9-18 tons), cuttlefish (22 tons), Octopus (80 tons), rabbitfish (9 tons) and shrimp (9 tons). Seahorse is an important resource of these seagrass beds, but over-exploited with production only 120kg per annum. The studies in the framework of Phu Quoc Demonstration Site (UNEP, 2006) showed that grouper (Serranidae), including 2 dominant species *Cephalopholis boenak* and *Cephalopholis formosa* are an important resource around Phu Quoc archipelago. Parrotfish (Scaridae) and Fusilier (Caesionidae), including *Caesio cuning*, *Caesio terres*, and *Pterocaesio tessellata* are also significant resources in coral reef areas.

THREATS TO AND DEGRADATION OF AQUATIC ENVIRONMENT AND RESOURCES

Over-exploitation

Increase in the number of fishing boats and better fishing gear causes increasing pressure on the resources and habitats that could lead to decline in fish stocks and yields. In Kampot, even though no concrete-scientific data are available to prove that stocks are over-exploited status, everybody from local fisherman to high officials admit that this is occurring. Most fishermen complaint that their daily catch decreases year by year and they have to increase the number of fishing gear to get the same catch.

The reports of Kien Giang Department of Fisheries show that fisheries production increased annually but catch per unit effort (kg/CV) reduced quickly, from an average of 1.563 tones/CV in 1985 to 0.273 tones/CV in 2006 (5.7 times less). Recent studies in the framework of the Phu Quoc Demonstration Site also suggest that over-exploitation is occurring in that large sized fish and costly edible fish species are rare or not observed in the surveyed reefs. Fish group with small size of 1 – 10 cm occupied more 90%, increasing 10% compared with that in 2000 (Nguyen Xuan Hoa *et al.*, 2005). The production of valuable species in seagrass beds such as swimming crabs, *Strombus* snails, sea cucumbers, sea horses, are gradually reduced.

Illegal fishing

Trawling, which is not allowed in the near shore waters as regulation of Cambodia and Viet Nam, commonly occurs on seagrass beds and shallow waters of both Kampot and Kien Giang provinces. This is one of the greatest sources of damage to seagrass habitats and biodiversity particularly young seagrass shoots, small juvenile fauna, and endangered species. Transboundary fishing activities occur everyday as fishing boats from Viet Nam illegally enter and fish on seagrass beds or coral reef areas of Kampot Province. Fishing using toxins and electricity are still recorded in the waters of both provinces.

Catching of endangered species

Fishermen in both provinces Kien Giang and Kampot still catch and trade endangered animals in transboundary waters, making endangered species such as dugong, sea turtles at risk of local extinction in the near future. Corals are also exploited for handicrafts and sold to tourists in Phu Quoc island.

Uncontrolled tourism

Tourism development contributes for development by providing jobs and improving livelihood for local inhabitants. Anchoring on coral reefs, waste discharge from hotels and tourist boats and sediments from construction have negative impacts on the marine environment and cause habitat damage.

Seaweed farming

Seaweed poles and ropes, which are built on top of seagrass and coral reef areas, result in the destruction of the meadows through construction methods and trampling. When seaweeds are hung on the surface, corals and seagrass are deprived of light and die after few months without

sunlight. This has already happened in coral reef areas of Koh Tonsay of Kep municipality, and farmers just abandoned the areas and moved to Kampot province.

Pollution/sedimentation

Littering, waste dumping, land clearing, road building, coastal construction and poor agricultural practices are considered factors lead to pollution, increase soil erosion and sedimentation, and cause the degradation of seagrass beds and coral reef areas in the transboundary waters. It is noted that waste from fishing boats, including oil discharge is a serious problems in fisheries piers in Phu Quoc archipelagos.

CHALLENGES IN MANAGING THE ENVIRONMENT IN THE TRANSBOUNDARY WATERS

Lack of coordination in fisheries management in the transboundary waters

Marine resources in the transboundary waters are exploited by fishermen of both provinces without definition of fishing boundary. Trading of marine products occurs daily between the two provinces. The coordination for joint management of fisheries has not yet developed and implemented effectively for this large marine area.

Lack of balance between economic development and environment management for sustainable development

Recently, many development projects have occurred in the coastal waters of both provinces in order to meet development plan with respect to increase income for local government and communities. Given that poverty alleviation is the first priority of the Governments, environmental management for sustainable development has not been adequately considered in planning and practices.

Lack of awareness of local communities on sustainable use and law enforcement

Through the execution of the demonstration site projects public awareness of the local communities have improved. However, their knowledge on sustainable use of resources is still limited, and local people concentrate on securing direct but not long-term benefits. Law enforcement is not effective enough due to weak capacities of both provinces.

BASIS FOR DEVELOPMENT OF POLICY AND FRAMEWORK FOR COOPERATION

- International Convention on trade in endangered species (CITES), 1973.
- International Convention on Biodiversity, 1994.
- Cooperation Program of three Indochina countries on environment, 1995.
- Agreement of three countries for biodiversity conservation??
- Law of Fisheries in Cambodia (2006)
- National Action Plan for Coral Reef and Seagrass in the Kingdom of Cambodia (2006)
- National Strategic Action Plan for Biodiversity Management in Cambodia
- Law of Fisheries of Viet Nam (2003)
- Law for Environment Management of Viet Nam (2005)
- Minute signed on October 13th, 2006 in cooperative relations of different fields between Chairman of Kien Giang Provincial People's Committee (Vietnam) and Governor of Kampot Administrative Committee (Cambodia).
- Memorandum signed with UNEP/GEF for execution of Demonstration Site of Phu Quoc (Vietnam) and Kampot (Campuchia)
- Minute of 1st Joint meeting between the management teams of Demonstration Sites of Phu Quoc and Kampot in Phu Quoc (Kien Giang Province, Vietnam), 29th – 31st May, 2006.
- Minute of 2nd Joint meeting between the management teams of Demonstration Sites of Phu Quoc and Kampot, in Kampot (Cambodia), 26th – 28th May, 2007.

GOALS

To enhance and strengthen cooperation between the two provinces in the fields of biodiversity conservation, reversing environment degradation trends, and sustainable use of resources, in order to improve the livelihood of local communities

OBJECTIVES

1. To strengthen institutional arrangements for management of natural resources and marine environment in the transboundary waters between the two provinces of Kien Giang and Kampot.
2. To improve the management capacity for natural resources and marine environment in transboundary marine zone between two provinces Kien Giang and Kampot.
3. To enhance awareness of managers and local communities regarding the importance of conservation in the transboundary marine zone between two provinces Kien Giang and Kampot.
4. To develop cooperative research programmes and exchange information, including sharing of data and databases.
5. To maintain financial sustainability for long term management, conservation of natural resources and marine environment in transboundary waters between two provinces of Kien Giang and Kampot.

PROGRAMMES AND ACTIONS

Programme 1. Strengthening institutional arrangements for management of coastal resources and environment and integration to development policy of two provinces

- Action 1. Review of existing legal documents of both provinces regarding management resources and environment
- Action 2. Integration of resource and environment management to cooperative agreement between two provinces and conduct of joint meetings of the Management Board/Steering Committee once or twice a year

Programme 2. Improvement of management effectiveness for resource and environment management in the transboundary waters

- Action 1. Additional inventory of biodiversity and resources for management purpose
- Action 2. Capacity building for scientific research, resource assessment and monitoring, management skill, and transferring knowledge and information to local communities
- Action 3. Study tour and workshop/seminars for local people, managers and policy makers for experience exchange in resource and environment management between two provinces and others in the region
- Action 4. Strengthening information exchanges and sharing between two provinces and maintenance of the joint GIS database for uses in management of resources and environment
- Action 5. Joint management and control of illegal trade, exploitation activities of resources in the transboundary waters; and to stop catching rare and endangered species

Programme 3. Enhancement of public awareness on marine conservation and sustainable resource use

- Action 1. Strengthening education capacity, communication system and establishment of network of communication and volunteers for enhancement of public awareness on marine resource sustainable use

- Action 2. Development and distribution of public awareness materials and implementation of communication programmes regarding ecosystem importance and sustainable use of coastal resources
- Action 3. Organisation of exchanges programme for natural resources conservation and environment protection for youths and students of Kien Giang and Kampot

Programme 4. Development and execution of joint projects with supports from International Organisations

- Action 1. Project for development and management of transboundary fisheries *refugia* belonging the two provinces
- Action 2. Project for migratory and endangered species conservation

Programme 5. Financial sustainability for long - term management and livelihood alternatives

- Action 1. Development of programmes for livelihood alternatives, including technical supports for aquaculture, fisheries processing, tourism, animal raising and integrated farming system
- Action 2. Development of models for community-based resource management
- Action 3. Promotion for development of tourism in the transboundary waters
- Action 4. Fund raising from international organisations for livelihood, and resource and environment management

IMPLEMENTATION OF THE POLICY AND FRAMEWORK

Institutional arrangement

Focal agencies

The provincial leaders of each Province shall appoint an appropriate agency as the focal point to coordinate activities under the policy and framework, including:

- Department of Natural Resources and Environment of Kien Giang province, and
- Fisheries Cantonment of Kampot Province

Cambodian related institutions and responsibilities in implementing the policy and framework

Institution	Responsibilities
Ministry of Agriculture, Forestry and Fisheries and Ministry of Environment	Provision of technical and financial supports, development of international cooperation,
<i>Fisheries Administration</i>	Provision of technical and financial supports, development of international cooperation, and assign responsibility for: coordination and facilitation of activities under the policy and framework
<i>Kampot Provincial Authorities</i>	Development and management of the projects regarding coastal resources and environment at the provincial level, including preparing proposals for funding support
<i>Kampot Department of Agriculture, Kampot Department of Environment, Kampot Department of Land Management, Kampot Department of Tourism, Kampot Department of Rural Development, Kampot Department of Women Affair, Kampot Department of Planning, Kampot Department of</i>	Support in implementing activities under the policy and framework for cooperation

<i>Public works and Transport, Kampot Department of Mine and Industry, Kampot Department of Water and Meteorology, Kampot Provincial Police Commission, Kampot District Authority</i>	Facilitating participation of local people in implementing activities under the policy and framework for cooperation
<i>Commune councils of Prek Tnot, Koh Toch, Boeung Touk Chum Kreal, Trabiang Sangke, Kaun Sat, kampong Samrong.</i>	Direct involvement in implementation of projects under the policy and framework for cooperation at the local level

Viet Nam related institutions and responsibilities in implementing the policy and framework

Institutions	Responsibilities
Department of Agriculture and Rural Development	Marine resource management, forest protection and rural livelihood alternatives.
Department of Science and Technology	Technical and financial support for development of projects related to research and application of new models in sustainable use of resources
Department of Finance	Allocation of fund for coastal resource management
Phu Quoc National Park and the Management Board of Protection Forests in Phu Quoc district	Protection of forest and re-forestation in Phu Quoc archipelago
Provincial Women Association	Development and implementation of the alternative livelihood
Border Army	Support for enforcement practices
Phu Quoc District Office of Agriculture, Forestry & Fisheries	Executing activities regarding training and public awareness
Business sector (Veranda Co., Saigon-Phuquoc Resort)	Sustainable use of habitats for tourist business
People's Committee of the communes	Encouragement of participation of local communities in habitat management and sustainable use of coastal resources

Mechanism in coordinating joint activities in implementing the policy and framework

Based on the existing management mechanism established by the transboundary demonstration site projects in the framework of the UNEP/GEF South China Sea Project, a coordinating body in each province shall be formed in order to integrate all activities related to management of coastal ecosystems and associated resources.

This body in Kien Giang Province is the Provincial Steering Committee with the members from the Departments of Natural Resources and Environment (DoNRE), Agriculture and Rural Development, Science and Technology, Planning and Investment, and Culture, Sport and Tourism; Women Association and Phu Quoc District People's Committee. The Committee is chaired by Vice-chairperson of Provincial People's Committee and vice-chaired by Director of Department of Natural Resources and Environment. A permanent coordinating board shall be led by Vice Director of DoNRE with participation of Director of Management Board of Phu Quoc Marine Protected Area, Sub-department of Environment Protection, and Chairperson of three communes (Hon Thom, Bai Thom and Ham Ninh)

In Kampot, the existing Management Board and Advisory Group including all related entities shall continue to integrate activities concerning coastal management, including activities under this framework. This is led by the Governor of Kampot Province.

Joint meetings between coordinating bodies will be convened once per year as agreed in advance by provincial leaders

Technical assistance

The coordinating bodies of two provinces shall get technical assistance (human resources and experience exchange) for joint activities from International Organisations/Institutions such as: United Nations Environment Programme, Southeast Asia Fisheries Development Center, World Wide Fund for Nature, International Union for Conservation of Nature, TRAFFIC, Bird life

International; Coordinating Body for the Seas of East Asia (COBSEA) and Asia Institute Technology. A number of Viet Nam scientific Institutions, including Institute of Oceanography, Institute of Marine Environment and Resources, Centre for Natural Resources and Environmental Studies shall support for research and management of coastal habitats, capacity building and environment education. Ministries of Natural Resources and Environment, Agriculture and Rural Development, and Science and Technology shall provide experts and financial supports for the activities regarding coastal resources and environment.

Each side will search for needed technical assistance or ask/request other for support. Both provinces also work together to develop proposal(s) to donor(s) for support.

Financial Sustainability

Kien Giang Provincial Authorities shall allocate annual budget for implementing the policy and framework for cooperation in Kien Giang coastal waters and seek financial support from Viet Nam Central Government to assist Kampot and Kien Giang in implementing joint activities

The provincial authorities of Kampot province, the Ministry of Environment, the Ministry of Agriculture, Forestry and Fisheries (Fisheries Administration) undertake to support the implementation of this framework, within the constraints of available finances

Both sides shall work together in seeking external financial support for activities under this framework.

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**Appendix 3 Report on The Third Joint Meeting between the Management Teams of the
Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites**



United Nations
Environment Programme



UNEP/GEF South China Sea
Project



Global Environment
Facility

*Reversing Environmental Degradation
Trends in the South China Sea and Gulf of Thailand*

REPORT

**The Third Joint Meeting between the Management Teams of
the Peam Krasop Wildlife Sanctuary (PKWS) and Trat Demonstration Sites**

Trat Province, Thailand, 18th – 20th February 2008

UNEP/GEF
Bangkok, February 2008



First published in Thailand in 2008 by the United Nations Environment Programme.

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For citation purposes this document may be cited as:

UNEP, 2008. Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand. Report of the Third Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary and Trat Demonstration Sites. UNEP/GEF/SCS/RKWS-Trat.3/3.

