STIMSON

REGIONAL
VOICES

The Indian Ocean

Resource and Governance Challenges

ELLEN LAIPSON
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Editors

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PRAGMATIC STEPS FOR GLOBAL SECURITY

Contents

Based in Dubai, United Arab Emirates, the **Gulf Research Center** (GRC) is a privately funded, nonpartisan think tank, education provider, and consultancy specializing in the Gulf region (the six Gulf Cooperation Council countries, and Iran, Iraq, and Yemen). Established in 2000, the Center conducts research on political, social, economic, security, and environmental issues from a Gulf perspective, redressing the current imbalance in Gulf area studies, where regional opinions and interests are underrepresented. With "Knowledge for All" as its motto, the GRC strives to promote different aspects of development and facilitate reforms in the region in order to secure a better future for its citizens.

The Henry L. Stimson Center, located in Washington, DC, is a nonprofit, nonpartisan institution devoted to offering practical solutions to problems of national and international security. Since its establishment in 1989, Stimson has been committed to meaningful impact, a thorough integration of analysis and outreach, and a creative and innovative approach to global security challenges. Stimson has three basic program areas: reducing the threat of weapons of mass destruction, building regional security, and strengthening institutions of international peace and security. These program areas encompass work on a wide range of issues, from nonproliferation to transnational challenges in Asia, from UN peacekeeping operations to analyzing the resources needed for 21st century statecraft.

Preface

Stimson's *Regional Voices: Transnational Challenges* project is devoted to enhancing the information and analysis available to US policymakers about emerging transnational security challenges in the Middle East, South Asia, Southeast Asia, and East Africa. The project draws on analysis by technical and subject experts, as well as by political and strategic thinkers.

The knowledge and analysis are developed by means of dialogue among experts from various disciplines and occupational backgrounds. Our work includes the organization of workshops in the regions, partnerships with regional institutions and individuals, interviews in the field, and research. We have sought the input of experts and practitioners who constitute new voices in the conversation with the US government. We have not shied away from perspectives that dissent from conventional wisdom, as long as they represent significant bodies of opinion in the countries of the regions.

In 2007, we organized our work by region and sought to arrive at an understanding of perspectives specific to each. This was reflected in our 2008 publication *Transnational Trends: Middle Eastern and Asian Views*. During 2008, we have engaged in dialogue and collaboration across all the regions and organized our work topically on themes as varied as the political economy of natural resources, climate change and river systems, maritime resources and security in the Indian Ocean, and the relationship between Islam and politics.

We have tried to integrate these varied inquiries by asking the following overarching questions:

- What are the key relationships among social, economic, environmental, technological, and political trends? How do these trends relate to traditional security concerns? What new sources of instability, crisis, or conflict are found in these, and with what consequences?

- How does the current public policy debate address the technical, governance, and cultural challenges of these specialized subject areas?

- How do political structures and cultural traditions constrain or facilitate effective responses?

- What are the current examples and future opportunities for transnational cooperation?
- What are the social, political, and security consequences of rapid change?

We have sought throughout to maintain a transnational perspective, to look at trends or threats that transcend national borders or are national in scope but recur in many societies in a region. In all our conversations, conferences, meetings, roundtables, and focus groups, we have sought to elicit the most candid possible discussion, and we have done so by explicitly placing all conversations off the record and not for attribution.

Each volume in the present series consists of essays on some of these questions by experts and thinkers from the regions covered, accompanied by one or more essays by Stimson scholars designed to synthesize and analyze our findings and describe the key trends that we have noted.

Amit Pandya
Director, *Regional Voices: Transnational Challenges*

Acknowledgments

This volume would not have been possible without the generous contribution of time, energy, and intellectual analysis of numerous experts abroad and in the United States. In addition, many people worked tirelessly behind the scenes to shepherd it through all stages of publication.

Our partner the Gulf Research Center in Dubai, United Arab Emirates, deserves special thanks for helping us design the initial concept and carry out a workshop of international experts in Dubai in October 2008. I am particularly indebted to the hospitality and intellectual vigor provided by Chairman Abdulaziz O. Sager as well as Christian Koch, Mustafa Alani, and Mohamed Raouf.

I also wish to express deep appreciation to the meeting participants and interviewees who provided valuable insights into the complex issues addressed here, including a group of knowledgeable experts in Washington who generously helped shape the conceptual and intellectual side of the workshop and subsequently this volume.

I am indebted to chapter authors Mustafa Alani, Edward N. Kimani, Mak Joon Num, and Geethangani de Silva for their valuable analytical contributions and their patience with the process of publication.

This volume owes its existence to the contributions of the *Regional Voices* team and others who worked behind the scenes. Research Associates Jumaina Siddiqui and Duaa Elzeney played an essential role in the organization of the Dubai workshop. Jumaina Siddiqui also provided valuable research and logistical support for the volume. Director Amit Pandya, who coedited this volume, brings enormous vision and intellectual leadership to the entire *Regional Voices* endeavor. Stimson's Director for External Relations, Nancy Langer, played a significant role in bringing this volume to completion; as did Laura Kim, who is largely responsible for the production values. I am particularly grateful to Kendra Patterson, Laura Kim, and Elizabeth Benedict for their careful editorial work. Contract Analyst Nicole Zdrojewski, who manages operations for the entire project, provided indispensable support throughout the process. Project interns Daniel Asin and Rebecca Bruening also contributed important research assistance.

Ellen Laipson
President and CEO, Stimson Center
April 2009

Introduction

Stimson's work on maritime issues explores the current realities and emerging concerns in the Indian Ocean, both for littoral states as well as the countries that conduct trade and commerce in its waters. The maritime realm is transnational by nature, and is yet arguably least regulated by consensual multilateral rules and instruments. The control of navigation has historically been the prerogative of the militarily strong, and exploitation of marine resources outside of the near coastal zones has conferred advantage on the technologically and financially well endowed. The lack of regulation has led to predatory phenomena such as well-financed and mobile pirates as well as coastal brigands. The former have been most successful in environments of weakness or failure of littoral states, whereas the latter have reflected a deterioration in livelihoods, governance, and the environment in coastal communities.

The Indian Ocean: Resource and Governance Challenges provides a variety of perspectives on the critical maritime concerns facing this region. It presents analyses by regional experts as well as by Stimson staff. The content of this volume draws substantially on a two-day cross-regional workshop held in October 2008 in Dubai, co-hosted by Stimson and the Gulf Research Center. The workshop focused on maritime concerns facing Indian Ocean littoral states, and gathered experts from academia, think tanks, government, business, and NGOs, as well as former naval officials. Our regional authors also participated in the workshop. The basis of our analysis also includes interviews and literature from the field, as well as consultations with US experts in Washington, DC.

Some of the topics addressed in this volume are social and economic—from the rising importance of the region in global trade to the tragedy of human trafficking. Other topics are scientific, such as fisheries and environmental degradation. Yet others are in a more traditional security realm, with rising Asian powers looking to naval prowess as one aspect of their national power and influence, and the concern of all littoral states to protect energy supplies and prevent terrorism and proliferation of illicit weapons and materials. Regional cooperation and governance of the maritime space is another topic on which we focus, analyzing existing mechanisms to develop policy prescriptions and best practices. This volume explores all these issues, and tries to illuminate how they interact and present new security dilemmas for states and societies.

The volume is divided into two sections. In "Perspectives from the Regions," four experts from different parts of the Indian Ocean region address a variety of maritime concerns: fisheries, livelihoods, and food security; environmental degradation; maritime security cooperation; and piracy and terrorism. The papers examine the interconnected nature of these issues—how the decline in fisheries correlates with economic insecurity and crime; how regional maritime cooperation is hindered by different priorities on security and development; and how civil society might play a role in promoting greater regional cooperation at the state level, through growing networks of NGOs addressing environmental concerns. All of the papers highlight the acute need for more comprehensive multilateral cooperation by moving the discussion of maritime security and resources from a state-to-state conversation to a regional and international one.

Edward Kimani, with coauthors Gladys Okemwa and Johnson Kazungu, highlights current trends and the economic impact of the industry in eastern Africa. While fisheries provide both food security and social stability to the region's growing populations, a lack of scientific and economic resources has inhibited their contribution to economic development. Pervasive illegal fishing, environmental issues, and lack of coordination to regulate and monitor international fishing companies and local fishers contribute to the overexploitation of fish stocks. However, Kimani and his coauthors emphasize the difficulty in providing an accurate picture of the impact of overfishing because of underreporting and poor statistics on actual catches. They also address the difficulties and trade-offs in managing this resource. They argue that while there have been some efforts to govern fisheries from national, regional, and international levels, they have been hindered by a lack of a comprehensive approach to manage both national exclusive economic zones and international water resources. Convergence of these issues, Kimani and his coauthors warn, could provide fertile ground for conflict over these and other maritime resources.

Mak Joon Num provides an overview of the maritime security concerns in Malaysian waters by focusing on the three main user groups: trawler fishers of Hutan Melintang (located on the western coast of Peninsular Malaysia), pirates based in Sumatra, and Filipino barter traders. He considers all three groups to be victims as well as exploiters. Mak notes that the common assumption is that, owing to the transboundary nature of maritime issues, multilateral cooperation would be "self-evident and inevitable among states." However, the reality is that maritime cooperation between and among states in Southeast Asia remains difficult because of divergent conceptions of core maritime security values as well as differing national and economic priorities.

In "Toward a Comprehensive Maritime Security Arrangement in the Gulf," Mustafa Alani discusses the need for comprehensive maritime security cooperation in the Gulf Cooperation Council states. He describes the historical underpinnings for the lack of a regional

maritime policy in the Gulf, and provides a multilevel model for maritime policy that addresses both "hard" security concerns (traditional threats as well as transnational issues such as terrorism and piracy), and "soft" security concerns such as disaster management, environmental degradation, and coastal zone management. Alani highlights recent national efforts to develop maritime policies that can be used as a foundation for regional policy-making on specific issues. He points to the example of the Abu Dhabi government which developed an environmental plan that could be used as a model for developing a regional environmental plan. Alani points to a number of obstacles that impede closer regional maritime security cooperation. These include the lack of comprehensive legal structures at the state and regional levels, unified political will to develop such cooperation arrangements, trust between and among some of the Gulf states, and the capacity to engage in a broad maritime security project. He notes that much of the national maritime legislation in Gulf countries was enacted upwards of 20 years ago, which hinders cooperation on emerging maritime issues. Alani calls for cooperation initially on a regional level, but finds utility in expanding this network out to other Indian Ocean littoral countries in Eastern Africa and Southern Asia.

Geethangani de Silva, in her essay on maritime issues in South Asia, addresses the region's central role in trade, commerce, and security in the Indian Ocean. South Asia's maritime challenges vis-à-vis the Indian Ocean are numerous according to de Silva: attempts by major powers to gain a foothold in the waters of South Asia; maritime terrorism and transportation of weapons, drugs, and humans by criminal and militant groups; illegal fishing; and environmental degradation. In order to counter these challenges, comprehensive cooperative mechanisms should be developed that focus on the wide array of maritime issues facing South Asian countries. These mechanisms should function on the bilateral, regional, and—eventually—global levels. Comprehensive mechanisms and frameworks on paper will do little good if there is no political will. This is where the author believes that civil society could play an effective role in encouraging proactive political leadership.

In the second section, "Interpreting the Trends," Stimson analysts turn to the overarching issue of governance: can states, regional organizations, and the international community find new ways to cope with the daunting list of Indian Ocean challenges in ways that protect the interests of diverse parties and foster peace? *Regional Voices* Project Director Amit Pandya discusses international law and norms that govern the maritime space—and the gaps that call for more attention. He examines how the core concepts of national jurisdiction and sovereignty are necessary yet insufficient to address the transnational challenges in the Indian Ocean region. Pandya also discusses the role of multilateral organizations and of nonstate actors (commercial and criminal), whose actions shape the security environment for littoral states but are often operating in international, ungoverned waters. Pandya calls on all stakeholders to work, in a spirit of common interest and pooled sovereignty, to

develop effective mechanisms for the Indian Ocean, such as a shared system for tracking seaborne navigation, regulatory efforts with respect to fish stocks, and information sharing on marine geology.