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Report of the Meeting

1. OPENING OF THE MEETING

1.1 Opening Address on behalf of UNEP

1.1.1 The Project Director, Dr. John Pernetta, opened the meeting, at 0845 on 18th February 2008, and welcomed participants on behalf of the Executive Director of UNEP, Dr. Achim Steiner, and the Director the UNEP Division of Global Environment Facility Co-ordination, Ms. Maryam Niamir-Fuller.

1.1.2 Dr. Pernetta noted that this was the third joint meeting and that it was being convened in the same location as the first, following last year's meeting in Koh Kong. He noted further that a number of items on the agenda had been introduced and discussed in previous meetings and expressed the hope that items such as the policy framework could be successfully concluded during this meeting, thus forming the basis for joint action following conclusion of the South China Sea Project.

1.1.3 Dr. Pernetta noted that this would be the last joint meeting concluded under the present project and informed the meeting that plans were in hand to implement follow-up activities. He welcomed participants and in particular the Deputy Governor of Trat Province Mr. Somsak Yonokpun and the Deputy Governor of Koh Kong Province Mr. Yay Seuy. Dr. Pernetta invited the Deputy Governors to address the meeting.

1.2 Welcome Statement by the Deputy Governor of Trat Province

1.2.1 The Deputy-Governor of Trat Province, Mr. Somsak Yonokpun warmly welcomed participants to Trat Province and to the meeting. He expressed the hope that the meeting would provide an opportunity for discussion and exchange of ideas related to the two demonstration sites in order to strengthen the joint management and conservation and reverse environmental degradation of the natural resources along the coasts of Cambodia and Thailand.

1.2.2 Mr. Somsak expressed appreciation to UNEP and the GEF for their financial support to activities in Trat Province and to the Director of the Project for his support and assistance in organizing the meeting.

1.3 Address by the Deputy Governor of Koh Kong Province

1.3.1 Mr. Yay, the Deputy Governor of Koh Kong Province addressed the meeting, and delivered a brief statement on behalf of the Provincial Government. He expressed deep appreciation to the Deputy Governor of Trat Province for coming to preside over and making the opening speech for the meeting. On behalf of the Governor of Koh Kong Province and also personally, he thanked the Project Director and UNEP/GEF for their support to the numerous activities of the South China Sea project and for inviting him and his colleagues to join in this important meeting.

1.3.2 He noted that in the implementation of the demonstration sites of Peam Krasop Wildlife Sanctuary and Trat Province, the aim was to protect and conserve the valuable mangrove and wetland resources in support of people's livelihood, economic development and maintaining coastal environmental stability. As a result of efforts in the development of the management plan, people had become more aware of the significance of mangrove wetland resources, rehabilitation of degraded mangrove areas had been initiated and exchange of experiences from site to site, had taken place.

1.3.3 Mr. Yay noted that this meeting provided an opportunity to discuss the management of mangrove forest of both provinces under the auspices of the SCS project. He noted that joint discussions were important not only for the implementation of the project but also as a mechanism for strengthening cooperation between the two provinces. The Deputy Governor expressed the hope that there would be an open exchange of ideas concerning policy and experiences for management and conservation of resources and ecosystems in both provinces and that the meeting would be both successful and productive.

1.4 Introduction of Participants

1.4.1 Dr. Pernetta thanked the Deputy Governors for their addresses and noted that although many of the faces round the table were very familiar it would be valuable for each participant to introduce themselves to the meeting and explain their role in relation to the activities of the demonstration site projects. There followed a "tour de table" during which participants introduced themselves, to the meeting. The list of participants is attached as Annex 1 to this report.

2. ORGANISATION OF THE MEETING

2.1 Organisation and Appointment of Officers

2.1.1 The Project Director proposed that, as for past meetings, the third joint meeting be co-chaired by the Deputy Governors of Trat and Koh Kong Provinces. This proposal was accepted by the meeting.

2.1.2 Dr. Pernetta noted that due to the downsizing of the Project Co-ordinating Unit he was the sole representative present in the meeting and he proposed that the focal points and site managers from each country should serve as Co-Rapporteurs and Secretaries to the meeting. This proposal was accepted by the meeting.

2.1.3 Dr. Pernetta reminded participants that although English was the official language and would be the language of the report it was cumbersome and time wasting to sequentially interpret all discussion from one to another of the three languages. He suggested and the meeting agreed that interpretation between Thai and Khmer would be used and that interpretation into English would only be done where his advice was specifically required. He noted that the Focal Points for Mangrove and/or Wetlands and site managers from each site were responsible for providing interpretation into Khmer and Thai languages to ensure that all participants were fully involved in the discussion.

2.2 Documents Available to the Meeting

2.2.1 Mr. Yay, Co-chairperson invited the Secretaries to introduce the documents available to the meeting a list of which was presented in document UNEP/GEF/SCS/PKWS-Trat.3/Inf.2. It was noted that these documents had been lodged on the project website in advance of the meeting and that copies in English had been provided by the PCU. Khmer and Thai translations had been made available by the focal points to the respective members.

2.2.2 Mr. Ke Vongwattana introduced the documents in Khmer and Dr. Sonjai Havanond introduced the documents in Thai. The list of documents is attached as Annex 2 to this report.

2.3 Programme of Work

2.3.1 The Co-Chairperson introduced the draft programme of work for the conduct of business as contained in document UNEP/GEF/SCS/PKWS-Trat.3/Inf.3.

3. ADOPTION OF THE MEETING AGENDA

3.1 Mr. Yay introduced the Provisional Agenda prepared for the meeting by the Project Co-ordinating Unit, as document UNEP/GEF/SCS/PKWS-Trat.3/1, and the Provisional Annotated Agenda, document UNEP/GEF/SCS/PKWS-Trat.3/2. He invited members to propose any amendments or additions.

3.2 No additions or amendments were proposed and the agenda was adopted as contained in Annex 3 of this report.

4. BRIEF OF ACTIVITIES AND ACHIEVEMENTS OF TRAT AND PEAM KRASOP WILDLIFE SANCTUARY DEMONSTRATION SITES TO DATE

4.1 Status of Activities and Achievements in Trat Demonstration Site

4.1.1 Mr. Yay invited Dr. Sonjai Havanond, the Thailand Mangrove Focal Point to present the document UNEP/GEF/SCS/PKWS-Trat.3/4a and provide a brief overview of the current status of activities following two years of implementation, and highlight achievements based on the stage of completion of project activities.

4.1.2 Dr. Sonjai highlighted the main activities and achievements under the 5 components of the project as follows:

Management: the outcomes from the report of a survey of resources and socio-economic parameters were outlined; and the status of the management plan reviewed. It was noted that meetings at community level were needed since the village leaders need to discuss and agree the draft of the management plan in light of the outputs from the mangrove resource survey. Meetings of the management board and senior advisory group had considered the draft management plan and the mid-term evaluation and site visit had been completed during the year.

Mangrove rehabilitation and conservation: Dr. Sonjai noted that activities involving planting and maintenance of plantations in the Trat Mangrove Demonstration Site had been undertaken using cash co-financing from the Department of Marine and Coastal Resources. A meeting had been convened to design, in full consultation with local communities, a long-term programme of replanting and mangrove restoration in the area, in July 2007. He noted further that community based patrols were planned for March 2008.

Business planning for the Trat Mangrove Demonstration Site was under subcontract with Kasetsart University and activities were due to commence around March 2008.

Public awareness material and education activities at the Trat Mangrove Demonstration Site had included the production of five issues of a newsletter; two youth camp activities, and improvement of the existing learning centre. A boardwalk and mangrove-learning museum were operating in Pred Nai Village.

Transboundary Cooperative framework: Teams from the two demonstration sites had attended the regional Mangrove Training Workshop in Penang in 2007. Trat had hosted the first joint meeting and Koh Kong had hosted the second joint meeting so both teams had had an opportunity to visit the mangroves in each Province.

4.2 Status of Activities and Achievements in Peam Krasop Wildlife Sanctuary Demonstration Site

4.2.1 Mr. Yay, Co-chairperson invited Mr. Ke, the Cambodian Mangrove Focal Point to present the document UNEP/GEF/SCS/PKWS-Trat.3/4b and to provide a brief overview of the current status of activities and highlight achievements to date.

4.2.2 Mr. Ke presented the activities and achievements of the Peam Krasop demonstration site highlighting the main outputs, which include:

- Finalisation and publication in Khmer of a five year management plan for the Peam Krasop Wildlife Sanctuary;
- The report on boundary demarcation is under preparation and will be finalised during the first quarter of 2008;
- The report on survey of socio-economics, uses, value, incomes and costs has been completed;
- The report on analysis of present and potential uses, values, net incomes and costs;
- GIS mapping of use zones and analysis of potential use conflicts and future management need costs;
- The report on review of method/techniques in mangrove planting;
- The report on development of method/techniques in mangrove planting;
- The report on field survey for species distribution, density, composition, area, and key associated benthic resources;
- The report on development of methodology for monitoring and evaluation of mangrove;
- The report on development of management plan of PKWS;
- The report on the guiding of implementation of the small grant programme.

4.2.3 In addition he presented information regarding public awareness activities among all stakeholders, highlighting the posters on mangrove and wetland importance and sustainable use and leaflets on mangrove and wetland biodiversity and sustainable use that have been published and distributed to all stakeholders throughout the Province, via districts, commune and villages in June 2006.

4.2.4 Workshops have been organised at village level regarding the significance of mangrove and wetland resources in April 2007 to improve people's understanding of the importance of mangrove and wetland environments, and promote local participation in mangrove and wetland resource management.

4.2.5 Training on community-based mangrove resource management for local authorities was organised in June 2007 to strengthen capacity and share experiences in mangrove and wetland resource management, among different communities.

4.2.6 On 29 May 2007, 6 people from Cambodia participated in mangrove planting in Trat Province, Thailand. In the second half of 2007, the project produced two short video films on the significance of mangrove resources and the PKWS wildlife sanctuary with the aim enhancing public awareness of the importance of mangrove resources to local livelihoods and the importance and diversity of resources in the wildlife sanctuary. These two films were shown on the national TV stations.

5. FINALISATION OF THE POLICY FRAMEWORK FOR COOPERATION IN RESOURCE AND ECOSYSTEM MANAGEMENT

5.1 Review and Finalisation of the Policy Framework

5.1.1 Participants recalled that during the previous meeting a draft of the policy framework had been prepared and annexed to the meeting report. In addition that meeting had agreed a process for finalising the policy framework which involved detailed consideration of the contents at Provincial level in both countries.

5.1.2 Mr. Yay invited Mr. Ke, the Cambodian Mangrove and Wetland Focal Point to advise the meeting on the status of this document. Mr. Ke reported to the meeting that following the second joint meeting between the management teams of PKWS and Trat, several meetings had been convened in Cambodia to review the document and examine and compare the meanings of the Khmer and English text. He noted that no substantive changes had been proposed by, either side in advance of the meeting.

5.1.3 Mr. Ke presented the content paragraph by paragraph, of the whole document to the meeting for review and correction. Dr. Pernetta noted that in several places the text had been translated into English from either Khmer or Thai and that the meaning was in some instances unclear. He proposed and the meeting agreed that, he would correct the English where necessary following agreement on the substantive content. He noted that once the English was corrected participants should check carefully that the meaning was the same in translation.

5.1.4 There followed a detailed consideration of the text and several substantive changes were made to paragraphs in which the English text was unclear. The final text was agreed by the meeting and is attached as Annex 4 to this report.

5.2 Mechanism for Implementing the Policy Framework

5.2.1 Mr. Yay invited the Cambodian Mangrove and Wetland Focal Point to present to the meeting a proposal regarding the implementation of the policy framework. Mr. Ke presented a draft memorandum of agreement for signature by the Governor of Trat Province, Kingdom of Thailand and the Governor of Koh Kong Province, Kingdom of Cambodia, paragraph by paragraph.

5.2.2 The English text was projected and interpreted into Khmer by Mr. Ke and into Thai by Dr. Sonjai. The text was reviewed, amended and agreed as it appears in Annex 5 of this report.

5.2.3 Mr. Koch Savath, the Deputy Director General of Technical Affairs of the Ministry of Environment of Cambodia requested clarification from the Thai participants regarding the mechanism for securing the signature of the Governor of Trat Province, since the Cambodian side was ready to sign the document during the meeting.

5.2.4 Dr. Sonjai responded that following the meeting the Memorandum of Agreement would be discussed during the meetings of the management board and management advisory group in March and Dr. Sonjai would inform the Cambodian participants of the outcome.

6. REVISION AND FINALISATION OF OPERATIONAL FRAMEWORK FOR COOPERATION IN RESOURCE AND ECOSYSTEM MANAGEMENT

6.1 Joint Transboundary Guidelines for Resource Assessment and Monitoring

6.1.1 Participants recalled that a preliminary draft of the guidelines for resource assessment and monitoring had been prepared and discussed during the second meeting. Mr. Yay invited the Site Manager of Trat, Ms. Cheewarat to present the document UNEP/GEF/SCS/PKWS-Trat.3/6 entitled "*Draft Joint Transboundary Guideline for Resource Assessment and Monitoring in Peam Krasop Wildlife Sanctuary and Trat Demonstration Sites*". This document was drafted in English and translated into Khmer and Thai for consideration of the participants in advance of the meeting.

6.1.2 Ms. Cheewarat presented the draft guidelines, noting that these had been prepared to support effective management and conservation and ensure that data and information were collected in a comparable and compatible manner in the two sites thus enabling more effective sharing and use of the data and information. She noted that this was the second draft that represented a substantial revision and updating from the first draft, presented during the second joint meeting.

6.1.3 Ms. Cheewarat presented in detail the recommended assessment and monitoring procedures for mangrove flora, and fauna, for fisheries productivity, environmental state, land-use and socio-economic characteristics. She noted that following approval by this meeting the management teams of both sites needed to consider and finalise them for adoption and use in the training course "Joint Resource Assessment and Monitoring in the transboundary area of Koh Kong Province and Trat Province".

6.2 Joint Transboundary GIS database and Information Exchange

6.2.1 Due to the illness of Mr. Somsak, Dr. Sonjai Havanond assumed responsibility as Co-chairperson and invited the Thai and Cambodian GIS experts to present the GIS databases and Maps developed for the Trat and Peam Krasop Demonstration Sites and to highlight progress in the integration of the databases for the transboundary waters.