Stimson Center President Ellen Laipson considers the governance questions from a political perspective: what is the will and capacity of regional organizations and nation states in particular to manage the maritime agenda? She notes that many Indian Ocean littoral states have grappled with how to improve maritime policymaking, each from its own vantage point and national interest. Some states, for example, see maritime issues as fundamentally driven by economic interests, while others would give priority to security concerns. At the regional level, each of the major organizations—including the Gulf Cooperation Council, the South Asian Association for Regional Cooperation, and the Association of South East Asian Nations—has self-imposed political constraints on how it views maritime issues. For the 21st century agenda, these regional organizations, along with the international community, will need to develop more robust mechanisms to address the diverse resource and security challenges in the Indian Ocean region.

This collection of essays will provide the general reader with an understanding of the varied policy issues that the maritime arena between Africa and Asia presents. The Indian Ocean region is of increasing importance to world commerce, energy security, and the environment. The countries along its rim, representing many pivotal states in critical economic and political transitions, are important players in determining how the many challenges will be managed. The Indian Ocean story reminds us of globalization's effects: these local and regional dynamics have global impact; therefore, the solutions to the maritime problem set will engage many experts and authorities in the region and beyond.

Perspectives from the Regions

Fisheries in the Southwest Indian Ocean: Trends and Governance Challenges

Edward N. Kimani, Gladys M. Okemwa, and Johnson M. Kazungu

Fish are a renewable natural resource that millions of people around the world depend on for food and livelihoods. In the last half century, the production of fish and fish products in the Indian Ocean (IO) region has increased tremendously as a result of improvements in fish capture technology and rising demand caused by a growing global population. Other dynamic trends that relate to this industry include the IO's growing prominence in the world energy trade, piracy attacks that have led to challenges in maritime security, and environmental stresses brought on by marine and land-based waste and pollution.

This assessment presents an overview of the current and prospective fisheries in the context of other transnational issues that affect the Southwest Indian Ocean (SWIO) region.[*] It also examines key governance challenges, as well as trade-offs that can be made in the short and long term to meet the needs and interests of local fisher communities,[†] national governments, and the international trade mechanisms that shape the region's maritime policies. Finally, it reviews the work of regional and global fishery organizations in managing the IO fisheries.

Overview

Off the coast of East Africa, there are two main types of fisheries: inshore small-scale or artisanal fisheries and industrial, open water fisheries. Artisanal fisheries, in inshore lagoons and coral reef habitats, are exploited using traditional crafts and fishing gear, which is labor intensive and requires low technological input and investment. The targeted fish stocks are mainly inshore and demersal, meaning they are closely associated with a

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[*]The SWIO region includes five continental countries—Kenya, Mozambique, Somalia, South Africa, and Tanzania—and six islands and archipelagos—Comoros, Madagascar, the Maldives, Mauritius, Réunion (France), and the Seychelles.

[†] "Fisher" is the term used by the Food and Agriculture Organization of the United Nations to describe any male or female who takes part in fishing conducted from a fishing vessel, a floating or fixed platform, or the shore.

particular bottom habitat. Industrial fisheries require higher technology and investment, and are located in offshore areas, including territorial waters, exclusive economic zones (EEZs), and international waters. Industrial fishers target a wide range of migratory fish, such as tuna, kingfish, bonito, and mackerel, most of which end up in the export market. Other significant fisheries in the region include prawn trawling in Kenya, Madagascar, Mozambique, and Tanzania, and aquarium and sports fisheries in Kenya, South Africa, and Tanzania. In South Africa, for example, there are over 300,000 people who are recreational anglers.[1] The main SWIO fish exports include crabs, lobsters, octopus, sardines, sea cucumbers, squids, tuna, and aquarium fish.

In recent years, the IO has produced approximately 10 percent of the almost 93 million tons of global fish production. The Western Indian Ocean (WIO) produces about 50 percent of the IO landings, and the SWIO region produces slightly over 10 percent of the total WIO landings. The population of the 11 SWIO countries, as estimated from various censuses and projections, is over 107 million, 47 percent of which lives within 100 kilometers of the coastline. The importance of marine fisheries to the national economies and food security of the SWIO countries varies widely, with small island nations—the Maldives, Mauritius, and the Seychelles—far more dependent on fisheries as a source of animal protein and foreign exchange compared with mainland countries.

Artisanal fisheries still account for the predominant share of catch from coastal areas, which include bays, coral reefs, estuaries, lagoons, mangroves, sandy beaches, seagrass beds, and wetlands. While coastal fisheries are mainly harvested by operators from coastal states, the more profitable offshore oceanic fisheries are harvested by distant water fishing (DWF) fleets from the European Union (EU), Japan, South Korea, and Taiwan, at times without bilateral agreements. The general view is that source countries are not benefiting fully from their offshore fisheries. Because of the gross decline of inshore freshwater and coastal stocks, affected countries are now focusing on maximizing exploitation of their EEZ fish resources to support economic development. Without effective management mechanisms, achieving ecological and economic sustainability will be a challenge in light of the projected needs for increased fishing because of global demand, population growth, and the growing sophistication of fishing technology.

Fishery Production Trends

The IO region has the highest incidence of stocks whose state of exploitation is unknown or uncertain, thereby making projecting fish production unreliable. However, the Food and Agricultural Organization's (FAO's) marine capture statistics show that there has been a steady increase in fish production there, from 861,000 tons in 1950 to 10.2 million tons in 2006 (see figure 1). According to FAO projections, the Indian and the Western Central

**Figure 1: Fishery Production of the Western Indian Ocean between 1950 and 2006**
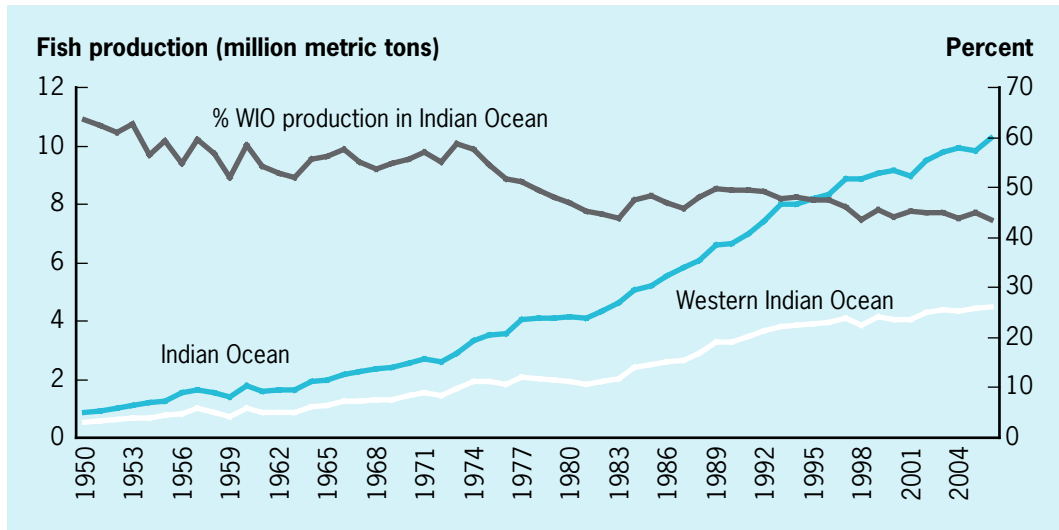
Source: FAO fishery statistics, 2006.

Pacific Oceans are the only oceans that show any potential for further increase in production.[2]

FAO statistics also show that fish production in the SWIO countries has increased from 44,000 tons in 1950 to 532,000 tons in 2006, contributing approximately 5 percent to the total IO production and 13 percent of the production from the WIO (see figure 2). The bulk of the production is from the Maldives, Madagascar, the Seychelles, and Tanzania. The reported production from the mainland countries is mainly from small-scale/artisanal fisheries; however, the data collection and reporting systems of this sector are often poor, resulting in gross underestimation of production statistics. Actual marine fisheries catches are likely 2.0 times more in Kenya,1.7 times more in Tanzania, and as much as 5.0 times more in Mozambique than those reported to the FAO.[3]

Underreporting of catches leads to a misrepresentation of the contribution of marine fisheries to the economy relative to other economic activities, such as tourism and agriculture, as well as to local food security. This situation has acted as a disincentive to public as well as private investment in the marine fisheries sector. Although many inshore fisheries are considered overexploited or maximally exploited, total production may be sustained in the near future depending on a number of factors: increased fishing effort and exploitation of coastal pelagic (open water) fisheries formerly not fully exploited due to lack of technology and equipment, exploitation of species previously ignored by fishers because of poor commercial value, and increasing aquaculture production to reduce pressure on capture fisheries.

Figure 2: Marine Fish Production Trends in SWIO Countries between 1964 and 2006 as Reported to the FAO
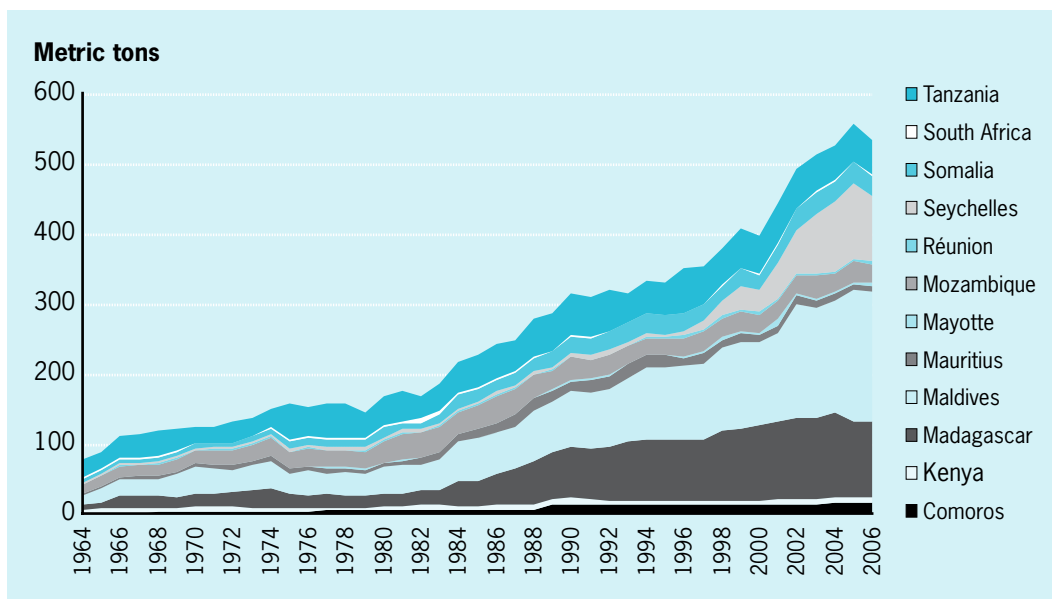
Source: FAO fishery statistics, 2006.

Economic Dimensions

Food Security

The importance of fisheries for poor coastal communities in developing countries cannot be overstated in terms of subsistence and livelihoods. In all countries of the region, fish play an important role in daily diets. Compared to other sources of animal protein, fish are often one of the cheapest sources, with simple and inexpensive technology such as smoking, drying, and salting being the main modes of preservation. Fish comprise over 20 percent of total animal protein in the island states of Comoros and Mauritius. This proportion is even higher in Mozambique, where it is estimated at 50 percent. In Tanzania, fish comprise about 30 percent of the total animal protein consumed nationally, with the per capita fish consumption ranging from 6 to 8 kilograms per year[4] and estimated at between 25 and 30 kilograms per year in the coastal region. The Seychelles is ranked fifth in the world in per capita consumption, estimated at 75 kilograms of fish per person annually.[5] Fisheries-related threats to food security include declines in production and quality because of over-exploitation, habitat destruction, and pollution. Also threatening are post-harvest losses that result from inadequate distribution, preservation, sanitary facilities, refrigeration capacity, access roads, electricity, and telecommunication.