6.2.2 Mr. Suon Mean, Cambodian GIS expert presented GIS database and maps developed for the Peam Krasop Wildlife Sanctuary by highlighting the main outputs, which included

- Map of Koh Kong Province including the boundary of the province, main road, and the location of Peam Krasop Wildlife Sanctuary;
- Map of Peam Krasop Wildlife Sanctuary including headquarters, station and boundary of PKWS, village center, location of each village, river, road, upland, water, commune and district boundaries;
- Map of district location in PKWS, in which he noted that there are 3 districts in the area;
- Map of fishing location in which he noted that there are four fishing villages namely Koh Kapic, Koh Sralav, Beoung Kachnag, and Peam Krasop;
- Map of animal species distribution in PKWS such as monkey, fire fly, water bird, and dolphins;
- Map of land use in PKWS in 1997, in which he noted that mangrove forest covered 12,678ha;
- Map of mangrove forest in 2002 which he noted that the total mangrove areas had declined to 10,731ha by 2002;
- Map of mangrove planting in PKWS, in which he noted that mangrove plantation area is big in Koh Sralav village and others villages are small areas for re-planting;
- Map of eco-tourism in PKWS, in which he noted that there was potential for eco-tourism because in PKWS, there is a cultured village, fire flies, a mangrove board walk, waterfall, diverse mangrove flora, dolphins, and other noteworthy species.

6.2.3 The presentation of Geographic Information from the Trat Mangrove Pilot Site was in two parts the first presented by Mr. Thanapong who provided an overview as follows:

- satellite images from IKONOS in the years 2000 and 2006 that enabled a comparison of the mangrove area;

- topographic images;
- map of the boundary of Thatapoa-Num Chieo Mangrove conservation area;
- Transportation route of Trat Mangrove Demonstration Site;
- Importance locations in the Trat Mangrove Demonstration Site;
- River and channel position in the Trat Mangrove Demonstration Site;
- A map showing location of 64 plots, 4 transect lines along Pred Nai Mangrove forest;
- A map showing the distribution of mangrove trees;
- A map of fauna survey plots and the results showing that clam and lampshell are more abundant in the front of canal;
- A map showing the management zones;
- Comparison of Land use maps of Trat Mangrove Demonstration Site for the years 2000 and 2006 and noted that the mangrove area had decreased, aquacultural land had increased by 2%, rubber decreased by 1% and orchard and village increased by 2%.

6.2.4 Mr. Wirot reviewed the situation with regard to the development of a joint GIS database noting that no progress had been achieved since the previous meeting. Mr. Wirot concluded that sharing of data between the two sides can be done if both sides share their complete GIS databases via the internet using a map server.

7. CONSIDERATION OF JOINT TRAINING AND PUBLIC AWARENESS FOR RESOURCE ASSESSMENT AND MONITORING

7.1 Training on Resource Assessment and Monitoring

7.1.1 Dr. Sonjai noted that during the first joint meeting, there had been a discussion on the need for a joint training course on resource assessment and monitoring in order to allow both sides to conduct field work on resource assessment and regular monitoring. This training course should be convened soon after the adoption of the joint resource assessment and monitoring guidelines perhaps in March 2008.

7.1.2 Concerning the proposed Training course on Resource Assessment and Monitoring, Ms. Cheewarat proposed a joint training course on Resources Assessment and Monitoring from 29 to 30 March 2008 in Trat Province and that it should focus on mangrove flora, fauna and fishery productivity. Mr. Savath suggested that five people from Cambodia would participate in this training event. The Thai side will support accommodation and transportation during this training activity.

7.2 Exchange of Experiences, Communication and Site Visits

7.2.1 In order to further enhance communication and to share experiences between the two transboundary sites it was agreed that communication, sharing experiences and site visits for local communities, school kids, teachers, and local authorities would be organised during the year.

7.2.2 Due to the limited budget Ms. Cheewarat suggested that some activities could be combined with a youth camp which would be more practical and save funds. It was decided that 5 teachers from Koh Kong would be invited to share experiences in the youth camp in Trat Province which would perhaps be more interesting and useful than only a site visit.

7.2.3 Mr. Savath asked about the proposed dates, budget and further details and it was agreed that the youth camp would be organised for 28-30 April, 2008 and Mr. Savath noted that Cambodia would send five participants.

7.3 Training for Tour Guides and Youth Camp

7.3.1 Dr. Sonjai noted that an expert from Kasetsart University has a sub-contact to undertake this activity and invited Cambodia to send participants to join the training for tour guides because this will be useful in developing ecotourism. Mr. Savath stated that although Cambodia would like to join this activity there were insufficient funds in the budget.

7.3.2 Dr. Sonjai noted the importance of this activity with respect to ecotourism even though a lot of tourists visited Trat only a few go to mangrove forest and if one could promote ecotourism between Trat and Koh Kong this would strengthen the capacity of both sides in promoting ecotourism. He noted that he would discuss the budget constraints later with the expert from Kasetsart University who was subcontracted to undertake this activity.

7.4 Joint Preparation and exchange of Public Awareness Materials

7.4.1 Ms. Cheewarat proposed an exchange of posters and newsletters and research outputs that would be translated into English and put on the website of the project. The Cambodian side could translate into Khmer language for distribution.

7.4.2 Dr. Sonjai suggested that the Thai side could select some PKWS Demonstration Site news to put into the newsletter of the Trat Mangrove Demonstration Site. This was distributed every three months and contained very interesting articles. The Cambodian side agreed to provide such materials to Ms. Cheerawat.

8. CONSIDERATION OF PROPOSAL FOR DEVELOPMENT OF GUIDELINES FOR SUSTAINABLE USE OF HABITATS AND ASSOCIATED RESOURCES

8.1 Dr. Sonjai invited the Focal Point for Mangroves and Wetlands, in Cambodia to present the document UNEP/GEF/SCS/PKWS-TRAT.3/8 *“Proposal for development of guidelines for sustainable use of coastal habitats and associated resources in the transboundary waters between the Provinces of Trat (Thailand) and Koh Kong (Cambodia).”*

8.2 Mr. Ke presented the proposal for development of guidelines for the sustainable use of habitats and associated resources in the transboundary waters. He noted that the draft proposal had been developed in close consultation with Dr. Thamasak Yeemin, Coral Reef Focal Point, for Thailand from the Department of Biology, Faculty of Science, Ramkhamhaeng University. The goal was to provide local governments and related stakeholders with advice regarding the sustainable use of habitats and associated resources for effective socio-economic development and environment management in the transboundary waters between the Provinces of Koh Kong (Cambodia) and Trat (Thailand).

8.3 Mr. Ke presented the draft and the meeting reviewed it paragraph by paragraph with each paragraph being translated from English into Khmer by Mr. Ke and into Thai by Dr. Sonjai. Having reviewed the proposal the meeting agreed that this was a valuable activity and supported its implementation.

8.4 Concerning the budget for this proposal, Mr. Savath reported that he had worked on the budget table and revised the costs for support in operation of each activity and included the numbers of people, the length of each meeting and he had added one activity to organise a meeting to review the guidelines before publication in Cambodia. The revised budget was agreed and the entire proposal is attached to this report as Annex 6.

9. WORK PLAN FOR FURTHER JOINT ACTIVITIES

9.1 Dr. Sonjai invited the Project Director to present the revised work plan prepared on the basis of the outcomes of the discussions under earlier agenda items. Dr. Permetta presented the draft noting that although activities would not be financially supported through the project after the 31st December 2008 nevertheless if the MoA and policy framework were to be effective the meeting needed to consider how to support continued joint action using government re-current funds.

9.2 Members were invited to discuss and agree the work plan for joint activities and the finalisation of the Memorandum of Agreement and co-operative policy framework. Following discussion of all items the work plan was approved as it appears in Annex 7 of this report.

10. ANY OTHER BUSINESS

10.1 Dr. Sonjai invited participants to raise any further items of business under this agenda item.

10.2 Mr. Amporn Patsart informed participants of the situation with respect to coastal erosion caused by the wash from coastal fishing boats along the seaward fringe of the Pred Nai Mangrove forest that was an important part of Trat Mangrove Demonstration site. He noted that the Pred Nai community had solved this problem by putting tyres at the seaward margin to prevent further coastal erosion. Moreover, people from Pred Nai believe that the tyres function as a refuge to protect marine animals in addition to preventing mangrove degradation from fishing boat wash. He requested support from the meeting in terms of research for the best way to solve this problem in the long term.

10.3 Dr. Sonjai suggested that this should be considered in the framework of the development of guidelines for sustainable use of habitats and associated resources, using experts of both sites because this problem is important and also occurred in the Koh Kong Province.

11. ADOPTION OF THE REPORT OF THE MEETING

11.1 Ms. Siripon on behalf of the Co-Rapporteurs presented the draft report of the meeting, prepared by the secretariat during the meeting, for consideration and adoption by the members.

11.2 The draft report was projected, considered, amended and adopted as it appears in this document.

12. CLOSURE OF THE MEETING

12.1 Dr. Sonjai invited the Deputy Governor of Koh Kong to make a few closing remarks and Mr. Yay thanked the Provincial Government of Trat and Dr. Sonjai for hosting the meeting and the Project Director for financial support to the demonstration sites and the convening of the meeting.

12.2 Mr. Savath and Dr. Sonjai both stressed the importance of the arrangements for joint work and co-operation in the management of resources in the transboundary area between the two countries. Dr. Permetta thanked the participants for their hard work and noted that he was pleased to see that plans were in hand for the next meeting in 2009 after the SCS project was completed which augered well for the success of arrangements under the Joint Memorandum of Agreement.

12.3 The Co-chairs closed the meeting at 1700 on 19th February 2008.

ANNEX 1

List of Participants

CAMBODIA PARTICIPANTS

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ANNEX 2

List of Documents

Discussion documents

UNEP/GEF/SCS/PKWS-Trat.3/1	Agenda.
UNEP/GEF/SCS/PKWS-Trat.3/2	Annotated Agenda
UNEP/GEF/SCS/PKWS-Trat.3/3	Report of the Meeting.
UNEP/GEF/SCS/PKWS-Trat.3/4a	Status of Activities and Achievements in Trat Demonstration Site.
UNEP/GEF/SCS/PKWS-Trat.3/4b	Status of Activities and Achievements in Peam Krasop Wildlife Sanctuary Demonstration Site.
UNEP/GEF/SCS/PKWS-Trat.3/5	Draft Joint Policy Framework for Cooperation in Resource and Ecosystem Management in Peam Krasop Wildlife Sanctuary and Trat Demonstration Sites
UNEP/GEF/SCS/PKWS-Trat.3/6	Draft Joint Transboundary Guideline for Resource Assessment and Monitoring in Peam Krasop Wildlife Sanctuary and Trat Demonstration Sites.
UNEP/GEF/SCS/PKWS-Trat.3/7	Proposal for Development of Guideline for Sustainable Use of Coastal Habitats and Associated Resources in the Transboundary Waters between Provinces of Trat (Thailand) and Koh Kong (Cambodia).

Information documents

UNEP/GEF/SCS/PKWS-Trat.2/Inf.1	List of Participants
UNEP/GEF/SCS/PKWS-Trat.3/Inf.2	List of Documents.
UNEP/GEF/SCS/PKWS-Trat.3/Inf.3	Programme.
UNEP/GEF/SCS/PKWS-Trat.2/3	The Second Joint Meeting between the Management Teams of the Peam Krasop Wildlife Sanctuary and Trat Demonstration Sites for the UNEP/GEF Project: <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> . Report of the Meeting, Koh Kong, Cambodia, 21 st - 23 rd August 2007.

ANNEX 3

Agenda

- 1. OPENING OF THE MEETING**
 - 1.1 Opening Address on behalf of UNEP
 - 1.2 Welcome Statement by the Deputy Governor of Trat Province
 - 1.3 Address by the Deputy Governor of Koh Kong Province
 - 1.4 Introduction of Participants
- 2. ORGANISATION OF THE MEETING**
 - 2.1 Organisation and Appointment of Officers
 - 2.2 Documents Available to the Meeting
 - 2.3 Programme of Work
- 3. ADOPTION OF THE MEETING AGENDA**
- 4. BRIEF OF ACTIVITIES AND ACHIEVEMENTS OF TRAT AND PEAM KRASOP WILDLIFE SANCTUARY DEMONSTRATION SITES TO DATE**
 - 4.1 Status of Activities and Achievements in Trat Demonstration Site
 - 4.2 Status of Activities and Achievements in Peam Krasop Wildlife Sanctuary Demonstration Site
- 5. FINALISATION OF THE POLICY FRAMEWORK FOR COOPERATION IN RESOURCE AND ECOSYSTEM MANAGEMENT**
 - 5.1 Review and Finalisation of the Policy Framework
 - 5.2 Mechanism for Implementing the Policy Framework
- 6. REVISION AND FINALISATION OF THE OPERATIONAL FRAMEWORK FOR COOPERATION IN RESOURCE AND ECOSYSTEM MANAGEMENT**
 - 6.1 Joint Transboundary Guidelines for Resource Assessment and Monitoring
 - 6.2 Joint Transboundary GIS database and Information Exchange
- 7. CONSIDERATION OF JOINT TRAINING AND PUBLIC AWARENESS FOR RESOURCE ASSESSMENT AND MONITORING**
 - 7.1 Training on Resource Assessment and Monitoring
 - 7.2 Exchange of Experiences, Communication and Site Visits
 - 7.3 Training on Tour Guide and Youth Camp
 - 7.4 Joint Preparation and exchange of Public Awareness Materials
- 8. CONSIDERATION OF PROPOSAL FOR DEVELOPMENT OF GUIDELINES FOR SUSTAINABLE USE OF HABITATS AND ASSOCIATED RESOURCES**
- 9. WORK PLAN FOR FURTHER JOINT ACTIVITIES**
- 10. ANY OTHER BUSINESS**
- 11. ADOPTION OF THE REPORT OF THE MEETING**
- 12. CLOSURE OF THE MEETING**

ANNEX 4

Cooperative Framework in ecosystem and resource management between Koh Kong Province, Kingdom of Cambodia and Trat Province, Kingdom of Thailand

1. PREFACE

The parties namely:

- Koh Kong Governor of Kingdom of Cambodia and
- Trat Governor of Kingdom of Thailand
 - **Recognize** the importance of a cooperative framework programme in ecosystem and resource management between Koh Kong Province, Kingdom of Cambodia and Trat Province, Kingdom of Thailand;
 - **Support** the principal of national sovereignty and territorial integrity of both countries;
 - **Understand** the importance and mutual benefits our nations may derive from close collaboration and good neighbor relations;
 - Are **Conscious** of the responsibility to conserve the environment and manage the coastal resources sustainably for present and future generations;
 - **Desire** to promote biodiversity conservation and sustainable socio-economic development across international boundaries for the benefit of the people of the region;
 - **Accept** the importance of equitable access to those benefits that may arise as a consequence of strengthening transboundary collaboration;
 - **Acknowledge** the important role of the local communities and their local structures in the optimizing the local economic benefit;

2. THREATS TO COASTAL RESOURCES AND MARINE ENVIRONMENT

- Population growth, poverty, human settlement and demand for improved livelihood of local people in coastal areas;
- Exploitation of mangrove trees for charcoal and encroachment into coastal areas for shrimp farming;
- Growth of economic development and investors including tourism development without taking care of environmental issues;
- Poor waste management;

3. CHALLENGES TO COASTAL RESOURCES AND MARINE ENVIRONMENTAL MANAGEMENT

- Weak Implementation of the legal framework and environmental policy;
- Participation from government agencies and private sectors is limited in environmental protection and natural resources management;
- Weak Management of data/information and environmental technology and information exchange;
- Lack of Human resources development;
- Limited Budget
- Inadequate co-operation and environmental partnership at International, National, and Provincial levels;
- Awareness of the importance of coastal resources and marine environment is limited;
- Encroachment in mangrove areas for ownership and exploitation;
- Lack of scientific research;

4. MISSION

To conserve (protect, manage and use) biodiversity for sustainable development in Koh Kong Province of the Kingdom of Cambodia and Trat Province of the Kingdom of Thailand

5. GOAL

To build co-operation between Koh Kong Province, Kingdom of Cambodia and Trat Province, Kingdom of Thailand in order to:

- Maintain biodiversity and the productivity of ecosystems by protecting living species in both social and natural environments;
- Prevent human activities that are unsustainable and promote sustainable use of biodiversity for development and long-term support of people's livelihoods;
- Ensure that the benefits derived from sustainable use of biodiversity contribute to poverty reduction and improvement of local community's livelihood;
- Promote biodiversity conservation; reverse environmental degradation trends; use coastal resources sustainably; as well as improve local community's livelihoods.