Most of the fish that actually reach local populations come from small-scale/artisanal fishing operations, suggesting that marine artisanal fisheries could play a significant role

in reducing vulnerability to food insecurity and poverty. Artisanal operations contribute between 90 and 100 percent of the Comorian, Kenyan, and Tanzanian marine fish landings; 53 percent of Madagascar's landings; and at least 75 percent of Mozambican landings.[6] South Africa is an exception because the major part of its total landings is harvested by a semi-industrial, midwater trawler fleet that targets horse mackerel and an industrial fleet targeting pilchard in both the Atlantic and Indian Oceans. Other exceptions include the Maldives, in which landings of tuna-like species dominate; and the Seychelles, where the traditional artisanal landings represent only 4.5 percent of all landings.[7] In Kenya and Tanzania, the situation is somewhat different because most fisheries are inland, in lakes such as Lake Victoria and Lake Tanganyika. Marine fish landings represent less than 5 percent of fish production in Kenya and between 10 and 30 percent in Tanzania.

Livelihoods

Although fishing does not generate high economic returns to local fishers, the occupation and related industries provide employment to many and keep young people from turning to illegal economic activities. Artisanal fisheries offer more employment opportunities for local communities than do industrial fishing activities: artisanal fisheries typically support a large number of workers in related industries, such as those who repair boats and fishing gear. In addition, a high number of women are involved in the processing and selling of fish. In Mozambique, only 17 percent of fishers are involved in industrial fishing; in Tanzania, it is 5 percent. It is difficult to accurately estimate the number of people engaged in marine fishing in the WIO. However, Ardill and Sanders estimated in 1991 that 160,000 marine fishers were active in eight WIO countries (Comoros, Kenya, Madagascar, Mauritius, Mozambique, the Seychelles, Somalia, and Tanzania), equal to 0.18 percent of the population including that of South Africa and extrapolated to 2004 population estimates. Studies have estimated a marine fisher population ranging from about 320,000 to an excess of 400,000 fishers, with an estimated dependency ratio of about 7:1,[8] which indicates that almost 3 million people are directly dependent on artisanal fishing for their livelihood along the shores of East Africa and Madagascar.

National Economies

Fisheries contribute relatively little to national economies in the region, although fish product exports provide a valuable source of foreign exchange. GDP contributions of fishery products range from 1 to 5 percent, with an average of approximately 2 percent.[9] In Mauritius, the fishing industry as a whole contributes only around 1 percent to GDP, but the sector remains important for trade, with a positive trade balance for fishery products of US$8.57 million in 2002. In Madagascar, the fishing sector is an important source of foreign exchange for the national economy, but accounts for only 3.5 percent of GDP. For many years, the export of marine products represented the single largest earner of foreign

exchange in Mozambique, accounting for 45 percent of the country's global exports[10] and 3.2 percent of GDP. In Tanzania, the marine fisheries sector contributes 2 to 5 percent of GDP in the mainland and 2 to 10 percent in Zanzibar. In Kenya, the national fisheries sector contributes 2 to 3 percent of GDP. According to Cunningham and Bodiguel, fishing was the largest contributor to GDP in the Maldives until tourism overtook it in the mid-1980s.[11] Despite the relative decline (from 16 to 9 percent) in the contribution of fishing to GDP resulting from the tourism boom, the landed value from the major fisheries increased substantially in the country, from US$24 million in 1989 to US$40 million in 2003.

Industrial fishing provides an important source of foreign exchange revenue through fish exports to markets in developed countries, especially in Europe and Asia. For instance, in 2002 fish exports were more than 30 percent of the value of agricultural exports in Madagascar, the Maldives, Mauritius, Mozambique, and the Seychelles. In the Maldives and the Seychelles, over 40 percent of all exports are fish and fish products. Fish exports from the region primarily include unprocessed fresh or frozen whole tuna, canned tuna, small pelagics such as mackerels and sardines, and crustaceans (mainly shrimp and rock lobsters) and mollusks. In the Seychelles, the fisheries sector is the main source of foreign exchange, and the country contains the most important tuna port in the world (Port Victoria). The Seychelles has the second largest tuna processing factory in the world, with canned tuna exports representing 87 percent of the country's foreign exports; it handles 88 percent of the total tuna catch in the WIO fleet. Fishery exports from Kenya and Tanzania are mainly from the inland freshwater fisheries, which have been declining because of overfishing, environmental degradation, and pollution, compelling the countries to consider their offshore marine fishery resources. Exploiting these resources is considered essential to increasing revenue and maximizing foreign exchange returns from the export trade in fish.

Management and Governance Challenges

Despite their contribution to local food security and economies, the management and governance of SWIO marine fisheries face increasing challenges in all sectors.

Artisanal Fishery Overcapacity and Overfishing

FAO studies indicate that in the WIO, 75 percent of fisheries are currently being exploited at their maximum biological productivity, while the other 25 percent are overexploited and require better management. The greatest challenge facing SWIO fisheries is management of the "commons." Due to the open nature of the region's fisheries, monitoring, controlling, and surveillance are difficult, especially in remote areas. Furthermore, tropical fisheries are mainly multispecies, unlike those in temperate regions, and species composition and fish size vary with the type of gear, technique, location, and season. As a result, fishers continually seek ways to increase efficiency by using less selective methods, which are

often more environmentally destructive. There is little incentive for fishers to comply with existing regulations or to take responsibility for resource management or the surrounding environment, since anything they do not catch will probably be taken by other fishers. Overfishing not only results in reducing targeted fish stocks but has spiraling effects on the ecosystem. For example, in Kenya, sea urchin populations have exploded because of fishing out triggerfish, which are their main predators. The increase in sea urchins has resulted in overgrazing, the destruction of seagrass beds, and eroding coral reefs, which reduce food for other fish and jeopardize fast recovery of fish stocks.

As the fishers compete for dwindling resources, conflicts among small-scale fishers are on the rise, in particular between those using traditional gear and vessels and those using modern, more efficient gear, and between "local" fishers and "migrant" fishers from neighboring villages or countries. In Kenya and Mozambique, there have been increasing conflicts between fishers using traditional basket traps and handlines, and those using beach seines.* There have also been increasing conflicts between industrial and small-scale fisheries, such as between prawn trawlers fishing for export and artisanal fishers. The conflicts have resulted from zone violations, as the trawlers often encroach onto fishing grounds used by the artisanal fishers, leading to the destruction of artisanal fishing gear. The high rates of fish bycatch and accidental catching of endangered species, such as sea turtles, also causes conflict, which is compounded by inadequate management, control, and surveillance structures.

In most countries of the region, fishery legislation is outdated and inappropriate. Additionally, surveillance and enforcement of regulations have been inefficient because of a lack of capacity. Efforts to assess and manage fisheries have been hampered by scientific uncertainty, as most of the countries lack adequate manpower and financial or technical capacity to carry out scientific research needed to properly manage fish stocks. A core challenge among fisheries managers of the region is devising policies that maximize social and economic benefits for those linked to the industry, particularly in coastal areas, while balancing sustainability considerations to ensure the viability of the resource. Fisheries governance in the region has been gradually shifting from the centralized, top-down approach to the fishers themselves through community-based and co-management approaches. This devolution of control allows local communities to formulate regulations regarding access to fisheries, collect some form of levy from fishers for operations, and penalize those who do not adhere to the regulations.

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* Beach seines (also called haul nets) are small mesh nets (or mosquito netting) up to 100 meters in length set in the lagoon or in open water reef areas, usually by young migrants or settled migrant fishers. The nets are dragged to the beach or onto a reef crest and have been documented to be highly destructive, indiscriminately catching everything, including juvenile fish. Their use is banned in Kenya and rejected by local fishers but still prevails. Beach seines are licensed in Mozambique with limited compliance.

Kenya and Tanzania have established local-level beach management units (BMUs), which empower local fishers to play a key role in protecting and establishing rules for using natural resources in specified areas. This arrangement is popular with managers because it reduces their responsibility, and with the individual communities because it give them more control over their fisheries. The benefits include more active involvement of fishers in resource management and an ongoing system for organizing local fishers into cooperatives to facilitate savings and access to credit facilities.

Total success with these approaches is yet to be realized in Kenya and Mozambique. One problem is unclear policy guidelines in delineating authority and sharing resources, which leads to conflicts and mistrust among members of the BMUs themselves, and among them and other commercial fishers and the fisheries management agencies. There is a need to explore mechanisms to build trust that include promoting good governance (accountability and transparency) and enhancing management skills, knowledge, and understanding through capacity-building activities. With the current political will for co-management that is in place in the region, there is great optimism for improving the management of fisheries.

Transboundary Challenges: Artisanal Fisheries

Fishery resources are regulated by national laws created to operate within the confines of national boundaries, with little regard for the transboundary nature of the resources. In eastern Africa, there are both resident fishers who make daily trips to nearby fishing grounds in small nonmechanized boats, and migrant fishers who follow the seasonal currents driven by the monsoon winds up and down the coast of Kenya, Tanzania, and northern Mozambique. The migrant fishers are expert traditional fishers and sailors who work in large groups using dhows propelled by sails and often outboard engines.[*] They mainly target larger long-ranging fish species, such as sharks and tuna, which they land locally and trade in adjacent coastal villages. Because of their efficiency, migrant fishers are often hired by businessmen and middlemen to fish particular high-value fish, such as lobster, octopus, and sea cucumber for the local tourist market or for export.

Until recently, migrant fishers have had unlimited access to fisheries along the entire coast of East Africa. For a long time, they have influenced the coastal economies and kept coastal communities socially and economically interlinked through marriages. Although fishing migrations are thought to be useful for inshore fish stocks because they allow time for recovery when the fishers follow migrations to other fishing grounds, migratory species are often overexploited through the introduction of highly efficient but destructive fishing methods. Migration-based fishing also leads to a localized increase of fishing effort in some areas during certain periods of the year, which has been the cause of fishery conflicts

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[*] These migrant fishers are often associated with Pemba Island in Tanzania (*wapemba*) and Lamu Island in Kenya (*wabajuni*).

in local communities. Resident fishers are becoming more protective of their access rights, partly because of a consensus that those closest to the fishery resource have the right to benefit from it. With the change in management paradigm from a top-down to a co-management approach, and with local communities given more power over the resources closest to them, conflict with migrant fishers could increase. Migrant fishers, regarded as foreigners by the local/resident fishers, are in jeopardy of losing their livelihoods. This can lead to cross-border conflicts or conflicts that have even more wide-ranging implications.

Transboundary Challenges: Open Water Fishing

One of the major challenges to open water fishing is boundary disputes. The coastline of SWIO countries, from Somalia to South Africa, including Madagascar, amounts to approximately 27,880 kilometers with a total EEZ of 8 million square nautical miles. The EEZ boundaries and shared waters between Comoros, Madagascar, Mayotte, and the Seychelles remain an unresolved issue, which poses a problem for the implementation of national policy and the definition of regional plans. The offshore waters of the SWIO region possess rich fishing grounds measured by total size and biomass of commercial species. These waters lie within the "yellowfin tuna belt," which is targeted by distant water fishing nations (DWFN) from the EU and the East Asian states of South Korea and Taiwan. These resources remain untapped and poorly managed by their respective East African governments. Countries of the region have resorted to allowing access to the DWF fleets to exploit the resources through bilateral and multilateral fishing agreements or licenses, not only because they do not have the required infrastructure to do so themselves, but because the DWF fleets have a competitive advantage in operating with high levels of government subsidies. Local fleets cannot compete unless they too are subsidized.[12] Countries with no fisheries agreements with DWFN, but that allow access to DWF vessels through access licenses, receive much less financial benefit than those with agreements.[*]

According to Ansell (2007), approximately 1 million tons of oceanic tuna and tuna-like species, with a processed value of € 2 to 3 billion, are harvested each year from the WIO. DWF nations began longlining for tuna in the WIO in the early 1950s.[†] The Japanese initiated this, soon followed by the Taiwanese (1954) and South Koreans (1960). Since then, Asiatic longline presence in the IO has increased significantly. Indonesia and Sri Lanka are also active players in the fishery, with rapidly developing fleets active in almost all areas of

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[*] The EU member countries have signed 15 or more agreements with African and WIO countries since 1993. Relative to other fishing nations, the EU plays an important role as a DWF fleet with a significant allocation of financial investments. In 2002, catches under the international fishing agreements accounted for 20 percent of all EU catches, valued at approximately € 1 billion. See WWF (2005).