6. OBJECTIVES

The objectives of the cooperative framework between Koh Kong Province, Kingdom of Cambodia and Trat Province, Kingdom of Thailand are:

- Capacity building in sustainable management of coastal resources and marine environment;
- Establish and strengthen cooperative mechanisms for the management of coastal resources and the marine environment;
- Promote public awareness and participation in marine environmental protection at local and provincial levels in both countries;
- Strengthen cooperation on transboundary environmental issues

7. PROGRAMME AND ACTIVITIES

Programme 1 Strengthen institutional arrangements, and partnership in environmental protection and sustainable development of both provinces for management of coastal resources and marine environment.

- Activity 1-** Exchange experiences, information and experts between both provinces and countries;
- Activity 2-** Organize workshops and study tours;
- Activity 3-** Disseminate and enforce the existing laws and regulations of both provinces and countries concerning coastal resources and marine environment management;

Programme 2 Establish a control and monitoring system for coastal resources and the marine environment in order to improve the effectiveness of coastal resource and marine environmental management in coastal transboundary areas.

- Activity 1-** Prepare an inventory of coastal and marine resources;
- Activity 2-** Establish environmental standard for all sectors related to regional activities;
- Activity 3-** Establish and implement a system and network of coastal resource and marine environmental control and monitoring;
- Activity 4-** Organize and implement training on science, assessment and control and monitoring for all levels from village and commune, to provincial and national;
- Activity 5-** Establish laboratory building and services for control and monitoring.

Programme 3 Extend public awareness on conservation of coastal resources and marine environment and data management.

- Activity 1-** Strengthen capacity to improve education, communication system and establish network and volunteers to extend public awareness on sustainable use of marine resources;
- Activity 2-** Produce and disseminate material on public awareness and implementation of communication programmes related to the significance of ecosystems and the sustainable use of coastal resources and marine environment;

Activity 3- Establish an exchange programme for the youth and students of both Provinces focused on natural resources conservation and environmental protection;

Activity 4- Strengthen exchange and sharing of data and information between both countries and maintain a database for use in the management of coastal resources and the marine environment;

Programme 4- Establish and implement joint projects supported by international organizations.

Activity 1- Project for management of coastal resources and marine environment in transboundary waters of both provinces;

Activity 2- Project on research into coastal resources and marine environment;

Activity 3- Project on mangrove and wetland conservation;

Programme 5- Establish and improve financial resources and exchange of information and technology.

Activity 1- Implement a small grant facility for livelihood alternatives at the community level with technical assistance in eco-tourism, agriculture, and aquaculture.

Activity 2- Establish models and methods for community based management of coastal resources and the marine environment;

Activity 3- Promote eco-tourism in both Provinces;

Activity 4- Seek financial resources from the international community for improving local livelihoods and management of coastal resources and the marine environment;

Activity 5- Develop joint project and mobilize funds in both provinces and countries to facilitate the exchange information and technology;

Programme 6- Sustainable development and environmental protection

Activity 1- Promote participation by the local authority and people in coastal resources and marine environment protection;

Activity 2- Promote zoning of coastal uses, including fishing to improve sustainability of the resources and hence the livelihood of local communities;

Activity 3- Provide a chance to public sectors to participate in coastal resources and marine environment protection;

8. IMPLEMENTATION

- The principles of co-operation, equality and co-development, and the aspirations of the SCS project to enhance regional cooperation under the implementation of this Co-operative Framework;
- Each province will designate a focal point/agency to be responsible for the organization and implementation of the activities within each Province under the leadership/ guidance of the provincial governments;
- The Policy and Framework for cooperation between Koh Kong and Trat on resources and environment management in transboundary waters may be revised and adjusted after initial. In the case of unforeseen problem(s) arising, the affected partner will inform the other at least 60 days in advance of any meeting in order to have enough time to discuss and identify potential solutions to the problem(s);
- Both sides agree to implement this policy and framework for the protection of the environment, conservation of biodiversity and sustainable use of the resources and human well-being of the two Provinces;
- This policy and framework document is executed as Annex 1 of the Memorandum of Agreement.

ANNEX 5
MEMORANDUM OF AGREEMENT
BETWEEN
GOVERNOR OF TRAT PROVINCE (KINGDOM OF THAILAND)
AND
GOVERNOR OF KOH KONG PROVINCE (KINGDOM OF CAMBODIA)

1. PARTIES. This Memorandum of Agreement is entered into between the Governor of Trat Province (Thailand) and Governor of Koh Kong Province (Cambodia)

2. BACKGROUND

The transboundary waters between the provinces of Trat (Thailand) and Koh Kong (Cambodia) are located in the eastern portion of the Gulf of Thailand between 11°35' - 12° 15' N Latitude and 102° 15' - 103° E Longitude. The coastline of the two provinces is 357km in length, including 237km in Koh Kong Province and 120km in Trat Province.

The coastal waters are characterised by coastal tropical ecosystems, including seagrass, coral reefs and mangroves. These habitats support high species richness of marine organisms; a large number of spawning and nursery grounds; and shared stocks of migratory species. The rich variety and high productivity of the marine living resources in the area provide livelihoods not only for coastal communities resident in both provinces but also for fishermen from other areas. Coastal habitats have been used for development of tourism in both sides. The coastal zone and associated marine waters, therefore, play an important role in the socio-economic development of both provinces. In addition, joint management of the ecosystems and associated resources in this area will contribute to regional efforts in environmental management of the South China Sea due to the regionally significant mangroves, marine biodiversity and fisheries.

In the framework of the UNEP GEF Project entitled "*Reversing environment degradation trends of the South China Sea and Gulf of Thailand*", the transboundary demonstration site projects in Trat, Thailand and Koh Kong, Cambodia have been under execution since 2006. An outstanding outcome of these demonstration site projects is the establishment of a mechanism for long-term, joint management in the transboundary waters. The management teams of both demonstration sites, through joint meetings with the participation of provincial leaders, have agreed to develop a policy and framework for cooperation in the management of coastal ecosystems and natural resources between the two provinces.

3. PURPOSE

Under this Memorandum of Agreement the two parties agree to implement ***the policy and framework for cooperation in management of coastal ecosystems and natural resources between the Provinces of Trat (Thailand) and Koh Kong (Cambodia)*** in order to strengthen environmental protection, biodiversity conservation, and welfare of each province. The policy and operational framework are attached as Annex I, which forms a part of this Memorandum.

4. EXECUTION ARRANGEMENTS

4.1 The policy and framework are developed on the principles of cooperation, equality and joint development and are intended to reflect the overall goal of the UNEP/GEF project "*Reversing Environmental Degradation Trends in South China Sea and Thailand Gulf*", namely to create an environment at the regional level, in which collaboration and partnership in addressing environmental problems of the South China Sea, between all stakeholders, and at all levels is fostered and encouraged, and to enhance the capacity of the participating governments to integrate environmental considerations into national development planning;

4.2 Each province will nominate a focal point with responsibility for organizing activities in order to fulfil the terms of this agreement, and who will operate under the guidance of the provincial leaders.

4.3 The initial period of validity of this Memorandum is from the date of signature to December, 31st 2012 and it may be extended thereafter by mutual consent. At that time the policy and framework may be amended or expanded as considered necessary;

4.4 In the event of problems arising from the execution of this agreement the affected partner will inform the other 60 days in advance of joint discussions to identify appropriate solutions;

4.5 Implementation of this policy and framework do not relate to, nor are the intended as a forum for discussion and or resolution of any boundary disagreements that might exist between the two countries of Thailand and Cambodia;

4.6 This Memorandum of Agreement is made in 12 equivalent copies in 3 languages (Thai, Khmer and English) having the same weight, in the event of any differences arising from the interpretation of the Khmer or Thai text, the English text shall take precedence.

The Memorandum of Agreement is made in xxxxxxxx on xxxxxxxx 2008

**Governor
Trat Province**

**Governor
Koh Kong Province**

ANNEX 1

**Cooperative Framework in ecosystem and resource management between
Koh Kong Province, Kingdom of Cambodia
and
Trat Province, Kingdom of Thailand**

1. PREFACE

The parties namely:

- The Governor, Koh Kong Province, Kingdom of Cambodia and
 - The Governor, Trat Province, Kingdom of Thailand
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 - **Desire** to promote biodiversity conservation and sustainable socio-economic development across international boundaries for the benefit of the people of the region;
 - **Accept** the importance of equitable access to those benefits that may arise as a consequence of strengthening transboundary collaboration;
 - **Acknowledge** the important role of the local communities and their local structures in the optimising the local economic benefit.

2. THREATS TO COASTAL RESOURCES AND MARINE ENVIRONMENT

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- Weak Management of data/information and environmental technology and information exchange;
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- Limited Budget;
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- Activity 3-** Project on mangrove and wetland conservation,

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- Activity 1-** Implement a small grant facility for livelihood alternatives at the community level with technical assistance in eco-tourism, agriculture, and aquaculture;
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- Activity 3-** Promote eco-tourism in both Provinces;
- Activity 4-** Seek financial resources from the international community for improving local livelihoods and management of coastal resources and the marine environment;
- Activity 5-** Develop joint project and mobilize funds in both provinces and countries to facilitate the exchange information and technology.

Programme 6 Sustainable development and environmental protection

- Activity 1-** Promote participation by the local authority and people in coastal resources and marine environment protection;
- Activity 2-** Promote zoning of coastal uses, including fishing to improve sustainability of the resources and hence the livelihood of local communities;
- Activity 3-** Provide a chance to public sectors to participate in coastal resources and marine environment protection.

ANNEX 6

Proposal for Development of the Guidelines for Sustainable Use of Coastal Habitats and Associated Resources in the Transboundary Waters between Provinces of Koh Kong (Cambodia) and Trat Province (Thailand)

BACKGROUND

In the framework of the UNEP/GEF project entitled "Reversing environment degradation trends in the South China Sea and Gulf of Thailand" the transboundary Peam Krasop Wildlife Sanctuary (Koh Kong) and Trat demonstration site projects have been implemented. The management teams of demonstration sites (mangrove) and Mu Koh Chang (coral reefs, Trat, Thailand) demonstration site in cooperation with the South China Sea Project Coordinating Unit have developed policy framework for cooperation in managing coastal habitats and resources in the transboundary waters. As agreed by leaders of provinces Koh Kong (Cambodia) and Trat (Thailand), the framework will be considered in the third joint meetings planned in early 2008 and approved by provincial authorities for long-term cooperation between two provinces in order to improve management effectiveness and support to socio-economic development of two boundary provinces.

In accordance with recommendation of the National Technical Focal Point of Cambodia, the Regional Scientific and Technical Committee, in its 8th meeting, 11th – 14th December 2007 and the Steering Committee, in its 7th meeting, 17th – 19th December 2007 accepted an additional activity namely "Development of guideline for sustainable use of coastal habitats in the transboundary waters". This proposal is prepared for implementation of this activity in the transboundary waters between the provinces of Koh Kong (Cambodia) and Trat (Thailand), in parallel with another proposal for joint activity between provinces of Kampot (Cambodia) and Kien Giang (Viet Nam).

GOAL

The goal of the guideline is to provide local governments and related stakeholders with advices in sustainable uses of habitats and associated resources for effective socio-economic development and environment management in the transboundary waters between provinces of Koh Kong (Cambodia) and Trat (Thailand).

OBJECTIVES

Assessment of resources, and existing and potential uses of resources in the transboundary waters between of Koh Kong (Cambodia) and Trat (Thailand).

- Analysis of reasonability and impacts of existing and planned economic activities in the transboundary waters
- Identification of options/solutions for sustainable use, focusing on the cooperation between two transboundary provinces; and guideline for implementation of proposed options/solutions, including *inter alia*: coastal habitat management (mangroves, coral reefs and seagrass), fisheries management (fishing gears and relevant areas, establishment and management of fisheries *refugia*, reasonable exploitation of target living resources, prevention of illegal fishing); mariculture development (target species, places and tools); tourism development based on coastal habitats (places, tourist categories, joint tourist operation); migrating endangered species management, and arrangement for integrated joint management in the transboundary waters.
- Capacity building for national and local experts in assessing resources and resource use based on local knowledge and practices, and in practicing resource management with involvement of local communities.
- Support of local governments of two provinces in sustainable development based on reasonable uses of their resources.

PLANNED ACTIONS

1/ Planning and task assignment for implementation of the approved proposal

Cambodia Inter-ministry Committee will host a meeting in Cambodia with participation of representatives from both provinces, including Focal Points, Chairpersons of Management Boards and Advisory Committees, Site Managers, selected local and national experts and consultants. The meeting will discuss and agree approach and time schedule for, and responsibilities of related stakeholders in developing the guideline.

2/ Assessment of resources and existing uses of resources

The assessment will be based on local consultations and field trips with involvement of local experienced persons who could provide data and information regarding habitat distribution and associated resources; exploitation location and tools, production, number of local people depending on, benefit and income. Local consultation will be convened at main villages bordering the transboundary waters.

3/ Review of planned socio-economic development and existing management of coastal habitats and associated resources

National and local experts and consultant will meet with related sectors at the provincial and district levels in order to gather information regarding resource management and plans for socio-economic development in their localities.

4/ Analysis of reasonability and transboundary factors in resource use

Consultants will work closely with national and local experts in order to analyse impacts and reasonability of existing resource uses in terms of ecological and economic aspects, taking account of transboundary factors in resource uses and management. Potentials for innovative activities will be also analysed with consideration of advantages and disadvantages.

5/ Development of guidelines for sustainable uses of habitats and associated resources

The guideline will be developed by consultants in the cooperation with national and local experts, taking account of joint activities between two provinces in the transboundary waters. A local consultation will be convened to get feedbacks from local communities on the draft guideline. The draft guideline, then, should be reviewed and commented by advisory committees, and revised by consultants based on additional inputs and comments.

6/ Publicity of the guideline for sustainable development in the transboundary area

The guideline will be translated into Khmer and Thai, and distribute to related stakeholders. A training workshop on sustainable use of coastal habitats and associated resources will be convened in each province with participation of local government officials and related stakeholders.

WORKPLAN

Actions	Time	Responsibility
Finalisation and submission of the proposal to the PCU	January	Cambodia IMC
Signature of amendment to the MoU between UNEP & Cambodia IMC, and fund transmission	February	PCU & Cambodia IMC
Meetings for planning and task assignment	March	Cambodia IMC & consultant
Documentation of existing materials regarding habitats and resource uses in the transboundary waters	March	Consultant & experts of Cambodia and Thailand
Documentation of marine - based economic activities and development plans	March	Consultant & experts of Cambodia and Thailand
Local consultation and field trip for collection of data related to resources and resource use	March	Consultant & experts of Cambodia and Thailand
Data synthesis and analysis, and draft guideline	April	Consultant & experts of Cambodia and Thailand
Local consultation review of Advisory Committee for revision of draft guideline	May	Cambodia IMC, Management Board, consultant & experts
Finalisation of the guidelines in English	June	Consultant & experts
Publicity of the guideline for sustainable development	June	Management Boards, Consultant & experts

BUDGET

Activities	Budget (USD)
Meetings for planning and task assignment in Cambodia (12persons * 2 days) 1. site manager, focal point from mangrove and wetland, scientific technical focal point, MB and MAG	3,078
Documentation of existing materials regarding habitats and resource uses in the transboundary waters (consultancy 2 sites * 1 person * 1 month, 3,000USD/person)	6,000
Documentation of marine - based economic activities and development Plans (consultancy 2 sites, 1 month, 3,000 USD/person)	6,000
Local consultation and field trip for collection of data related to resources and resource use (transportation, accommodation, 2 sites * 44 persons * 2 days)	10,560
Data synthesis and analysis, and draft guideline (consultancy 2 sites * 1 person, 1 month, 3,000 USD/person)	6,000
Local consultation review of Advisory Committee for revision of draft guideline (2 sites * 2 times * 5 persons * 2 days)	4,284
Finalisation of the guidelines in English (consultancy 2 sites * 1 person, 1 month, 3,000USD/person)	6,000
Meeting for reviewing the guideline before publication in Cambodia (12 persons * 2 days)	3,078
Publicity of the guideline for sustainable development (Printing 500 copies and distribution)	5,000
Total	50,000

ANNEX 7

Work Plan for Joint Activities Trat Province (Thailand) and Koh Kong Province (Cambodia)

Activities	Quarter	Year 2008				Year 2009			
		1st	2nd	3rd	4th	1st	2nd	3rd	4th
1. Joint meetings of the Management Teams									
Third Joint meeting of Management Advisory Groups (MAGs) and Management Board (MBs)		18-20 Feb							
Fourth Joint meeting of Management Advisory Groups (MAGs) and Management Board (MBs)						22-24 Jan			
2. Further Development of Co-operative Framework at Policy Level									
Revision and Editing of Thai, Khmer & English texts		x							
Approval and signature of MoA and Framework by both Provincial Governors		April							
3. Development of Co-operative Framework at Operational Level (Scientific, Technical and Action Cooperation, Exchange and capacity building)									
Resource Assessment & Monitoring									
Revision and Editing of joint guidelines		Feb/March							
Approval by both Management Boards		March							
Training and site visits									
Training on resource assessment and monitoring		28-30 March							
Site Visit (for local community, school kids, teacher, and local authority)			28-30 April						
Training for Tour Guides			5-8 May						
Guidelines for sustainable uses of coastal habitats and associated resources in the transboundary waters between provinces of Koh Kong (Cambodia) and Trat Province (Thailand)									
Signature of amendment to the MoU between UNEP & Cambodia I/MC, and fund transmission		February							
Meetings for planning and task assignment		March							
Documentation of existing materials regarding habitats and resource uses in the transboundary waters		March							
Documentation of marine-based economic activities and development plans		March							
Local consultation and fielding for collection of data related to resources and resource use					April				
Data synthesis and analysis, and draft guideline					May				
Local consultation review by Advisory Committee for revision of draft guideline					May				
Finalization of the guidelines in English					June				
Publication of the guideline for sustainable development					June				

For Thai side called *Trat Advisory Group*
 For Thai side called *Seesp Advisory Board*

Appendix 4
**Plan of Cooperation in Fisheries Management between Kampot Administrative
Committee (Kingdom of Cambodia) and The Provincial People's Committee of Kien
Giang Province (S.R. Vietnam)**

KAMPOT ADMINISTRATIVE

COMMITTEE

KAMPOT FISHERY DEPARTMENT

KIEN GIANG PEOPLE'S COMMITTEE

DEPARTMENT OF AGRICULTURE

AND RURAL DEVELOPMENT

PLAN OF

Implementing the cooperation in fisheries between Kampot Fishery Department and Kien Giang Fishery Department DARD

As a part of the fisheries cooperation plan between Kien Giang PPC (Vietnam) and the Kampot Administrative Committee (Cambodia), a workshop was held at Kampot on 20/02/2014 to report on the last years implementation of the cooperation, and to decide on the details of the future cooperation, in improving the management of the fisheries resources of the two provinces in the Gulf of Thailand for the period 2014 – 2020.

Today, 29/05/ 2014, at Kampot Province, Kampot Fishery Department and Kien Giang DARD sign the plan of cooperation in fisheries management.

Details:

- 1. PURPOSE:** through a series of communication activities, to raise the communities' awareness of fisheries policies of the two provinces and the need to protect the aquatic resources from overexploitation; to develop and share marine management experiences; to implement new technologies and use the findings of scientific research to improve fisheries management;; and to enhance the relationship and develop new ways of cooperation of the 2 provinces: Kien Giang and Kampot.
- 2. CONTENT:**
 - a) Raising awareness of existing policies and fisheries regulation**
The Kampot fishery department will organize and facilitate Kien Giang DARD to inform Kampot (Cambodian) fisheries officers and fishing communities about Vietnam fishery laws and regulations.

Kien Giang DARD will organize and facilitate Kampot fishery department to inform Kien Giang (Vietnamese) fishery officers, and fisherman about Cambodian fishing laws.

The two provinces will work together to harmonize the different policies and will develop policies to allow effective management and sustainable exploitation of the marine resources.

b) Exchanging experiences in aquatic resources management

Organize training and workshops for officers and fisherman on community based resource management.

Exchange information on the results of marine biodiversity monitoring.

Identify ways to protect the endangered and commercially and scientifically valuable species that move between national borders.

c) Managing the exploitation of marine resources

Regular discussion/exchange on the levels of exploitation of the marine resources by government departments and fisherman from the 2 provinces. Assess the existing marine fish stock and biodiversity of seagrass and coral reefs.

Jointly develop ways to solve illegal fishing activities in a peaceful and friendly manner and educate the fisherman to obey the regulations of Kien Giang and Kampot provinces.

d) Coordinating the management of migratory aquatic species at the border

Implement the Memorandum of Agreement between the Vietnam Fishery Department and the Cambodian Fishery Department.

Coordinate and support the collection of information on the cross border fishing situation.

e) On aquaculture:

Organising trainings for technology and technical transfer for aquaculture. Consult suitable locations along the coastline for investment for intensive and semi intensive shrimp farming.

Find joint approaches to improve export trade and profits from aquaculture and wild caught seafood products.

3. Funding:

In addition to use of the government budget, the two provinces will cooperate to mobilize additional funds to provide technical support and

investment from private industry, national and international organizations in order to implement this plan.

4. Reporting:

Annually, each province will take a turn to organize a meeting for the reporting of the results, lessons learned and to develop a plan for the following year. First year (2014), the reporting meeting was in Kampot.

Time of reporting: December, 2 weeks prior to the annual meeting.

This plan is agreed by the two provinces and there are 4 copies in Vietnamese, 4 copies in Khmer, 04 copies in English, each province keeps 6 copies (2 Vietnamese, 2 Khmer, 2 English).

KAMPOT FISHERY DEPARMENT

DIRECTOR

SAR SORIN

KIEN GIANG DARD

VICE DIRECTOR

QUANG TRONG THAO

APPENDIX: List of activities developed by Kampot and Kien Giang provinces that are needed to implement the MoA on fisheries management in the Gulf of Thailand.

Kampot Fishery Department and Department of Agriculture and Rural Development of Kien Giang wish to acknowledge thank Dr. Sharon Brown, Chief Technical Advisor (CTA) to Kien Giang Province, for her assistance in developing the Memorandum of Agreement on “Implementing the cooperation in fisheries between Kampot Fishery Department and Kien Giang DARD” signed in Kampot, 2014.

The signed MOA will be a catalyst for the development of a strategy document for managing the marine resources along the coastlines of Kampot and Kien Giang provinces in the Gulf of Thailand and will assist in the implementation of Decision No.1690/QĐ-TTg of September 16, 2010, approving Vietnam's fisheries development strategy through to 2020 and Fishery Strategy of Campodia.

The proposed strategy will aim to:

- a) Exchange information and experience in aquatic resources management
- b) Develop joint agreements on the management and exploitation of marine resources
- c) Develop joint agreements on the management of migratory pelagic species
- d) Develop sustainable up to date technologies and trade for aquaculture and fresh caught species

The strategy will help to identify objectives and methods for marine management that will form the basis for researches and policy development.

Hereunder we, Department of Agriculture and Rural Development of Kien Giang and Department of Fishery of Kampot outline the high priority activities in developing the fishery cooperation between the 2 provinces and propose Kien Giang's People Committee (Vietnam) and Kampot Administrative Committee (Cambodia) request to governments and to donors for ongoing technical and capacity building support. This assistance is needed to allow the 2 provinces to refine the signed agreement based on robust information, and to train local technical staff to monitor change, upgrade management policies and law enforcement, improve trade, develop sustainable and modern aquaculture

approaches and provide advice to the provinces on marine management that will allow evidence based decision making (Table 1).

TABLE 1. LIST OF HIGH PRIORITY ACTIVITIES NEEDED TO SUPPORT EFFECTIVE IMPLEMENTATION OF THE AGREEMENT

No	Activities	Objectives
1	Understand the marine fishery resource	<ul style="list-style-type: none"> - Marine fish stocks are surveyed and the data used in management solutions - The state of coral reefs is assessed and improved management solutions identified, agreed and implemented - The state of seagrass is assessed and improved management solutions identified, agreed and implemented - Water quality is assessed and improved management solutions identified, agreed and implemented - Where appropriate new technology is used in management
2	Understand the relationship between aquaculture and marine resource	<ul style="list-style-type: none"> - Measurements of the influence of aquaculture on marine areas understood and used in management - Incidence, source and solutions to disease understood and used in management practice - New technology that ensures better production and environmental outcomes is used
3	Develop aquaculture production and trade	<ul style="list-style-type: none"> - Sustainable techniques are used along the coastlines of 2 provinces - Joint use of processing facilities is developed and implemented - Joint trade and export opportunities developed and implemented - Joint marketing of seafood for export is developed and implemented
4	Develop monitoring systems for pelagic species	<ul style="list-style-type: none"> - Monitoring system for economic pelagic species set up - Suitable management systems identified, agreed and used

		- Policy on marine management harmonized and introduced in the two provinces
5	Assess and develop potential for caged fisheries	- Potential sites for gaged fisheries identified and production levels and cost benefits estimated - Suitable species tested and available - Model used for potential scale-up
6	Public awareness rising on need to maintain biodiversity and marine and fisheries laws and policies of both countries	- Community aware of rules and regulations related to marine resource management, exploitation, use and protection. - Community, fishing groups, political/social groups, etc. in 2 province coastlines aware of their responsibility to ensure sustainable development of fisheries.
7	Develop a "Marine Management Strategy" of the 2 provinces' marine areas)	- Develop marine protected areas - Systematize all issues related to marine resource management along the two coastlines. -A monitoring program used by both provinces with standardized data collection protocols etc. for water quality, fisheries resources etc -Management mechanism facilitates cooperation between different levels, departments in the provinces on marine resource management.
8	Baseline surveys, research, model development to support fisheries management in two provinces	Surveys, research that combines the resources and expertise of National Technical Departments and National and International research organizations that have experience working in Vietnam and Cambodia (eg University of Queensland, University of Tasmania, University of Newcastle) used to optimize marine resources management for: a) The environment, marine wild catch and aquaculture under climate change; b) Minimize disaster risk from flooding and pollution from wastewater/groundwater from agriculture, aquaculture and urban areas and other industries. c) Provincial staff and Ministries enabled to effectively manage marine resources, manage the environment/biodiversity, develop marine resource

	management policy, rules and regulations, standards
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Appendix 5 Cambodia's Baselines Legislation (1982)

Page 1

Decree of the Council of State of 13 July 1982

The chairman of the Council of State, considering that the People's Republic of Kampuchea has full sovereignty and inviolable rights over its territorial waters and its continental shelf; Considering that the People's Republic of Kampuchea must watch its sovereignty, security and national defense toward the sea and ensure the best exploitation of natural resources in its territorial waters and continental shelf in order to serve the national defence and reconstruction efforts and the improvement of the people's living standards; Considering the Constitution of the People's Republic of Kampuchea; And the Council of Ministers having been informed, Has decreed the following:

Article 1

The full and entire sovereignty of the People's Republic of Kampuchea extends beyond its territorial and internal waters to a maritime zone adjacent to its coasts and its internal waters, designated by the name of the territorial waters of the People's Republic of Kampuchea.