[†] Longlining is a method of fishing that can be either surface set (pelagic) or bottom set (demersal) line fishing. Both methods comprise main lines to which branch lines are attached, each fitted with one or more baited hooks or artificial lures.

the tropical IO. Numbers of active Japanese and Korean longliners have diminished in recent years because of declining profitability.[13] Large-scale purse seine fishing for tuna began in 1983,* when French and Spanish fleets moved into the WIO, fishing under access rights. Other purse seine fleets active in the WIO are registered in Iran, the Seychelles, and Thailand.

Because of the lucrative nature of fishing in the EEZ, fisheries access should be considered "give-and-take," with the DWFN that have permission to fish the waters also being obligated to follow certain regulations. Important considerations are the long-term interests of the host countries' economies and of coastal fishing communities, and the sustainable management of the respective EEZ fisheries. Generally, new fisheries access agreements are moving toward building more fishing capacity in host states.[14] Increasingly, fisheries agreements contain "targeted actions," such as sums of money to be spent on stock management, research, and policy development activities. The best example is the Seychelles, which has, with the EU, provided for regular consultations by both parties on the management of fish stocks and other matters of mutual interest, with payment based mainly on the value of the catch.

DWF fleets have increasing incentives to exploit new resources because of the ever-increasing global demand for fish. Large numbers of vessels are undertaking illegal, unreported, and unregulated (IUU) fishing on the high seas and within the EEZs, taking advantage of the lack of effective monitoring control and surveillance. IUU fishing includes a wide range of illicit activities: fishing without permission or out of season, harvesting prohibited species, using outlawed fishing gear, and nonreporting and underreporting of catch weights.

Illegal fishing undermines efforts to conserve and manage fish stocks. IUU fishing is a global problem affecting EEZs and the high seas, and is a significant threat to the economic and social well-being of SWIO states. The environmental impacts of IUU fishing include bycatch associated with fish-aggregating devices or with longlines.† Vessels involved in IUU activities in the EEZ are largely from DWFNs, and their illegal activities include fishing in off-limit areas and misreporting or underreporting of catches. IUU fishing vessels have lower costs and fewer social responsibilities than licensed vessels, which drives them to exploit resources irresponsibly. The current overcapacity of the world fishing fleet, in terms of numbers of vessels and technological power—created largely through subsidies

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* Purse seine fishing is a method of fishing capable of harvesting large quantities of surface-schooling fish by surrounding the school with a net.

† Fish-aggregating devices are devices that fish like to school around, such as a certain type of bottom-anchored buoy, thus making the fish easier to catch in large number. Their use, like that of longline fishing, tends to capture a large volume of unwanted fish, or bycatch. Bycatch often die during the catching process or are killed and discarded.

to the fishing sector in developed countries—is a major cause of marine fishery problems in the SWIO region.

Monitoring, control, and surveillance of the EEZ resources remain major challenges in the region. Enforcing regulations is often undertaken by the police or navy—whose core responsibilities and priorities are not fisheries—or it is performed by the fishery management agencies, which lack the technical and human capacity to fulfill the task. The level of compliance is thus often low. Kenya, Mozambique, and Tanzania have recently established distinct fisheries ministries. Almost all countries have introduced vessel-monitoring systems technology to assist in monitoring activity in industrial fisheries. Comoros is also interested in adapting this technology to the artisanal fleet for monitoring and safety purposes. Good monitoring, control systems, and procedures coupled with the political will to enforce regulations, cooperation with neighbors on surveillance, and active participation in regional and subregional fisheries agreements would reduce the problem of IUU and increase food security and the security of artisanal fishers' livelihoods.

Climate Change and Extreme Events

The world's climate is constantly changing and has a major influence on all biological processes, species, and ecosystems.[15] Coastal habitats and their resources are likely to be affected by climate change through sea level rise, warming sea temperatures, a build-up of nutrients in the water column (eutrophication), and the spread of invasive species. Globally, 50 million people may be at risk from climate change.[*] Projections suggest that reef loss and a decline in fish availability will cause global per capita consumption of fish to drop by approximately 15 percent by 2015.[16] Semi-arid developing countries with significant coastal or inland fisheries, such as many African countries, are particularly vulnerable because of a high dependence on fish protein and a low capacity to adapt to change.[17] The devastating effects of recent climate change are most pronounced on coral reefs, where there are clear links between increasing ocean temperatures and regional scale bleaching of corals.[18] The 1998 global mass bleaching was the most devastating and widespread bleaching event ever recorded. It contributed greatly to an increased realization that global climate change is a real phenomenon and a significant threat to entire ecosystems. Bleaching was particularly severe on coral reefs in the IO, where coral cover declined by an average of 46 percent following the 1998 bleaching.[19] In the WIO, the event resulted in an average of 30 percent mortality of corals.[20]

Apart from the ecosystem effects, climate change is a burden to other poverty drivers such as declining fish stocks, increases in the spread of HIV/AIDS, and diminished alternative livelihoods. The negative effects of environmental degradation and climate change on

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[*] Increasing human population densities compound these risks.

inland fisheries, such as Lake Victoria, are already being felt in food security and liveli-hoods. The likelihood and magnitude of extreme events, such as drought, flooding, and cyclones increase with changes in climate. Protection of natural barriers—coral reefs, man-grove forests, and sand dunes—is therefore critical, as the barriers dampen the impact of extreme events and protect coastlines from their full power. The effectiveness of actions to sustain fisheries will therefore depend on governments' and societies' capacity to recog-nize and understand the impacts of these stresses and the environmental effects of climate change as well as the capacity to adapt to the changes.

Regional and International Agreements

International policies and legal frameworks applicable to fisheries of the WIO region are based on a variety of treaties and international instruments. The significant global instru-ments that govern these realms include the 1982 UN Convention on the Law of the Sea (UNCLOS), the 1995 United Nations Fish Stocks Agreement, and the 1995 FAO Code of Conduct for Responsible Fisheries. Agreements that form an integral part of the Code of Conduct include the 1993 FAO Compliance Agreement and various international plans of action (IPOAs), which were all in force in 1999, in particular the following:

- The 2001 IPOA to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
- The IPOA for Reducing Incidental Catch of Seabirds in Longline Fisheries
- The IPOA for the Conservation and Management of Sharks
- The IPOA for the Management of Fishing Capacity

Effective conservation and management of shared international fisheries resources also call for actions to be undertaken at the regional and subregional levels. The SWIO region has two regional fishery advisory bodies related to tuna and tuna-like fisheries: the Western Indian Ocean Tuna Organization established in 1991 and the complementary Indian Ocean Tuna Commission established in 1996. Other regional bodies are

- the Southwest Indian Ocean Fisheries Commission established in 2004 to promote the sustainable utilization of the living marine resources of the SWIO region;[*]
- the South Indian Ocean Fisheries Agreement (SIOFA) established in 2006;[†]

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[*] Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, the Seychelles, Somalia, and Tanzania are all members of the commission.

[†] Comoros, France, Kenya, Mozambique, New Zealand, the Seychelles, and the European Community have signed SIOFA. According to the FAO, the "SIOFA will also join the existing network of fishery commissions already established in the region…and will cooperate with these bodies." See FAO, "New Agreement Gov-erning High-Seas Fishing in Indian Ocean," press release, July 12, 2006, available at www.fao.org/newsroom/en/news/2006/1000360/index.html; accessed April 17, 2009.

- the Southern African Development Community (SADC) Treaty Protocol on Fisheries, of which Mauritius, Mozambique, South Africa, and Tanzania are members.

All countries in the SWIO region have signed and ratified UNCLOS. This treaty defines the rights and responsibilities of nations in their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources including fisheries. In particular, this convention gives coastal nations the right to explore, manage, and conserve fisheries resources within the EEZ, 200 nautical miles offshore, and the continental shelf up to 350 nautical miles or 2,500 meter isobath.* However, as previously mentioned, most of the SWIO nations do not have the capacity to fully undertake their responsibilities and benefits within the EEZ and the continental shelf.

Building on the general UNCLOS framework, the 1993 FAO Compliance Agreement seeks to address the threat to international fisheries management posed by vessels that do not abide by fishing rules. The agreement has been ratified by all countries except Comoros, South Africa, and Tanzania. Five countries signed the UN Fish Stocks Agreement (Kenya, the Maldives, Mauritius, the Seychelles, and South Africa). The first to ratify it was Mauritius in 1997, and the latest was Kenya in 2004, when it became a member of the Indian Ocean Tuna Commission.[21] The performance of countries in implementing IPOAs is uneven. However, all countries have initiated actions on at least one IPOA and are in the process of developing national plans of action (NPOAs). In South Africa, high seas fishing permits have been introduced for flag-state vessels,† and this has helped control domestic effort. However, high seas activity by flag-of-convenience vessels remains difficult to control.‡ Monitoring the landings of IUU vessels has dramatically improved in South Africa and in other ports in countries that are signatories to the SADC Fisheries Protocol. In 2004, the Seychelles produced an NPOA against IUU activities that sets out state responsibilities including control over nationals, sanctions on unauthorized fishing by national vessels outside of its EEZ, a review of practices relating to IUU fishing, and port state and coastal state measures that it has established. Several measures against IUU fishing are in place in Mauritius and a formal NPOA against IUU is in preparation. Mauritius and the Seychelles are also in the process of developing an NPOA for sharks, and a 10-year ban on coastal shark fishing is in place in seven atolls in the Maldives. An NPOA on shark management has also been submitted by South Africa.

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* A mapping line that connects points of equal depth under water.

† A flag-state vessel is one registered in the same country in which its owner has citizenship. A ship must follow the laws and regulations of the country in which it is registered.

‡ A flag-of-convenience vessel is one registered in a country different from that in which the owner has citizenship.

Within the SADC, activities related to establishing effective cooperation on monitoring, control, and surveillance among the SADC coastal member states (Angola, Mozambique, Namibia, South Africa, and Tanzania) have been undertaken, along with activities related to information collection, training, review and analysis of legal issues, economic planning analysis, and co-management review. Besides the regulations spelled out in the agreements among partner nations, each country has national laws and statutes regarding fisheries. The SWIO region has established an unofficial Southwest Indian Ocean Fisheries Commission to advise on the management of the fisheries resources within the EEZ.

Individual governments put a high priority on the promise of international laws and on conventions and agreements aimed at ensuring greater management of maritime resources by the coastal states. Nevertheless, the level of implementation and enforcement of regulations provided for in these management mechanisms is low, leaving most of the offshore fishery resources an easy target for IUU fishing. Budgetary difficulties and low capacity make prohibitive costs and lagging implementation two of the greatest challenges faced by national fisheries authorities. At the national level, there are often multiple institutions with overlapping mandates involved in the administration of maritime-related activities, including navies, police, fishery departments, and port authorities. This makes implementation of bilateral and multilateral agreements and national regulations more complicated. Kenya and Tanzania are setting up national maritime authorities to coordinate the activities of all agencies with maritime-related mandates. However, these are recent efforts whose results are not yet clear.

Conclusion

The fisheries resources of the SWIO contribute significantly to the food security and social stability of the region's growing populations. However, the full potential of the marine fisheries resources to contribute to economic development has not been reached, primarily because of a lack of scientific and economic capacity and uncoordinated management of national EEZ and international water resources. Within inshore fisheries, challenges include overexploitation and related issues of stock collapse and change of inshore habitats, such as coral reefs and seagrass beds. Conflicts between resource users, pollution of near-shore habitats, and global warming are the major threats. Fishing overcapacity and IUU fishing are two important fisheries management challenges faced by the SWIO countries. Of immediate concern are national and regional coordination in regulation, monitoring, and surveillance; the development and implementation of an early warning system for extreme events; and the enhancement of regional preparedness to deal with ocean-based disasters. Reduced productivity of fisheries and its negative impact on food security and economic activity are likely to increase cross-border conflicts and illegal marine economic activities, such as smuggling, piracy, and human trafficking, as those employed in the fishing industry seek other alternatives. The region is ill prepared to manage and adapt to the impacts of climate change and extreme events which threaten all coastal economic sectors, especially fisheries.