This sovereignty also extends to the airspace above the territorial waters of the People's Republic of Kampuchea as well as to the seabed and subsoil of these waters.

Article 2

The width of the territorial waters of the People's Republic of Kampuchea is 12 nautical miles (1 nautical mile equaling 1,852 metres) measured from straight baselines, linking the points of the coast and the furthest points of Kampuchea's furthest islands; these baselines are traced along the low-water mark.

These straight baselines are concretely defined in annex I of this Decree.

The internal waters of the People's Republic of Kampuchea are the waters located between the baseline of the territorial waters and the coasts of Kampuchea.

Article 3

The outer limit of the territorial waters of the People's Republic of Kampuchea is a line each point of which is at a distance equal to the width of the territorial waters from the closest point of the baseline.

In the maritime zone between Kach Kut Island and the terminus of the land border between Kampuchea and Thailand, the limit of the territorial water of the People's Republic of Kampuchea follows the dividing line of the maritime waters determined by the historic border stipulated in the Franco-Siamese treaty of 23 March 1907.

Article 4

The contiguous zone of the People's Republic of Kampuchea is a maritime zone located beyond and adjacent to its territorial waters, with a width of 12 nautical miles measured from the outer limit of the territorial waters of the People's Republic of Kampuchea.

In its contiguous zone, the People's Republic of Kampuchea exercises necessary control in order to oversee its security and to prevent and check violations of its customs, fiscal, health and emigration and immigration laws.

National legislation - DOALOS/OLA - United Nations 

Article 5

The exclusive economic zone of the PRK (People's Republic of Kampuchea) is a maritime zone located beyond its territorial waters and adjacent to the latter. This zone extends to 200 nautical miles measured from the baseline used to measure the width of the territorial waters of the PRK.

The PRK has sovereign rights over the exploration and exploitation and the preservation and management of all organic or inorganic natural resources of the seabed, of its subsoil and of the waters above it and over other activities leading to the exploration and exploitation of its exclusive economic zone.

In its exclusive economic zone, the PRK has exclusive jurisdiction regarding the setting up and use of installations, devices and artificial islands and marine research; and has jurisdiction over the preservation of the marine environment and the control of pollution.

Without prior authorization or agreement by the PRK, foreign ships are forbidden to fish or exploit any natural resources in any form, or to undertake scientific research in the exclusive economic zone of the PRK. When they have obtained prior authorization or agreement, they must conform with the laws and regulations of the PRK concerning fishing, the exploitation of other natural resources and scientific research, and with other regulations relating to them decreed by the PRK, and must strictly carry out all obligations provided in the licenses of the contracts.

Article 6

The continental shelf of the People's Republic of Kampuchea comprises the seabed and the subsoil of the submarine areas that extend beyond the territorial waters throughout the natural prolongation of its land territory to a distance of 200 nautical miles from the baseline used to measure the width of the territorial waters of the People's Republic of Kampuchea.

The People's Republic of Kampuchea exercises sovereign rights over its continental shelf for the purposes of exploration, exploitation, preservation and management of its natural resources comprising mineral resources and other inorganic resources belonging to sedentary species living on the continental shelf.

The People's Republic of Kampuchea has the exclusive right to regulate the setting up and use of installations, devices and artificial islands or drilling on its continental shelf for the purpose of exploration, exploitation or any other purpose.

All activities carried out by foreigners on the continental shelf of Kampuchea, for whatever end, must be the object of an authorization or an agreement by the Government of the People's Republic of Kampuchea and conform with the laws and regulations of the People's Republic of Kampuchea.

Article 7

The People's Republic of Kampuchea will settle, by means of negotiations with interested States, all problems concerning the maritime zones and continental shelf in a fair and logical manner on the basis of the mutual respect for sovereignty, independence and territorial integrity.

Article 8

The People's Republic of Kampuchea will negotiate and agree with the Socialist Republic of Viet Nam on the maritime border in the historic waters zone of the two countries fixed in the agreement on the historic waters of the two countries signed on 7 July 1982 in line with the spirit and letter of the Treaty of Peace, Friendship and

Cooperation between the two States signed on 18 February 1979.

Article 9

All provisions contrary to this decree are purely and simply abrogated.

Article 10

The minister of national defense, the minister of interior and the ministers concerned are charged, each in his proper field, with the implementation of this decree.

Annex 1

**Baseline retained for the limitation of the territorial waters
of the People's Republic of Kampuchea**

The baseline retained for the limitation of the territorial waters of the People's Republic of Kampuchea is made up of segments of a line passing successively through the following points, the co-ordinates of which are expressed in degrees, minutes and tenths of a minute, the longitude being counted from the meridian of Greenwich.

Number	Geographical Place	Latitude (North)	Longitude (East)
1	Border point on low-water mark between Thailand and the People's Republic of Kampuchea according to Treaty of 23 March 1907	11° 38.8'	102° 54.3'
2	Kaek Kusrovie	11° 06.8'	102° 47.3'
3	Kaek Voar	10° 14.0'	102° 52.5'
4	Poulo Wai	09° 55.5'	102° 53.2'
5	Point O out at sea on the south-west limit of the historic waters Agreement of 7 July 1982 of the People's Republic of Kampuchea		According to the

Appendix 6 Thailand's Baseline Legislation (1970)

Page 1

Announcement of the Office of the Prime Minister, 12 June 1970

...

Reference No.	Geographical Name	<u>Geographical Co-ordinate</u>	
		Lat. N	Long. E.
AREA No. 1			
1	Laem Ling	12° 12.3'	102° 16.7'
2	Ko Chang Noi	12° 09.6'	102° 14.9'
3	Hin Rap	12° 03.1'	102° 14.5'
4	Hin Luk Bat	11° 56.7'	102° 17.2'
5	Ko Rang	11° 46.6'	102° 23.2'
6	Hin Bang Bao	11° 35.8'	102° 32.0'
7	Ko Kut	11° 33.6'	102° 35.7'
8	Thai - Cambodia Boundary Post	--	--
AREA No. 2			
1	Laem Yai	10° 53.7'	99° 31.4'
2	Ko Ran Khai	10° 47.8'	99° 32.6'
3	Ko Ran Pet	10° 46.5'	99° 32.2'
4	Ko Khai	10 41.8'	99° 24.8'
5	Ko Chorakhe	10° 33.6'	99° 25.2'
6	Hin Lak Ngam	10° 30.0'	99° 25.6'
7	Ko Tao	10° 07.5'	99° 50.7'
8	Hin Bai	09° 56.6'	99° 59.7'
9	Ko Kong Thansadet	09° 45.8'	100° 04.7'
10	Ko Phangan	09° 49.0'	100° 05.2'
11	Ko Kong Ok	09° 36.1'	100° 05.8'

National legislation - DOALOS/OLA - United Nations 

12	Ko Mai Lang	09° 32.0'	100° 05.3'
13	Ko Samui	09° 28.3'	100° 04.7'
14	Hin Ang Wang	09° 23.4'	100° 01.8'
15	Ko Rap	09° 17.9'	99° 57.8'
16	Laem Na Tham	09° 12.4'	99° 53.2'
AREA No.3			
1	Ko Phuket	07° 46.5'	98° 17.5'
2	Ko Kaeo Noi	07° 43.9'	98° 18.0'
3	Ko Hi	07° 44.0'	98° 21.7'
4	Ko Mai Thon	07° 44.9'	98° 28.7'
5	Ko Kai	07° 44.6'	98° 37.1'
6	Ko Bida Nok	07° 39.2'	98° 46.2'
7	Ko Ha	07° 36.6'	92° 52.1'
8	Ko Lanta Yai	07° 27.8'	99° 06.0'
9	Ko Ngai	07° 23.8'	99° 12.1'
10	Ko Kradan	07° 17.7'	99° 15.4'
11	Ko Khwang	07° 13.3'	99° 21.7'
12	Ko Beng	07° 04.3'	99° 29.7'
13	Hin Baewa	07° 03.7'	99° 24.0'
14	Ko Tului Yai	07° 00.9'	99° 26.3'
15	Ko Ta Dai	06° 58.8'	99° 28.7'
16	Ko Ayam	06° 47.6'	99° 30.1'
17	Hin Osbon	06° 38.8'	99° 32.5'
18	Ko Tarutao	06° 30.2'	99° 39.1'
19	Hin Bai	06° 30.0'	99° 42.1'
20	Ko Koi Yai	06° 33.9'	99° 50.7'
21	Ko Lima	06° 32.2'	99° 57.4'

22	Ko Khuning	06° 26.7'	100° 08.7'
23	Ko Prasmara	06° 25.4'	100° 05.2'
24	Thai-Malaysia Boundary	--	--

Map

Appendix 7 Thailand's Baseline Legislation (1992)

Page 1

Announcement of the Office of the Prime Minister concerning straight baselines and internal waters of Thailand Area 4, 17 August 1992

Whereas the Announcement of the Office of the Prime Minister concerning the Straight Baselines and Internal Waters of Thailand dated 11 June 1970 was published in Official Gazette, Special vol. 87, Chapter 52, dated 12 June 1970, (1) to proclaim the straight baselines and internal waters of Thailand in 3 areas.

Whereas the Cabinet has deemed it appropriate to proclaim the straight baselines and internal waters of Thailand in another area, that is Area 4, pursuant to the generally accepted principles of international law, as follows:

Area 4

REFERENCE NO.	GEOGRAPHICAL NAME	GEOGRAPHICAL COORDINATES	
		LAT. N.	LONG. E.
1.	KO KONG OK	9° - 36' - 06"	100° - 05' - 48"
2.	KO KRA	8° - 23' - 49"	100° - 44' - 13"
3.	KO LOSIN	7° - 19' - 54"	101° - 59' - 54"
4.	THAI-MALAYSIAN BOUNDARY	6° - 14' - 30"	102° - 05' - 36"

Whereupon the waters within the aforementioned straight baselines are the internal waters of Thailand.

Details of straight baselines and internal waters of Thailand Area 4 appear in the map annexed to this present Announcement.

Announced on 17 August 1992. (2)

Appendix 8

Vietnam's Statement on the Territorial Sea, the Contiguous Zone, the Exclusive Economic Zone and the Continental Shelf of 12 May 1977

The statement which is dated May 12, 1977, and has been approved by the Standing Committee of the SRV National Assembly, reads in full as follows:

The Government of the Socialist Republic of Vietnam,

After approval by the Standing Committee of the National Assembly of the Socialist Republic of Vietnam,

Declares that it has defined the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of the Socialist Republic of Vietnam as follows:

1. The territorial sea of the Socialist Republic of Vietnam has a breadth of 12 nautical miles measured from a baseline which links the furthest seaward points of the coast and the outermost points of Vietnamese offshore islands, and which is the low-water line along the coast.

The waters on the landward side of the baseline constitute internal waters of the Socialist Republic of Vietnam.

The Socialist Republic of Vietnam exercises full and complete sovereignty over its territorial sea as well as the superjacent air space and the bed and subsoil of the territorial sea.

2. The contiguous zone of the Socialist Republic of Vietnam is a 12-nautical-mile maritime zone adjacent to and beyond the Vietnamese territorial sea, with which it forms a zone of 24 nautical miles from the baseline used to measure the breadth of the territorial sea.

The Government of the Socialist Republic of Vietnam exercises the necessary control in its contiguous zone in order to see to its security and custom and fiscal interests and to ensure respect for its sanitary, emigration and immigration regulations within the Vietnamese territory or territorial sea.

3. The exclusive economic zone of the Socialist Republic of Vietnam is adjacent to the Vietnamese territorial sea and forms with it a 200-nautical-mile zone from the baseline used to measure the breadth of Vietnam's territorial sea.

The Socialist Republic of Vietnam has sovereign rights for the purpose of exploring, exploiting, conserving and managing all natural resources, whether living or non-living, of the waters, the bed and subsoil of the exclusive economic zone of Vietnam; it has exclusive rights and jurisdiction with regard to the establishment and use of installations and structures, artificial islands; exclusive jurisdiction with regard to other activities for

the economic exploration and exploitation of the exclusive economic zone; exclusive jurisdiction with regard to scientific research in the exclusive economic zone of Vietnam; the Socialist Republic of Vietnam has jurisdiction with regard to the preservation of the marine environment, and activities for pollution control and abatement in the exclusive economic zone of Vietnam.

4. The continental shelf of the Socialist Republic of Vietnam comprises the seabed and subsoil of the submarine areas that extend beyond the Vietnamese territorial sea throughout the natural prolongation of the Vietnamese land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baseline used to measure the breadth of the Vietnamese territorial sea where the outer edge of the continental margin does not extend up to that distance.

The Socialist Republic of Vietnam exercises sovereign rights over the Vietnamese continental shelf in the exploration, exploitation, preservation and management of all natural resources, consisting of mineral and other non-living resources, together with living organisms belonging to sedentary species thereon.

5. The islands and archipelagos, forming an integral part of the Vietnamese territory and beyond the Vietnamese territorial sea mentioned in Paragraph 1, have their own territorial seas, contiguous zones, exclusive economic zones and continental shelves, determined in accordance with the provisions of Paragraphs 1, 2, 3 and 4 of this statement.

6. Proceeding from the principles of this statement, specific questions relating to the territorial sea, the contiguous zone, the exclusive economic zone, and the continental shelf of the Socialist Republic of Vietnam will be dealt with in detail in further regulations, in accordance with the principle of defending the sovereignty and interests of the Socialist Republic of Vietnam, and in keeping with international law and practices.