Maritime Security and Resources in Somalia

Jumaina Siddiqui

Somalia illustrates a perfect storm of maritime threats and challenges facing Indian Ocean littoral countries. The country has been without a formal national government since 1991. The humanitarian crisis in Somalia is so grave that 3.2 million of its people survive strictly on food aid. However, with the security situation deteriorating rapidly, the World Food Programme halted food shipments to Somalia in January 2009 after the death of two of its employees; it plans to resume aid once it has security assurances from local administrations, warlords, and armed militias.

The civil war and political instability in Somalia has left many citizens with few options for employment. Additionally, widespread drug abuse is eating away at meager earnings and hindering their ability to work. This, compounded with the fact that two generations of Somalis have little or no education or training, has created fertile ground for recruitment by both Islamist groups and pirates alike. This is a serious threat not only to Somalis but for commerce and security in the region.

The overexploitation of fisheries by both international commercial and illegal foreign fishing has marginalized local Somali fishers. Poor governance of maritime resources has also led to dumping of hazardous waste in Somalia's coastal areas. The indigenous fishers face other problems such as lack of infrastructure and technology to maximize their catch. Because of the dire employment situation, the number of households that rely on fishing as a source of income has doubled between 2000 and 2005. Many of these fishers were previously farmers who had to turn to fishing to survive.

While some experts feel that regulation and improved distribution infrastructures for fisheries could have an enormous impact on the industry, the actual impact on the local economy and food security is hard to determine due to scarcity of formal records. It is estimated that the pelagic fish stocks in Somalia's EEZs are capable of providing sustainable annual catches of approximately 200,000 tons, but this is based on data from the 1970s and 1980s; 1990 figures show that the total landings are estimated to be 14,850 tons and only contribute to about 2 percent of GDP.

The diminished opportunities for gainful employment has led some Somalis toward piracy and Islamist groups. These two extremes have led the international community to question which group is the greater threat. Some observers believe that piracy is funding the Islamist groups, noting reports that some of the ransom money was shared with an al Qaida–linked Islamist group. Islamist groups have denied any links with the pirates and have even offered to fight the pirates who hijacked the Saudi oil tanker in November 2008; Islamist groups felt it was a sin to steal the property of another Muslim country. In 2008, there have been 120 attacks on the east coast of Somalia and the Gulf of Aden—an increase of nearly 200 percent from the previous year.

The international community has rallied together to combat piracy in the region. The United States has established a new maritime task force, CTF-151, specifically for anti-piracy efforts. The UN Security Council has passed a series of resolutions to combat piracy in Somalia, six of them just in 2008, which have progressively become broader, allowing countries to aggressively pursue pirates. The most recent resolution, 1851, allows countries to pursue pirates on land, where previously navies had to end their pursuit as soon as pirates reached land.

Pirates, Barter Traders, and Fishers: Whose Rights, Whose Security?

User Conflicts and Maritime Nontraditional Security in Malaysian Waters

Mak Joon Num

"The traditional goal of 'national security' has been the defense of the state from external threats. The focus of human security, by contrast, is the protection of individuals."—*Human Security Report 2005*[1]

This paper outlines the problem of maritime security in Malaysian waters. Maritime security here is defined in broad terms. It covers not merely the notion of the maritime defense of states, but also the security of individuals and communities, and the sustainable use of ocean resources and the maritime environment. In this sense, the theoretical framework employed to analyze maritime security is not based upon conventional international relations theory. Instead, the concept used is based on individual or human security.

The well-being of individuals logically extends to local communities and their economic, ecological, and resource environment. As such, this paper prefers to use the term "maritime nontraditional security" instead of the more state-centric concept of maritime security.

This study looks at two main bodies of water that Malaysia shares with its neighbors. The first is the well-known and somewhat notorious Straits of Malacca and Singapore (hereafter the Malacca Straits). The second is the maritime border region in the Sulu Sea between North Sabah (on Borneo Island) and the southern Philippines.

This paper focuses on three main user groups of the seas.[2] The first is the trawler fishers of Hutan Melintang, located on the western coast of Peninsular Malaysia. In the very recent past, these fishers were the principal victims of the Malacca Straits pirates and provided them with a steady source of income. Pirates based on the Indonesian island of Sumatra, who until recently roamed the northern approaches to the Straits of Malacca, comprise the second group. The final community is the Filipino barter traders who regularly operate between the islands of the southern Philippines and the northern coast of Sabah in the Sulu Sea area. All three groups are victims as well as exploiters of the Malaysian seas.

The Trawling Community of the Straits of Malacca

The largest community of trawler fishers in Malaysia is based in Hutan Melintang, a small estuarine town on the midwestern coast of Peninsular Malaysia. For more than 20 years, these fishers had been the primary victims of maritime pirates based in Aceh, in northern Sumatra. These pirates depended on the 800 or so Hutan Melintang trawlers to provide them with a regular source of income. Initially armed only with machetes, the pirates began to use firearms in the 1990s. The increasing use of assault rifles and other powerful firearms during this period was not surprising, given the revival of the Gerakan Aceh Merdeka (GAM or the Free Aceh Movement) armed rebellion in northern Sumatra at the end of the 1980s, which resulted in an influx of weapons into Aceh.[*] These pirates also progressed over the years from simple robberies to ship hijacking, because fishers began to carry less cash and trawlers increased in value. Hijacking boats for ransom was much more lucrative than stealing cash, fuel, catch, and equipment. By the late 1990s, the average ransom for a new, well-equipped trawler was around RM 100,000, or roughly 10 percent of its cost.[3]

A different and more troubling development in maritime predations in the northern end of the Straits began to emerge in 2000 and became pronounced after 9/11: kidnapping skippers, or *taikongs,* for ransom instead of hijacking the boats, which resulted from the increased maritime patrols in the Malacca Straits in the wake of 9/11. More significant was the renewed Indonesian military offensive against the GAM beginning in May 2003, which included a tight maritime blockade that made it harder for pirates to hijack ships and escape with their prizes. For instance, in February 2004, an Indonesian navy ship intercepted and sank a tug purportedly hijacked by members of GAM 14 nautical miles from Pulau Berhala, southeast of Medan.[4] In the third week of February 2004, an Indonesian navy ship sank a hijacked fishing boat off Tanjung Balai Asahan in northern Sumatra. A total of 11 fishers survived and were rescued, and 3 alleged GAM members were captured.[5]

Another technological development that facilitated kidnap-for-ransom was the widespread use of cell phones in the 1990s, which made negotiations between kidnappers and families of hostages direct and rapid. Kidnappings occurred so regularly that the Hutan Melintang community and the pirates had a standard operating procedure. The pirates would invariably kidnap the *taikong*, who is the most valuable member of the crew and usually a member of the tightly knit Hutan Melintang Chinese community. The Thai, or Myanmarese, crewmen were rarely kidnapped. The going rate for the release of the hostage depended on the value of his boat. The going ransom rate was understood to be around 10 percent of the

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[*] The GAM had been battling the Indonesian government in a bid to gain regional autonomy since 1976. The fighting ceased in 2005 as a result of a peace treaty brokered by Sweden. For a background to the conflict, see Anthony L. Smith, "Aceh: Democratic Times, Authoritarian Solutions," *New Zealand Journal of Asian Studies* 4, 2 (December 2002): 68–89.

value of the trawler. Once a sum was agreed upon, parties decided on the mode and date of payment. If everything went smoothly, the hostages would be released within five days.

Who Will Guard the Guards?

At the same time, the Hutan Melintang trawler fishers were being preyed upon by Indonesian maritime enforcement agencies, which accused them of illegally fishing in Indonesian waters because of the unresolved maritime border dispute over the demarcation of the Malaysia-Indonesia exclusive economic zone (EEZ) in the Malacca Straits. This dispute allows renegade members of the Indonesian enforcement agencies to prey on the fishers, seize their vessels for illegally entering Indonesian waters, and demand bribes (or ransom) before releasing the trawlers.[*]

In this sense, the trawler fishers can be regarded as victims of maritime predations. Yet at the same time, they are also predators, as they engage in a most exploitative and unsustainable form of fishing: bottom trawling that clears and cleans everything in the path of the trawl nets. Because of depleting fish resources in traditional Malaysian waters, they are increasingly tempted to fish in the relatively underexploited waters on the Indonesian side of the Straits and in the disputed Indonesian-Malaysian maritime zone. This leaves them open to predations by Indonesian maritime enforcement agents who force them to pay "unofficial" ransoms for the release of seized trawlers.

Victims or Predators?

One can also argue that the pirates of Aceh were both predators and victims. They apparently used the money from their nefarious activities to help fund their separatist war against Jakarta in the 1990s. Thus, the Acehnese pirates were part of the GAM attempt to gain independence from Indonesia and to assert Acehnese rights and identity.[6] Significantly, all

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[*] The Malaysian-Indonesian maritime boundary in the Straits was demarcated by two agreements: the 1969 Continental Shelf Agreement and the 1970 Territorial Sea Boundary Agreement. It is important to note that the agreement covers only the southern end of the Malacca Straits, stopping at about 2 degrees north. Indonesia and Malaysia, up to the present moment, have not concluded a territorial sea agreement covering the northern end of the Malacca Straits, nor have they initialled any EEZ agreement. Malaysia's position—embodied in the country's *Peta Baru* (New Map) published in 1979—is that both the EEZ line and the continental shelf boundary line are identical (i.e., the *Peta Baru* uses the concept of a single maritime boundary). Indonesia has been pressing since 1998 for a new maritime delimitation in the Straits, since it feels that the 1969 agreement is not equitable, and has been quietly challenging Malaysian jurisdiction in the Straits, especially over fishing rights in the northern end. This is because Jakarta recognizes only the continental shelf boundary, which gives Malaysia the right to exploit the resources of the seabed and subsoil, but not that of the water column. In contrast, a country's EEZ would endow the country "with sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil," including fish. See R. Haller-Trost, *The Contested Maritime and Territorial Boundaries of Malaysia: An International Law Perspective* (London: Kluwer Law International Ltd, 1998), pp. 23–32.

Acehnese predations against Hutan Melintang fishers ceased immediately after the 2005 Indonesia-GAM truce. Now the only predators of Hutan Melintang fishers are rogue members of Indonesian maritime enforcement agencies.

Several fishery traders and *taikongs* have claimed that Indonesian enforcement officers are aggressive and violent when they arrest the trawlermen for allegedly crossing into Indonesian waters.[7] Also, the price for the return of seized boats has gone up sharply since the end of 2005. From a standard 10 percent, renegade officials now demand up to RM 400,000 to settle the return of a trawler, or roughly one-third to one-half its cost. The owner of two boats seized in September 2005 paid RM 400,000 for the release of the large trawler and RM 200,000 for the smaller boat. He had three options: pay the ransom, write off the boats and crews completely, or pay the official fine with his crews serving jail terms. Even if he had paid the official fine in court, his boats would have been returned months later in a state of disrepair, with all removable gear gone. "At least by paying the RM 600,000, my boats and crew are back already, earning income to cover my losses," said the trader.[8] According to him, unofficial fines have skyrocketed because Indonesian enforcement agencies are under increasing pressure from Jakarta to assert Indonesia's maritime sovereignty in the disputed zone.

Although no Hutan Melintang boat has been attacked by pirates since 2005, the rate of predations in the region remains unchanged, with 10 boats unofficially and 10 officially detained by Indonesian enforcement agencies in 2006. Until November 18, 2007, 8 trawlers were officially detained and more than 10 held and released unofficially by Indonesian enforcement agencies. Renegades of Indonesian enforcement agencies have also adapted to the times since the 2005 GAM truce, shortening the length of time they unofficially detain trawlers: the owner of the vessel was informed by a Malaysian or Indonesian middleman within 10 minutes of the seizure that his vessel had been detained and that a certain sum was required for its release. In another new twist after 2005, seized trawlers were immediately released, together with the crew, once the owner agreed to the ransom. The mode of payment varied: payment in cash in mid-Straits, transfers to an Indonesian bank account, or payment to intermediaries in Medan or Belawan.

Why do renegades release seized trawlers immediately? According to a Hutan Melintang trawler owner, it is to minimize exposure and detection by either Malaysian authorities or other Indonesian enforcement vessels. If detected, it means having to release the trawler, or share the spoils, or escort the trawler to Belawan and forfeit the chance of pocketing the unofficial ransom. It is all about *cari makan* (Malay for "making a living"). Ironically, it involves the economics of trust, since the renegades only have the word of the trawler owner that he will pay the ransom after release. Nearly all trawler owners pay as promised, since they fear increased harassment. In two cases where owners failed to pay the promised ransom, they took the precaution of re-registering their boats, giving them new registration numbers and, they hoped, a new identity.

When a trawler is officially seized by Indonesian enforcement agencies in the disputed maritime zone, it is towed into Indonesian waters and reported as having been detained well within Indonesian territorial waters, even if it was not. The Indonesians do this to ensure that charges against the Hutan Melintang fishers for illegal intrusion are watertight. Charging the fishers for illegally fishing in what is still a disputed maritime zone could well be dismissed by Indonesian courts.

Are the trawler fishers merely victims? Earlier it was argued that bottom trawling by boats from Malaysia and Thailand has devastated the fishing grounds of the Malacca Straits, especially around northern Sumatra.* Without the constraints and increased costs placed on trawling by pirates and corrupt Indonesian officials, the fishing grounds of the northern Malacca Straits would have been completely depleted long ago. Maritime predations have therefore indirectly contributed to fisheries management.

However, these predations have conversely also allowed illegal trawling to continue to exist in Indonesian waters at the expense of local communities. According to a 2003 report, Indonesian maritime enforcement officials allowed foreign trawlers to fish off the northern Sumatran coast in return for hefty bribes.[9] The impact on traditional local fishers in Belawan, for example, was such that their average catch per week fell from about 200 kilograms of high-quality fish to about 70 kilograms of lower grade fish in a space of three years. In addition, foreign trawlers, especially Thai trawlers, did considerable damage to coral reefs in Indonesian waters.[10] Another report even claimed that since the arrival of foreign trawlers off the east Sumatra coast, the catches of fishers in Jambi fell from "30kg to 5kg per day."[11] Thus, the issues of victims versus predators, politics, economics, sustainable fisheries, and protection of the marine environment are linked in complex ways in the waters of the northern end of the Malacca Straits. Now that the "real" pirates (i.e., the Acehnese) have laid down arms after the GAM truce with Indonesia, it remains to be seen what impact indiscriminate illegal trawling will have on these waters.

The Barter Traders of the "Sulu Zone"

As in the case of trawling in the Malacca Straits, barter trading between the southern Philippines and the coast of Sabah is a sensitive and complex issue. While the Malaysian state of Sabah sees barter trade in the Sulu Sea as economically advantageous and politically necessary, Manila takes a completely opposite view. Thus, while Sabah is doing its best to encourage and facilitate barter trade between the state and the islands of the southern Philippines,

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* Bottom trawling is a method of dragging large, heavy nets across the seabed that sweeps everything in their path into a holding or catch net. Bottom trawling destroys everything in its path, including corals, sponges, fishes, and other animals. Greenpeace described it as the number one threat to sustainable fishery. See "Bottom Trawling," available at www.greenpeace.org/international/campaigns/oceans/bottom-trawling; accessed September 15, 2008.

Manila considers the activity to be, at best, smuggling. To understand these two very different perspectives, one must understand the long history of trade in the Sulu Zone.

Barter trading in the Sulu Sea between the north coast of Borneo (today's Sabah) and the islands of the southern Philippines stretches back to the 15th century. It boomed suddenly at the end of the 18th century, with the enhanced commodity flows among China, Southeast Asia, and the West.[12] The flourishing trade encouraged an increase in piratical activities in the Sulu Sea, and the Sulu Zone became notorious for the predations of slave-taking pirates, the Iranuns (*lanuns*) being particularly notorious. In 1882, the British North Borneo Chartered Company was formed and took over the administration of North Borneo. The British brought with them the *laissez-faire* attitude toward trade and continued to encourage trade between the southern Philippines and North Borneo when the latter became a British protectorate in 1888. To protect their trade, the British, in cooperation with the US administration of the Philippines, took great efforts to suppress piracy from 1915 until the outbreak of the Pacific war with Japan in 1941.

In 1946, barter trade revived when the British government took over direct control of North Borneo. However, with the granting of independence to the Philippines in the same year, the new Filipino government adopted a completely different attitude toward barter trade between the southern Philippines and North Borneo. From 1956 on, it began to view it not as trade but as smuggling that deprived Manila of much-needed revenue. World War II brought a massive influx of firearms and marine outboard engines to the Sulu Zone, which led to a revival of piracy. Although Britain attempted to persuade the Philippines to take joint action against piracy in the zone, Manila was not interested in an anti-piracy pact. Instead it pressured the British to take joint action against smuggling from 1956 onwards.[13] This was because huge quantities of consumer goods, especially cigarettes, were being transhipped from Hong Kong to the Philippines via North Borneo. Then-president Magsaysay of the Philippines attempted to legalize the trade; however, he died in a plane crash in 1957. Thereafter, the Philippines Customs Department began adding to a growing list of items banned from the barter trade. This change in attitude by Manila toward barter trading has important ramifications for the trade even today.

Traders or Smugglers?

The Malaysian attitude toward barter trade, however, is in complete contrast to that of the Filipino authorities. British North Borneo became independent in 1963, joining the Federation of Malaysia as the state of Sabah. For various ethnic, religious, and economic reasons, Sabah continued to encourage trade between the southern Philippines, northwest Indonesia, and Sabah. Indeed, at one point the Sabah administration did not even try to regulate the movement of goods and people between Sabah and the Philippines. Notably, the majority of people and traders moving and trading in the Sulu Zone are Muslims. This

very relaxed official Sabah attitude toward the movement of Muslims changed only after the Abu Sayaf kidnappings of tourists and Malaysian workers from the resort islands of Sipadan and Pandanan, off the east coast of Sabah, in 2000. This fear of attacks by dissident groups from the Philippines was reinforced by the 9/11 attacks the following year. Thereafter, Malaysia began to regulate boats and traders from the Philippines, restricting all boats, including *kumpits,* to the use of six designated sea lanes, or approaches, to Sabah.* Even so, Sabah sees barter trade, centered on the town of Sandakan, as a very important political and economic tool. At present, between three and six Filipino *kumpits* on average call at the state-run Sandakan Barter Trade Jetty daily, with each boat staying for up to three days at the jetty.

Despite the Abu Sayaf threat, Sabah is giving special treatment to and facilitating the entry and exit of barter traders from the southern Philippines by setting up specially designated barter trade jetties. In Sandakan, for example, traders using conventional ferries between Sandakan Port and Zamboanga Port are required to possess international travel documents, while the ferries themselves must meet the International Maritime Organization's International Ship and Port Safety standards. This includes clearance from Philippine port authorities before any ferry is allowed to dock at Sandakan Port. By contrast, a great number of international conventions are dispensed with at the barter trade jetties. Sabah does not insist on strict border controls, thus indirectly encouraging the notion that the Malaysia-Philippines maritime boundary is still a frontier rather than a boundary in the strict Westphalian sense. Traders from the southern Philippines are given special travel documents on arrival at any of the six designated barter trade ports in Sabah, and the regulations for the entry of Filipino *kumpits* are also relaxed.†

The Sabah authorities are driven by political and economic considerations. First, they see the barter trade as being advantageous to the state because it brings in foreign exchange. Indeed, the term "barter trade" is a misnomer today, since *kumpits* usually arrive in Sabah empty, but carry on average ₱ 300,000 in cash to buy consumer goods and food to bring back to the southern Philippines. Trade is also seen as one way of helping to pacify the southern Philippines. As a Malaysian official observed, it is one way of ensuring that the cost of living there remains low and affordable: "If the cost of living goes up too much, the people of the southern Philippines will feel forced to migrate illegally to Malaysia. Worse,

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* *Kumpits* are traditional wooden-hulled vessels (motorized today) of less than 100 gross registered tons that carry the bulk of trade between Sabah and the southern Philippines. They are the workhorses of the barter trade system.

† Crews and traders of *kumpits* are issued seamen identification cards on arrival by the Sabah state government in lieu of passports. The only restriction is that they must be on board their vessels by nightfall. *Kumpits* are also not required to be issued port clearance certificates by their last port of call. However, they are restricted to specific anchorages monitored by the Malaysian Marine Police.

they might resort to their traditional occupation of piracy."[14] As a consequence, the Malaysian authorities take great pains to regulate, facilitate, and ensure the safety of Filipino *kumpits* from the time they enter Malaysian waters until they leave, to the point of escorting them to the Malaysian-Filipino maritime boundary.

In direct contrast, barter trade is not sanctioned by Filipino authorities, which only issue licenses for the *kumpits* to operate in Filipino waters.[*] The moment any barter boat crosses into Malaysian waters, the crew is technically already involved in an illegal act. When laden Filipino *kumpits* sail back into Filipino waters, they are therefore regarded as vessels involved in smuggling. Barter traders, in turn, accuse Filipino maritime enforcement agencies of exacting unofficial taxes, known euphemistically as "local arrangements," to allow the *kumpits* to carry on sailing to their port of destination. Between four and six agencies may exact their unofficial taxes from each boat, with ₱ 9,000 being the apparent minimum asked by each agency, sharply driving up trade costs. Not only are the Filipino enforcement agencies regarded as "pirates," but Filipino barter traders allege that Malaysian authorities are also involved in "local arrangements" to facilitate the checking and entry of *kumpits* into Malaysian waters. Somewhat ironically, groups of southern Filipinos, such as the Taosugs, Maranaos, and Iranuns—once renowned as pirates and slave raiders but now involved in the Philippines-Sabah barter trade—see themselves as the victims of uniformed "pirates." For example, a Taosug barter trader from the Philippines who is now a Malaysian citizen running a shipping and customs agency for barter trade confirmed that barter traders are the victims of corrupt officials, whom he described as "modern-day pirates."[15]

A Channel for Undocumented Migration

In contrast to the official views of the state government, non-Muslim natives and residents of Sabah see the barter trade as a major source of undocumented Muslim migrants from the Philippines into Sabah. "The barter boats are not supposed to carry more than 15 crew and traders when they enter Sabah," said a Malaysian maritime official. "However, you can see large numbers of speedboats swarming around the *kumpits* and offloading people before they reach their designated official anchorages."

Indeed, a number of political parties in Sabah see the Brunei-Indonesia-Malaysia-Philippines East Association of South East Asian Nations (ASEAN) Growth Area (BIMP-EAGA) initiative to speed up trade and development in the Sulu Zone as highly counterproductive, because it is facilitating this undocumented Muslim migration into Sabah.[16] In October 2006, the Chinese-based Sabah Progressive Party urged the government to impose a RM

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[*] The key reason for Manila's attempts to curb the *kumpit* trade is not merely the loss of revenue. Even more important could be the fact that the Philippines is fearful of its southern region becoming increasingly reliant politically and economically on Sabah.

500 bond on all visitors from the Philippines and Indonesia to Sabah in order to guarantee their departure.[17] The party also suggested that the Sandakan-Zamboanga ferry service be suspended, alleging that instead of facilitating trade and travel, as envisaged under BIMP-EAGA, the ferry service was being abused by migrants to enter Sabah legally before disappearing into the state and staying on illegally.[18] Thus, the barter traders, who see themselves as victims of piracy, are regarded in turn by a significant portion of the citizens of Sabah as a threat to their identity, ethnicity, and religion. The latter, in fact, claim that there are officially sanctioned attempts to turn Sabah into a Muslim-majority state by granting instant citizenship to Muslim migrants, whether documented or undocumented.[19]

Conclusion

As we can see from this brief outline, the issue of maritime security and, in particular, maritime nontraditional security is highly complex. The victims of maritime piracy in the Malacca Straits are themselves exploiters and destroyers of rich fishing grounds. Recently, Acehnese pirates were also victims of Jakarta's efforts to impose central rule and maintain a unitary Indonesia. Since the GAM-Jakarta truce, the only maritime pirates preying on trawler fishers are renegades of the Indonesian enforcement agencies. It remains to be seen whether the fishing grounds in the Malacca Straits will be further depleted as a result of bribery, which allows boats to continue operating. Although Malaysian trawlers may be targeted because of the Malaysia-Indonesia maritime border dispute in the Straits, trawlers of other nationalities can claim "innocent passage" and plunder the waters. In the Sulu Sea, what constitutes legal trade, smuggling, and piracy is equally complex, and tied up with political and economic relations between Malaysia and the Philippines. Here people-smuggling is also an issue, with non-Muslim Malaysian citizens worried that the *kumpit* trade poses a threat to their identity, ethnicity, and religion.