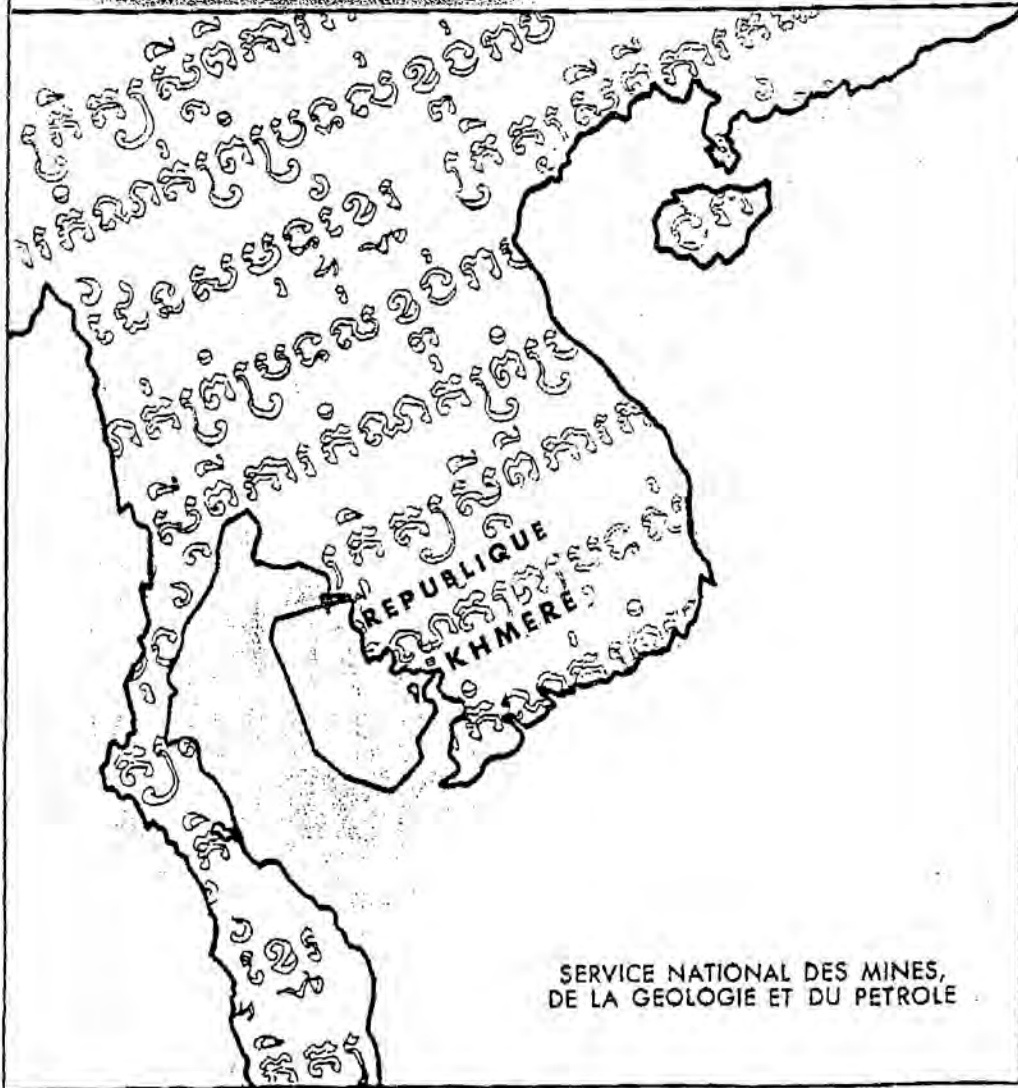
7. The Government of the Socialist Republic of Vietnam will settle with the countries concerned, through negotiations on the basis of mutual respect for independence and sovereignty, in accordance with international law and practices, the matters relating to the maritime zones and the continental shelf of each country.

Source: FBIS Daily Report: Asia and Pacific, 24 May 1977.

Appendix 9 Cambodian *Kret* No. 439-72/PRK, 1 July 1972

សាធារណរដ្ឋខ្មែរ
REPUBLIQUE KHMER

**ក្រឹត្យស្តីពីការកំណត់ព្រំប្រទល់
ខ្ពង់រាបដីទទឹងសមុទ្រខ្មែរ**
**DECRET PORTANT DELIMITATION
DU PLATEAU CONTINENTAL KHMER**



SERVICE NATIONAL DES MINES,
DE LA GEOLOGIE ET DU PETROLE

ក្រឹត្យ

LE PRESIDENT DE LA REPUBLIQUE KHMERE

Vu la Constitution de la République Khmère ;

Vu l'Ordonnance N°-1/71-CE du 18 Octobre 1971 régissant les questions relevant du domaine de la Loi ;

Vu l'Ordonnance N°-17/72-CE du 12 Mars 1972 définissant le titre du Chef de l'Etat de la République Khmère ;

Vu l'Ordonnance N°-2/72-PRK du 12 Mars 1972 conférant les pouvoirs du Chef du Gouvernement au Président de la République Khmère ;

Vu le Kret N°-187/72-PRK du 21 Mars 1972 modifié par les textes subséquents portant nomination du Cabinet Ministériel ;

Le Conseil des Ministres entendu ;

ORDONNE :

ARTICLE PREMIER.— En application des clauses de la Convention de Genève du 29 Avril 1958 sur le Plateau Continental à laquelle la République Khmère a adhéré et du Traité Franco-Siamois du 23 Mars 1907 et le Procès-Verbal de délimitation de la frontière du 8 Février 1908, la limite extérieure du Plateau Continental de la République Khmère est fixée comme l'indique la carte N°-1972 de la Marine française à l'échelle 1/1.096.000 annexée au présent Kret avec les coordonnées de ses points repères suivantes :

La délimitation latérale Nord entre les zones du Plateau Continental relevant de la souveraineté respective de la République Khmère et de la Thaïlande est constituée par une ligne droite joignant le point frontière "A" sur la côte au plus haut sommet de l'île de Koh Kut "S" et se prolongeant jusqu'au point P, ces points A et P sont définis ci-après :

	LONGITUDES EST GREENWICH	LATITUDES NORD
POINT A Ce point étant le point frontière sur la côte (Traité de Bangkok du 23 Mars 1907)	102°54'81	11°38'88
POINT P Point équidistant de la base cambodgienne A - Ilôt Kusrovie et de la ligne de base thaïlandaise opposée	101°20'00	11°32'00

ARTICLE 2. - La délimitation de la ligne médiane (direction Nord-sud) est constituée par une ligne brisée partant du point P et passant successivement sur les points P_{ck1} - P_{ck2} - P_{ck3} - P_{ck4} - P_{ck5} - P_{ck6} - P_{ck7} - P_{ck8} - P_{ck9} - P_{ck10} - P_{ck11} - P_{ck12} - P_{ck13} et B point frontière avec le Sud-Vietnam ci-après définis et reportés sur la carte jointe en annexe :

	LONGITUDES EST GREENWICH	LATITUDES NORD
P _{ck1} Point équidistant d'une part de l'îlot cambodgien de Kusrovie et d'autre part des points thaïlandais suivants : îlot Koh Charn et point 8 Area 2 (Hin Bai)	101°13'00	10°59'00
P _{ck2}	101°29'00	10°16'50
P _{ck3}	101°36'00	9°05'00
P _{ck4} <i>Island Krao Noi</i>	101°57'50	8°31'00
P _{ck5} <i>Island Pulo Anjan</i>	102°59'50	7°42'00
P _{ck6} <i>Island</i>	103°21'00	7°34'00
P _{ck7} <i>Island</i>	104°08'00	9°01'00
P _{ck8}	104°01'00	9°18'00
P _{ck9}	104°08'50	9°38'50
P _{ck10}	104°16'50	9°56'00
P _{ck11}	104°15'00	10°01'00
P _{ck12}	104°10'50	10°05'00
P _{ck13}	104°09'00	10°12'00
B point frontière avec Sud-Vietnam	104°26'63	10°25'23

ARTICLE 3.— La carte marine n° 1972 de la Marine française - Edition 1949 à l'échelle 1/1.096.000* est jointe au présent Kret.

Toute référence au Kret implique en même temps une référence à la carte n° 1972.

ARTICLE 4.— Toutes dispositions contraires au présent Kret sont purement et simplement abrogées.

ARTICLE 5.— Le Ministre des Affaires Etrangères et le Ministre de l'Industrie, des Ressources minières et des Pêches maritimes sont chargés, chacun en ce qui le concerne, de l'exécution du présent Kret./.

Fait à Phnom-Penh, le 1er Juillet 1972

Signé : **LON NOL**

Présenté à la signature du
PRESIDENT DE LA REPUBLIQUE KHMERE
par
LE MINISTRE DE L'INDUSTRIE, DES RESSOURCES
MINIERES ET DES PECHEES MARITIMES,

Signé : **CHHANN SOKHUM**

POUR AMPLIATION,
LE SECRETAIRE GENERAL
DU GOUVERNEMENT,

Signé : **OUK SOUN**

DESTINATAIRES :

- Dircabinet du Président de la République Khmère
- Préconseil (SGG) - JOC.
- IGARK - IAPA.
- Tous Municipalités - Khéts et Anoukhéts.
- Tous Ministères - Trésor.
- Cab-DG-IG-Toutes Directions et Inspections-Sec P&M et tous bureaux relevant du MinIndustrie.
- Ex. Assemblée Constituante.
- Archives et Bibliothèque Nlo.

Fait à Phnom-Penh
June 12 1970

POUR COPIE CONFORME
P.LE MINISTRE DE L'INDUSTRIE,
DES RESSOURCES MINIERES
ET DES PECHEES MARITIMES,
LE DIRECTEUR DU SERVICE NATIONAL
DES MINES, DE LA GEOLOGIE ET DU
PETROLE,

SEAN PENGSE

Appendix 10
Proclamation on Demarcation of the Continental Shelf of Thailand in the Gulf of Thailand, 18 May 1973

His Majesty the King is graciously pleased to proclaim that

For the purpose of exercising the sovereignty rights of Thailand in exploring and exploiting natural resources of the Gulf of Thailand, the continental shelf shall therefore be demarcated according the map and geographical co-ordinates of each point constituting the continental shelf of Thailand annexed to this Proclamation as the continental shelf of Thailand in the Gulf of Thailand.

The continental shelf has been demarcated on the basis of the right according to the generally accepted principles of international law and the Convocation on the Continental Shelf done at Geneva on 29th April 1958 and ratified by Thailand on 2nd July 1968 has been taken into account.

The map and connecting points determining geographical co-ordinates under this Proclamation are to show the general demarcation lines of the continental shelf. As for the sovereignty rights over the territorial sea adjacent to the territorial sea of the neighbouring countries, which will be taken as starting point of the line dividing the continental shelf, it will be according to future agreement on the basis of the provisions of the Convention on the Territorial Sea and the Contiguous Zone done at Geneva on 29th April 1958.

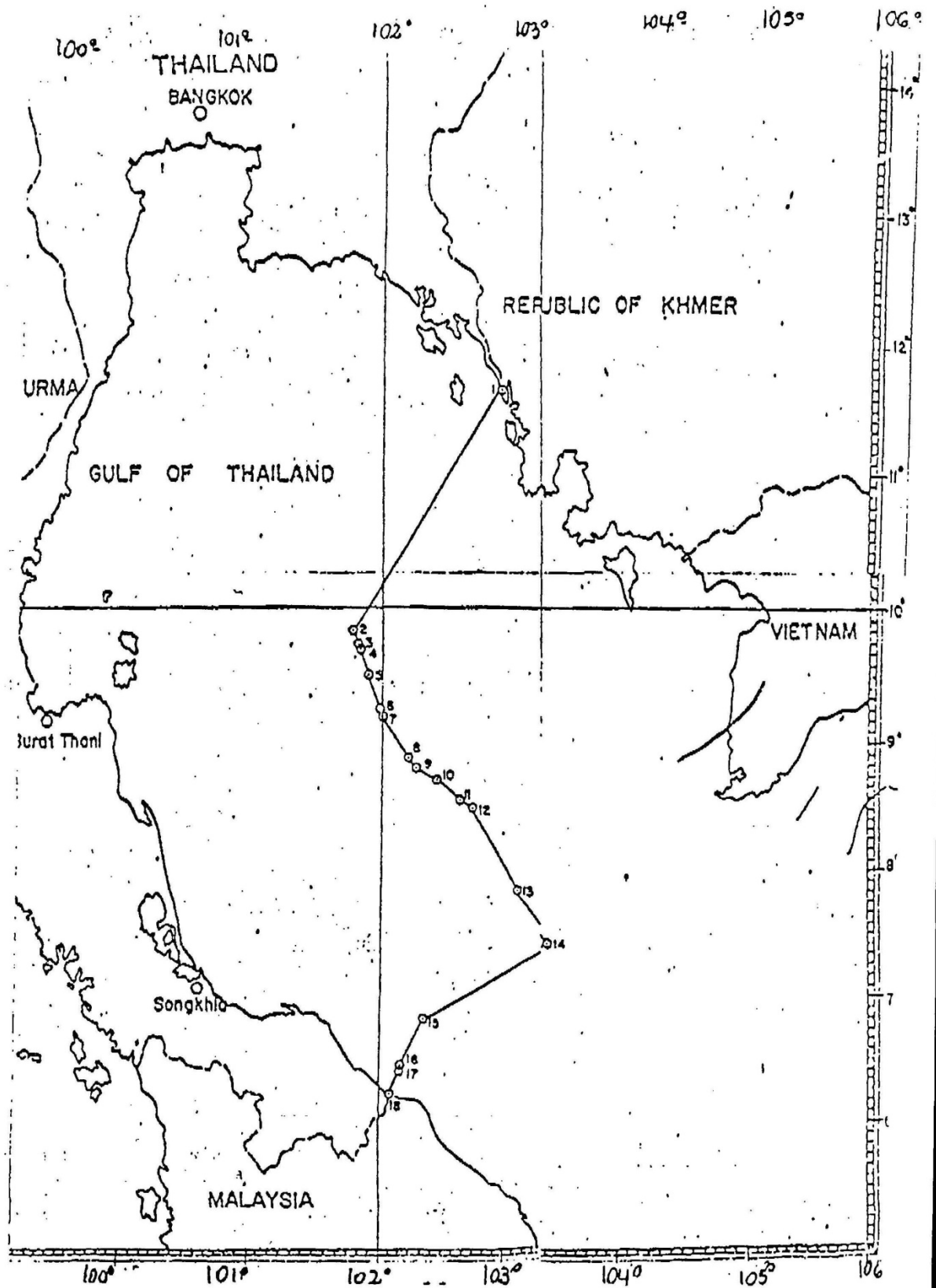
Given the 18th May B.E. 2516, being the 28th year of the present Reign.