It is commonly assumed that because maritime problems are invariably transboundary, multilateral cooperation would be self-evident and inevitable among states. For example, ASEAN announced that maritime cooperation would constitute a central plank of its maritime security agenda in its preamble to the ASEAN Security Community proposal in 2003. The 2003 Declaration of ASEAN Concord II stated unequivocally: "Maritime issues and concerns are transboundary in nature, and therefore shall be addressed regionally in a holistic, integrated, and comprehensive manner. *Maritime cooperation between and among ASEAN member countries shall contribute to the evolution of the ASEAN Security Community*"[20] [emphasis added].

In this regard, a number of analysts see regional maritime cooperation not only as logical, but inevitable.[21] In light of the transboundary nature of maritime threats, it is often assumed that ASEAN should be a logical focal point to discuss and work out an effective program to deal with maritime nontraditional security issues. However, the reality is that maritime

security in Southeast Asia is complex, and maritime cooperation among states remains difficult and highly problematic. Different countries have different conceptions of core values when it comes to maritime security. There are no shared norms binding regional actors along these lines.

There are two key impediments to maritime nontraditional security cooperation in Southeast Asia. The first and most critical obstacle is that elites see maritime security as a state-centric problem. For instance, piracy is usually regarded through an internationalist lens as a problem that affects international shipping only. The fact that pirate attacks against international shipping using the Malacca Straits have ceased since 2005 is touted as an example of how multilateral cooperation in this arena can succeed given sufficient political will. Many sources, including the International Maritime Bureau, have attributed the sharp decline in pirate attacks in the Straits to the "landmark naval cooperation in July 2005."[22] However, the fact that trawler fishers are still the victims of maritime predations seems to have escaped the attention of elites and the media.

The second and related impediment to cooperation is that Southeast Asian states each have their own national and economic priorities. This explains why the Philippines and the Malaysian state of Sabah have adopted completely contrasting policies to barter trading. Countries in Southeast Asia have very different national capacities, priorities, and financial wherewithal to deal with maritime problems. The issue of governance, or lack of governance, is critical in many Southeast Asian countries. Corruption is rampant in many bureaucracies because officials are often poorly paid, or graft has become an ingrained part of administrative norms. This has allowed renegade Indonesian maritime enforcement officers to flourish in the Malacca Straits; by bribing key officials, bottom trawlers are still able to operate illegally with relative impunity in Indonesian waters.

One critical problem is how to reconcile different governments' approaches to maritime nontraditional security issues such as coastal degradation, human smuggling, narcotics, and piracy. Another important challenge is the lack of national capacity and differing national priorities in implementing maritime nontraditional security cooperation initiatives. Singapore, for example, can afford to implement a range of strategies to protect its maritime interests, while Jakarta has a multitude of nonmaritime problems to tackle, such as the problem of potential secession by certain provinces, inter-ethnic and interreligious strife, and eliminating poverty within the huge archipelago.

Indeed, the problem of poverty, underpaid officials, and poor governance makes it very likely that certain key countries in maritime Southeast Asia, especially the Philippines and Indonesia, will not be able to solve their maritime problems effectively in the short and medium term. Even worse, the lack of governance and the existence of endemic corruption ensure that interstate cooperation to tackle maritime nontraditional security issues will

remain embryonic at best. At least for the moment, governments are unlikely to take maritime nontraditional security issues seriously. It is therefore the task of NGOs, including international organizations, to highlight the problem and difficulties faced by maritime communities, introduce initiatives, and persuade regional governments to prioritize maritime nontraditional security. Maritime pollution, environmental degradation, disappearing fish stocks, illegal and unregulated fishing, and violence at sea are all very real issues that will have a negative impact on the seas of Southeast Asia unless these problems are recognized and tackled seriously.

Toward a Comprehensive Maritime Security Arrangement in the Gulf

Mustafa Alani

The Gulf region accounts for more than 30 percent of world oil supplies, making the region of strategic importance to the international community. Offshore oil and gas fields account for a sizable share of the production, and at least 90 percent of energy products are transported by sea to consumer countries. This reality makes the development of a cooperative maritime security regime in the Gulf an international responsibility as it would have a positive impact on the safety of energy production (e.g., oil, gas, and other petroleum products) and the shipment of products to international markets.

The need for such a regime is unquestionable. The contemporary history of the Gulf is mired in major conflicts and political-territorial disputes. These conflicts, which intensified during the 1970s and 1980s in the aftermath of the British military withdrawal from the region, have generated a deep sense of distrust among Gulf countries and their leaders. The evident ambition of some to establish their hegemony over the region has aggravated the crisis of confidence, especially among the smaller states. Furthermore, the military presence and political influence of outside powers, mainly the United States, have aggravated this sense of uncertainty and distrust.

A multinational regional security architecture could address this lack of confidence to a great extent. For a start, the process of building regional arrangements among the Gulf Cooperation Council (GCC) states and other regional powers would require the states to agree to a certain set of rules and norms. Creating and confirming to these principles would enhance transparency, promote trust, and contribute to building the mutual confidence needed to achieve long-term regional stability.

The Maritime Security Cooperation Model

Before discussing the obstacles to implementing a model to create a maritime security cooperation regime, it is necessary to have a clear idea of how to create one. In this section, a proposed model will offer some guidelines to how a maritime security regime could be constructed.

Geographical Scope

A regional maritime security regime should include the GCC states (Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia), other countries in the Gulf (Iran, Iraq, and Yemen), and eventually other concerned states in southern Asia, such as Bangladesh, India, Pakistan, Singapore, and Sri Lanka, as well as the littoral states of East Africa. This initiative, however, should begin on a smaller scale, with initial involvement of GCC states first, then expand to include the other Gulf states, and finally include the southern Asian and eastern African states.

Institutional Structure

There is a general assumption that navies should take the lead in formulating maritime policies. For example, in Sri Lanka no decision is made on maritime issues without the full participation of the Navy. But in this case, given the complexity of maritime security, the navy's role should not be primary. Within a state there are many security-related institutions: customs, the coast guard, marine police, and the navy. It is necessary to integrate them before moving to the regional level. In maritime security operations, navies should be involved to some extent, but be restricted to a marginal role.

The main actors (apart from navies) in a maritime security arrangement should include coast guards from all the cooperating regional states. These institutions would be expected to play a greater role than has traditionally been assigned to them. They would be involved in the process of disseminating information and sharing intelligence with their counterpart maritime nations and other naval powers with a presence in the Gulf. Other activities could involve the assistance of air force units operating beyond the shoreline. In addition to those related to criminal activities, such a maritime security system should also address economic, environmental, and humanitarian issues.

An earlier attempt at such an alliance offers an example of how such cooperation can come about. In the 1990s, the Gulf states were involved in the Arms Control and Regional Security (ACRS) Working Group, one of five working groups that comprised the multilateral track of the Madrid Peace Conference. The ACRS Working Group, active from 1992 to 1995, brought together 14 states from the Middle East and North Africa (including Israel but excluding Iran and Iraq).[1] Its aim was to improve mutual confidence- and security-building measures among the regional states in order "to reach an agreement upon a shared understanding of arms control."[2]

The ACRS Working Group dealt primarily with maritime security cooperation. In fact, the participating states agreed to work on two significant nonmilitary aspects of maritime security, namely search and rescue and the prevention of incidents at sea (INCSEA).[3] Unfortunately, the ACRS process was shelved because member states had reservations about other issues; however, this was an important initiative that produced considerable

work on maritime security issues in the Middle East for the first time. Although the agreements were not implemented, it is clear that there are possibilities for such mechanisms to be created in the region.

One such mechanism that has materialized is an information center, established in Oman, which shares vital information related to maritime activities. This could eventually become the foundation for a maritime cooperation network. It is estimated that by 2010 more information centers will be established in the surrounding states and will be connected to a central command, thus facilitating information sharing that could be immensely beneficial in dealing with any marine accidents or incidents.

Common maritime concerns of regional states might be able to be addressed jointly despite differences over other issues that have caused impediments in bilateral relations. The Regional Organization for the Protection of the Marine Environment (ROPME), established following the adoption of a convention to protect the marine environment by Kuwait in 1978, brings together Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The cited objective of ROPME is "to coordinate the Member States' efforts towards protection of the water quality in ROPME Sea Area and protect the environment systems as well as marine living, and to abate the pollution caused by the development activities of the Member States."[4]

While the maritime security regime model that this paper proposes might serve as a platform for future cooperation among Gulf states, it might not initially receive encouragement from the United States because it would diminish its power in the region. The United States has defense agreements with all of the GCC countries and is actively involved in a wide array of joint operations with regional and extraregional states (with the exception of Iran). Some of these operations are conducted by the US-led Coalition Task and Patrolling Forces.[*] However, assurance that an indigenous Gulf maritime cooperation system could work alongside or within the existing regional security architecture could alleviate any concerns the United States might have.

On the other hand, the possibility of involving NATO through its Istanbul Cooperation Initiative (ICI) in the project can be rejected outright.[†] The ICI is new and has not yet matured, and its current activities do not allow for involvement in such an endeavor. The fact that Oman and Saudi Arabia, the two largest GCC states, are not members of the ICI has been the biggest obstacle to the Initiative's progress. Both states do not feel the need to be part of this dialogue for a number of reasons, among them the perception that the ICI does not have

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[*] A joint force—CTF-150—comprising most regional states (but excluding Iran) works at present under a US umbrella. See note on p. 36 for more information.

[†] The ICI includes the Middle East region; its purpose is to foster regional and global security.

clear objectives and the fact that these countries already enjoy cooperative military relations with the United States and other GCC states. At present, there is no political acceptance of NATO in the region, and these states do not feel the need for a nonmilitary dialogue.

If a regional maritime security system is developed and proves effective, it could lay the foundation for long-term strategic cooperation. However, for the system to be successfully integrated and implemented in this region of conflict and contention, it is important to start with less sensitive issues: environmental protection, humanitarian assistance, and other soft security activities.

Governance Structure

The governance of a regional maritime security structure will pose some initial challenges. It would be useful to consider the European Union (EU) as a model and examine how it successfully integrates and enforces a collective policy agreed upon by individual states. For example, one area of study is the level of harmonization and regulation involved in non-EU shipping entering EU waters. To achieve comparable understanding and cooperation, it is important for the GCC states to rise above the existing tensions and problems at the intra- or interstate level and develop a maritime security concept that is acceptable to all. A governing body comprising members of all GCC states could be formed to regulate meetings and plan the strategy for the project.

Different Levels of Operation

This model is comprised of a multilevel structure; the first two levels are linked to soft security and deal primarily with humanitarian and environmental issues. The third level relates to the strategic dimension and would represent the culmination of regional cooperation.

Level 1

The first level, or the foundational stage, of cooperation should be based on soft security issues with wide social and economic impacts. This nonmilitary level would cover a comprehensive range of issues that have the potential to attract all regional states to enter into a cooperative arrangement. Regional collaboration on marine-related environmental and humanitarian activities could form the basis for extending cooperation to the next level.

Some of the main areas of cooperation could be search and rescue; natural and manmade disaster management; preventing illegal fishing; helping repatriate illegal fishers who are imprisoned; managing environmental degradation from oil spills, waste disposal, and pollution by ships; marine transport; coastal zone management; dealing with threats to or accidents at desalination plants; and managing marine food sources. Such cooperation would entail integrated communication, information exchange, and intelligence sharing at the national and regional levels among government agencies and between the governments and their respective navies.

Given that the aforementioned issues are predominantly humanitarian and environmental, it is unlikely that outside powers would raise objections to such an arrangement. Though outside powers' approval is not needed for this level of cooperation, regional states should not give the impression that they are working against the interests of outside powers.