Countersigned by

Field Marshall Thanom Kittikachorn
Prime Minister

Geographical coordinates of the connecting points constituting the continental shelf of Thailand in the Gulf of Thailand

Numerical point	Latitude North	Longitude East
1	11°39'.0	102°55'.0
2	09°48'.5	101°46'.5
3	09°43'.0	101°48'.5
4	09°42'.0	101°49'.0
5	09°28'.5	101°53'.5
6	09°13'.0	101°58'.5
7	09°11'.0	101°59'.0
8	08°52'.0	102°13'.0
9	08°47'.0	102°16'.5
10	08°42'.0	102°26'.5
11	08°33'.0	102°38'.0
12	08°29'.0	102°43'.0
13	07°49'.5	103°05'.5
14	07°25'.0	103°24'.8
15	06°50'.0	102°21'.2
16	06°27'.8	102°09'.6
17	06°27'.5	102°10'.0
(18)	06°14'.5	102°05'.6



Appendix 11 Coordinates of South Vietnam's 6 June 1971 Continental Shelf

Points	Latitude	Longitude	Points	Latitude	Longitude
1	8°19'N	104°50'E	18	10°03'	103°31'
2	8°33'	105°27'	19	10°22'	103°41'
3	9°00'	105°40'	20	10°29'	103°45'
4	9°25'	106°45'	21	10°31'	103°45'
5	10°09'	107°06'	22	10°31'	103°47'
6	10°32'	108°00'	23	10°30'	103°54'
7	11°00'	108°35'	24	10°30'	103°57'
8	11°00'	110°00'	25	10°29'	104°04'
9	7°05'	110°00'	26	10°24'	104°11'
10	5°20'	107°20'	27	10°23'	104°20'
11	7°03'	102°52'	28	10°28'	104°21'
12	7°34'	103°19'	29	10°14'	104°22'
13	7°42'	102°58'	30	10°23'	104°24'
14	8°31'	101°56'	31	10°00'	104°31'
15	9°36'	101°30'	32	8°36'	104°31'
16	10°09'	101°27'	33	8°26'	104°36'
17	10°09'	102°58'			

Appendix 12

Royal Proclamation establishing the Exclusive Economic of the Kingdom of Thailand, 23 February 1981

Page 1

Royal Proclamation establishing the Exclusive Economic Zone of the Kingdom of Thailand, 23 February 1981

By Royal Command of His Majesty the King, it is hereby proclaimed that:

For the purpose of exercising the sovereign rights of the kingdom of Thailand with regard to the exploration and conservation of the natural resources, whether living or non-living, of the sea. It is deemed appropriate to establish the exclusive economic zone of the Kingdom of Thailand as follows:

1. The exclusive economic zone of the Kingdom of Thailand is an area beyond and adjacent to the territorial sea whose breadth extends to two hundred nautical miles measured from the Baselines used for measuring the breadth of the territorial sea.
2. In the exclusive economic zone, the Kingdom of Thailand has:
 - (a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the seabed and subsoil and the superjacent waters, and with regard to other activities for the economic exploration and exploitation of the zone, such as the production of energy from the water, currents and winds.
 - (b) jurisdiction with regard to :
 - (i) the establishment and use of artificial islands, installations and structures;
 - (ii) marine scientific research;
 - (iii) the preservation of the marine environment.
 - (c) other rights as may exist under international law.
3. In the exclusive economic zone, the freedoms of navigation and overflight and of the laying of submarine cables and pipelines shall be governed by international law.
4. In any case where the exclusive economic zone of the Kingdom of Thailand is adjacent or opposite to the exclusive economic zone of another coastal State, the Government of the Kingdom of Thailand is prepared to enter into negotiations with the coastal State concerned with a view to delimiting their respective exclusive economic zones.

Proclaimed on the 23rd day of February, B.E 2524, being the thirty sixth year of the present Reign.

Appendix 13

Agreement on Historic Waters of Vietnam and Kampuchea, 7 July 1982

The Government of the Socialist Republic of Vietnam and the Government of the People's Republic of Kampuchea,

DESIROUS of further consolidating and developing the special Vietnam-Kampuchea relations in the spirit of the Treaty of Peace, Friendship and Cooperation between the Socialist Republic of Vietnam and the People's Republic of Kampuchea signed on February 18, 1979.

CONSIDERING the reality that the maritime zone situated between the coast of Kien Giang Province, Phu Quoc Island, and the Tho Chu archipelago of the Socialist Republic of Vietnam on the one side, and the coast of Kampot Province and the Poulou Wai group of islands of the People's Republic of Kampuchea on the other, encompasses waters which by their special geographical conditions and their great importance for the national defence and the economy of both countries have long belonged to Vietnam and Kampuchea,

HAVE AGREED ON THE FOLLOWING:

Article 1

The waters located between the coast of Kien Giang Province, Phu Quoc Island, and the Tho Chu archipelago of the Socialist Republic of Vietnam on the one side, and the coast of Kampot Province and the Poulou Wai group of islands of the People's Republic of Kampuchea on the other, form the historical waters of the two countries placed under the juridical regime of their internal waters and are delimited (according to the Greenwich east longitude):

To the northwest by a straight line stretching from coordinates 09 degrees 54'2" north latitude – 102 degrees 55'2" east longitude and coordinates 09 degrees 54'5" north latitude – 102 degrees 57'2" east longitude of Poulou Wai Islands (Kampuchea) to coordinates 10 degrees 24'1" north latitude – 103 degrees 48'0" east longitude and 10 degrees 25'6" north latitude – 103 degrees 49'2" east longitude of the Koh Ses Island (Kampuchea) to coordinates 10 degrees 30'0" north latitude – 103 degrees 47'4" east longitude of Koh Thmei Island (Kampuchea) to coordinates 10 degrees 32'4" north latitude – 103 degrees 48'2" east longitude on the coast of Kampot Province (Kampuchea).

To the north by the coast of Kampot Province stretching from coordinates 10 degrees 32'4" Lat. N. – 103 degrees 48'2" Long. E. on the terminus of the land border between Vietnam and Kampuchea on the coast.

To the southeast by a line stretching from the terminus of the land border between Vietnam and Kampuchea on the coast to coordinates 10 degrees 04'42" Lat. N. – 104

degrees 02'3" Long. E. from the An Yet point of Phu Quoc Island (Vietnam) and along the northern coast of this island to the Dat Do point situated at coordinates 10 degrees 02'8" Lat. N. – 103 degrees 59'1" Long. E., and from there to coordinates 09 degrees 10'1" Lat. N. – 103 degrees 26'4" Long. E. of Thu Chu Island (Vietnam) to coordinates 09 degrees 15'0" Lat. N. – 103 degrees 27'0" Long. E. of Hon Nhan Island in the Tho Chu archipelago (Vietnam).

To the southwest by a straight line stretching from coordinates 09 degrees 55'0" Lat. N. – 102 degrees 53'5" Long. E. from Puolo Wai Islands (Kampuchea) to coordinates 09 degrees 15'0" Lat. N. – 103 degrees 27'0" Long. e. of Hon Nhan Island in the Tho Chu archipelago (Vietnam).

Article 2

The two sides will hold at a suitable time negotiations in the spirit of equality, friendship, and respect for each other's independence, sovereignty, territorial integrity, and the legitimate interests of each side in order to delimit the maritime frontier between the two countries in the historical waters mentioned in Article 1.

Article 3

Pending the settlement of the maritime border between the two States in the historical waters mentioned in Article 1:

The meeting point 0 of the two baselines used for measuring the width of the territorial waters of each country situated on the high seas on the straight baseline linking the Tho Chu archipelago and Poulo Wai Islands will be determined by mutual agreement.

The two sides continue to regard the Brévié Line drawn in 1939 as the dividing line for the islands in this zone.

Patrolling and surveillance in these territorial waters will be jointly conducted by the two sides.

The local populations will continue to conduct their fishing operations and the catch of other sea products in this zone according to the habits that have existed so far.

The exploitation of natural resources in this zone will be decided by common agreement.

DONE in Ho Chi Minh City on the 7th of July 1982, in two languages, Vietnamese and Khmer, both being equally valid.

For the Government of the Socialist Republic of Vietnam: Nguyen Co Thach, Minister of Foreign Affairs of the Socialist Republic of Vietnam.

For the Government of the People's Republic of Kampuchea: Hun Sen, Minister of Foreign Affairs of the People's Republic of Kampuchea.

Appendix 14 The Brevie Line. 31 January 1939

Directorate of Political Affairs
Number 867/API

Hanoi, 31 January 1939
The Governor General of Indochina
Grand Officer of the Legion d'Honneur

To the Governor of Cochin China
(I Bureau) in Saigon

Subject: Islands in the Gulf of Siam

I have the honor of informing you that I have just reexamined the question of the islands of the Gulf of Siam, the possession of which is disputed between Cambodia and Cochin China.

The situation of this group of islands, scattered along the Cambodian coast and some of which are so near the coast that land filling presently being carried out will seem to fuse them to the Cambodian coast in a relatively near future, logically and geographically requires that these islands be under the jurisdiction of the Administration of Cambodia.

I believe that it is impossible to let the present state of affairs continue as it is, which is forcing the inhabitants of these islands to refer, either at the price of a long crossing, or at the price of a long detour through Cambodian territory, to the Administration of Cochin China.

As a consequence, I have decided that all the islands located north of the line perpendicular to the coast starting from the border between Cambodia and Cochin China and making a 140 grad angle with the north meridian, in accordance with the attached chart, will be from now on administered by Cambodia. The Protectorate will, in particular, take over the police of these islands.

All the islands south of this line, including the islands of Phu-Quoc, will continue to be administered by Cochin China. It is understood that the demarcation line thus made will make a line around the north of the island Phu-Quoc, passing three kilometers from the extreme ends of the north shore of this island.

Administration and police powers on these islands will thus be clearly distributed between Cochin China and Cambodia, so that all the future disputes might be avoided.

It is understood that the above pertains only to the administration and policing of these islands, and that the issue of the islands' territorial jurisdiction remains entirely reserved.

You will please make provisions so that my decision is immediately put into effect.

Please notify me of the receipt of this letter.

Signed: BREVIÉ

Appendix 15

Franco-Siamese Boundary Treaty, 23 March 1907

The President of the French Republic and His Majesty the King of Siam following the delimitation undertaken in execution of the Convention of 13 February 1904, desiring on the one hand to ensure the final settlement of all questions connected with the common boundaries of Indo-China and Siam by a reciprocal and rational system of exchanges, and desiring on the other hand to ease relations between the two countries by the progressive introduction of a uniform legal system and by the extension of the rights of those citizens under French jurisdiction established in Siam, have decided to conclude a new treaty, and have named to this effect their plenipotentiaries as follows:

The President of the French Republic: R. Victor-Emile-Marie-Joseph Collin (de Plancy) Ambassador Extraordinary and Plenipotentiary Minister of the French Republic to Siam, Officer of the Legion of Honour and Public Instruction;

His Majesty the King of Siam: His Royal Highness Prince Devawongse Varoprakar, Knight of the Order of Maha-Chakri, Commanding Officer of the Legion of Honour, etc., Minister of Foreign Affairs;

Who, provided with full authority, which has been found in due and proper form, agreed to the following dispositions:

Article I

The Siamese Government cedes to France the territories of Battambang, Siem-Reap and Sisophon, whose boundaries are defined in Clause I of the Protocol of Delimitation annexed to this Treaty.

Article II

The French Government cedes to Siam the territories of Dan-Sai and Kratt, whose borders are defined in Clauses I and II of the aforementioned Protocol, also all the islands situated to the south of Cape Lemling as far as and including Koh-Kut.

Article III

The exchange of these territories will take place within twenty days after the date of the ratification of the present Treaty.

Article IV

A Mixed Commission composed of French and Siamese officers and officials, will be named by the two contracting Countries, within four months of the ratification of the

present Treaty, and charged with settling the new boundaries. It will commence work as soon as the weather allows and they will follow and conform to the Protocol of Delimitation annexed to the present Treaty.

Article V

[Legal arrangements for aliens]

Article VI

[Rights of French citizens in Siam]

Article VII

[Treaties unaffected by the present Treaty to remain in force]

Article VIII

[French version of the Treaty authoritative]

Article IX

[Ratification]

Done in Bangkok in duplicate on 23 March 1907.

V. Collin (de Plancy)
Devawongse Varoprakar

Annexe 1 Protocol of delimitation

In order to facilitate the work of the Commission referred to in Article IV of the Treaty dated this day, and to avoid all possibility of difficulty in the delimitation, the Government of the French Republic and His Majesty the King of Siam have agreed as follows:

Clause I

The boundary between French Indo-China and Siam leaves the sea at a point situated opposite the highest point of Koh-Kut island. From this point it follows a northeasterly direction to the crest of Pnom-Krevanh. It is formally agreed that in every case the sides of these mountains which belong to the Klong-Kopo basin remain in French Indo-China. The boundary follows the crest of the PnomKrevanh in a northerly direction to Pnom-Thom which is found on the main water parting between the rivers which flow into the Gulf of Siam and those which flow towards the Grand Lac. From Pnom-Thom, the border then follows in a northwesterly direction, then a northerly direction the actual boundary between the Provinces of Battambang on one side and those of Chantaboun

and Kratt on the other side, as far as a point where the boundary cuts the river Nam-Sai. It then follows the course of this river as far as its confluence with the Sisophon river and then the latter to a point situated ten kilometres below the village of Aranh. From this last point it continues in a straight line to a point on the Dang-Reck, halfway between the Chong-Ta-Kob and Chong-Sa-Met passes. It is understood that this line must leave a direct route between Aranh and Chong-Ta-Koh in Siamese territory.

From the point mentioned above, situated on the crest of the Dang-Reck, the boundary follows the line of the water-parting between the basin of the Grand Lac and the Mekong on one side and the Nam-Moun on the other side, and reaches the Mekong below Pak Moun, at the mouth of the Huei-Doue, conforming to the line adopted by the previous delimitation Commission of 18 January 1907.

A rough draft of the boundary described above is annexed to the present Protocol.

Clause II

On the side of Luang-Prabang, the boundary leaves the Mekong at the mouth of the Nam-Huong in the south and follows the thalweg of this river as far as its source, which is situated at Phu-Khao-Mieng. From there the boundary follows the water-parting between the Mekong and the Menam, and meets the Mekong at a point called Keng-Pha-Dai, conforming to the line adopted by the previous Delimitation Commission of 16 January 1906.

Clause III

The Delimitation Commission authorised by Article IV of the Treaty of today's date will determine and trace, on the basis of the terrain, that part of the boundary described in Clause I of the present Protocol. If in the course of these operations the French Government desires to obtain a rectification of the boundary with the aim of substituting natural lines for the conventional lines, this rectification must not be made to the detriment of the Siamese Government.

The respective Plenipotentiaries have signed the present protocol and affixed their seals.

Done in duplicate in Bangkok 23 March 1907.

V. Collin (de Plancy)
Devawongse Varoprakar

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