The lack of scientific research in the Gulf—essential in assessing and evaluating the impact of coastal development on the environment—needs to be addressed jointly, as there has been a surge of development along the coasts of major Gulf states, with scant attention paid to the broad environmental impact. Governments in the region need to encourage and facilitate scientific research that could be considered by decision makers when formulating policies. The impact of rapid growth and development on the environment has the potential to create long-term problems in the Gulf and must be addressed on a priority basis by the regional states.

Though the GCC lacks a maritime security policy that considers issues with an economic-environmental impact, there are some indications that this is changing. For example, the Abu Dhabi government has initiated a maritime environment plan, though it is currently restricted to that emirate because information is still not readily shared among the seven constituent entities of the United Arab Emirates (UAE). The Abu Dhabi initiative stems from a clear commitment made in 1996 to create the Environmental Research and Wildlife Development Agency. In 2005, this emirate-level agency was renamed the Environment Agency–Abu Dhabi.[5] Over the last decade, the agency has become more established as more information on maritime environment has become available. There is a need for more coordination among the emirates of the UAE, because the threat posed to the marine environment affects vital natural food resources, which can have long-term consequences for people's health and livelihoods. Assessments have shown that careless and rampant fishing has led to a decline in the UAE fish resources. Because of bureaucratic hurdles, Abu Dhabi has decided to tackle this problem at the emirate level before moving to the national level for now.

As part of its initiative, Abu Dhabi has begun looking into other important economic and environmental issues, such as invasive species, integrated coastal zone management, biodiversity, environmental conventions, and land reclamation projects. Although most of the land-related issues are dealt with at the emirate level, other issues need to be addressed at both the national and regional levels.

Level 2

The second level of cooperation should involve a joint mechanism to combat criminal activities at sea, including narcotics trafficking, human trafficking, piracy, weapons smuggling, and smuggling of other goods. This stage could entail the establishment of a broader regional network that would extend from the Gulf to the Arabian Sea and the Sea of Aden, thereby forging links to the Indian Ocean states. This is particularly important in view of

the increased criminal activity in waters off the coast of Somalia and Yemen. Coastal South Asian states, such as Pakistan, are also vulnerable to maritime crime.

Human trafficking, weapons smuggling, and trafficking of cocaine from South America and chemical drugs from Europe to Africa and then to the Gulf are regular occurrences. Yemen, a poor country, is not a destination zone but serves as a transit point for illegal goods, drugs, and humans smuggled to richer Gulf states and Europe. Similarly, Afghan opiates, including heroin and South Asian hashish, are trafficked via Yemen to Africa and then to Europe. This route is also heavily used by human trafficking networks. A regional marine coast guard or police force with participation from all states in the security network could be employed to safeguard the interests of the states against these threats. Besides Yemen, Oman and the UAE have also emerged as principal transit zones for narcotics trafficking over the past few years. Large consignments of narcotics transported by sea have been frequently intercepted in this region. This is indicative of the high volume of illegal narcotics conducted by sea and the concerted efforts to carve out markets in oil-rich states.

Combined Task Force 150 (CTF-150), a multilateral task force created to conduct maritime security operations, is not bound to act against piracy or drug trafficking on the western side of the Gulf.[*] Its mandate relates to fighting terrorism and does not cover drug interdiction and piracy.[†] There are indications that even major outside players, including the United States, would encourage the formulation of another *ad hoc* group to solve the region's security problems. It is believed that jointly identifying shared problems could encourage states to form an institutionalized system that can recognize threats and deal with them effectively.

Level 3

The third and final level should encompass strategic security, with special attention paid to preventing misunderstandings and communication lapses among naval forces that could lead to accidental military confrontations. This level should also include counterterrorism activities against nonstate threats, whose maritime aspect was highlighted after the 9/11 attacks.

The key starting point for any comprehensive maritime security arrangement in the region would be to take steps that establish trust and confidence among the regional partners. In most cases, maritime states in a regional or extended bloc will have conflicting interests and differences of opinion. To enhance the chances of success, preliminary steps need to

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[*] CTF-150 was established in October 2002 and incorporates the vessels of the US Navy's Fifth Fleet. CTF-150 is under the Combined Forces Maritime Component Commander/Commander US Naval Forces Central Command in Bahrain. Current CTF-150 members include Canada, Denmark, France, Germany, Pakistan, and the United Kingdom. Australia, Italy, the Netherlands, New Zealand, Portugal, Spain, and Turkey have all participated in CTF-150.

[†] In January 2009, CTF-151 was established specifically to address the issue of piracy in the Gulf of Aden, the Red Sea, the Indian Ocean, and the Arabian Sea. Current members of CTF-151 include Denmark, Turkey, and the United Kingdom.

focus on nonsensitive issues, and could be promoted by a non- or semi-official approach. The objective is to build confidence among the regional states so that trust, understanding, and cooperation form the basis of their interaction in individual and interoperable activities. This would require an informed awareness of each state's strategic interests and concerns, and of individual and collective threat perceptions. Once trust is established and there is greater understanding about shared security concerns, a Track II approach could move on to deeper strategic issues.

Even small accidents and incidents related to unclear maritime boundaries can rapidly escalate into armed confrontations. Such a possibility is greater in the narrow waters of the Gulf than in most other regions in the world. It is important for the regional states to enter into an INCSEA agreement, as it can be safely assumed that no state would welcome the escalation of a chance incident into a full-blown confrontation. The 1972 INCSEA agreement between the United States and the Soviet Union at the height of the Cold War serves as an instrumental motivational benchmark. Such an agreement was drawn up during the ACRS process, but unfortunately could not be implemented because of a breakdown in the talks.

The Gulf region is highly vulnerable to terrorist incidents and has seen its share of terrorist attacks on the seas. Similarly, offshore oil platforms, desalination plants, and merchant and commercial ships are all high-value targets for terrorists, who often resort to sophisticated methods for conducting their operations. The final stage of the proposed security architecture would cover issues ranging from terrorism and prevention of incidents at sea to maintaining strategic communication links.

International Conventions and Maritime Legal Instruments as a Support Mechanism

Most Gulf countries have enacted some maritime legislation and became signatories to maritime international laws and conventions 20 years ago. While some states have since upgraded their own laws, such as those related to port operations, not all have ratified important international laws and conventions.

The Special Area Status that was to be granted to GCC states, after requests made to the International Maritime Organization in August 2008, requires the enforcement of strict rules regarding dumping by ships and monitoring of passing ships. There is increasing concern about marine pollution and consequent environmental damage.[*] Despite growing attention to environmental issues, it is, nevertheless, of the utmost importance that these states *ratify* and *comply* with the international conventions on marine pollution.

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[*] It is interesting to note that a study conducted by the Omani government states that marine pollution from land was greater than that from passing ships. Pollution originating on land accounts for 37 percent of total marine pollution, while passing ships contribute 33 percent.

There are international laws pertaining to piracy at sea and crimes related to proliferation and terrorism. In recent years, new conventions have been adopted in response to emerging threats posed by nonstate actors. For instance, two instruments designed to combat piracy, armed robbery, and maritime terrorism are the 1988 Suppression of Unlawful Acts (SUA) Convention (formally known as the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation) and its 2005 Protocol which provides relevant amendments after the 9/11 attacks. The 1988 SUA Convention is a useful tool to combat ship hijackings by international organized crime groups, or to intervene when attackers are operating outside their home countries' waters. The 2005 SUA Protocol "creates important new offenses to deal with the threat of maritime terrorism and illicit transport of WMDs [weapons of mass destruction] by sea. However, the effectiveness of the Convention depends upon all the states within a region becoming parties."[6] These offenses include use of radioactive material or biological, chemical, or nuclear weapons on a ship; discharging oil, liquefied natural gas, or other hazardous substances from a ship; or using a ship to cause damage, serious injury, or death. Most states in the Gulf are signatories to the 1988 SUA Convention, but none are party to the 2005 SUA Convention and Protocol.[*]

Obstacles to a Gulf Maritime Security Regime: View from the GCC

Currently, most GCC states lack long-term national and regional maritime strategies, and governments handle maritime security issues on an *ad hoc* basis, varying from case to case and state to state. There is no doubt that any Gulf security arrangement must be comprehensive and inclusive, and that other regional states must play key roles. However, most regional states have shown little interest in participating in a multinational security maritime cooperation arrangement. While different governments have occasionally indicated that maritime security cooperation is necessary, they have never moved beyond rhetoric. There are a number of obstacles at the state and regional levels that impede closer regional maritime security cooperation.

- At the state and regional levels, the lack of a permanent comprehensive legal structure has made it difficult for the individual GCC states to define duties, obligations, and commitments of the partner states within a cooperative framework.
- The GCC states lack the politically unified attitude required to visualize such a complex project. Some of the governments do not have the political will and commitment to divert resources into this kind of project.
- Trust is lacking between and among some of the states, which impedes cooperating on strategic security. While cooperation on soft security issues may be achieved with

[*] The GCC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the UAE, and Yemen) are signatories to the 1988 SUA Convention. Iran and Iraq have not signed the convention.

little difficulty, major confidence building will be required before GCC states are ready to work together on hard security issues.

- Most of the GCC states currently lack the capacity to engage in a maritime security project. Four of the six GCC states are small countries with small populations and modest navies with about 2,000 to 2,500 total personnel. Before any effective security investment, the smaller GCC states need to focus on capacity building.

- The delay in the demarcation of maritime borders among GCC states, as well with other non-GCC Gulf states, hinders closer regional maritime cooperation. Since the 1960s, there has been an ongoing dispute between Iran and Kuwait over the offshore oil field of Dorra. Along with Saudi Arabia, they all claim an island in the disputed area. Saudi Arabia reached a settlement with Kuwait regarding the maritime border in 2000,[7] and talks are under way to settle the dispute between Kuwait and Iran amicably. Another example of maritime boundary problems is the UAE islands: Iran has illegally occupied Abu Musa and Greater and Lesser Tunb since 1971 but refuses to resolve the dispute or take the matter to the International Court of Justice. Recently, Iran set up a marine rescue center and a registration office for ships and sailors on the island of Abu Musa, triggering severe criticism from the GCC and the UAE. The latter called the actions illegal and a flagrant violation of the 1971 Memorandum of Understanding, which does not give Iran sovereignty over any part of the islands.[8]

The demarcation of maritime boundaries is critical to defuse tensions in a region that has witnessed four major wars within two decades: the Iraq-Iran war (1980–88), the Iraqi military invasion of Kuwait (1990), the US liberation of Kuwait (1991), and the US invasion and occupation of Iraq (2003). There is no guarantee that tensions will not escalate into full-blown conflict over these outstanding issues. Especially with the presence of external naval powers, which provide protection to smaller states, the threat of a major international war is always present. The undefined or partially defined maritime boundaries can also affect other issues. For instance, it is difficult to reach an agreement on tackling illegal fishing or environmental problems if these boundaries have not been demarcated.

Yet another obstacle to regional cooperation is the perceived lack of encouragement and support from the United States and European and Asian countries that share an interest in the stability of the region. The GCC states feel that the United States is more interested in encouraging bilateral security agreements with individual states than encouraging multinational cooperation.

The Role of Iran

Iran's attitude toward a regional maritime security project is even more complex. From the GCC standpoint, the Iranian government has set impractical and difficult conditions for negotiations.[9] The main Iranian prerequisite for establishing a security regime in the region

is the withdrawal of all foreign forces from the Gulf region, a demand that is against the strategic interests of many Western states and the majority of the GCC states. The waters of the Gulf are both strategically and economically vital, and outside naval powers have no intention of leaving the area. Given the fact that most GCC states currently rely on US military protection, in particular air and naval defense, it is highly unlikely that these states will accept such a demand either. On the contrary, some regional states are encouraging more outside powers to contribute to their defense and protection, as in the case of Kuwait after 1991 and, more recently, the UAE (which inked an agreement with France to establish a French military base in the country). Iran continues to assert that regional maritime security arrangements are not feasible while foreign military forces are present in the region. Therefore, any negotiation between the GCC and Iran is doomed to fail if they do not find a common ground on this issue. Any regional dialogue on the establishment of a maritime security regime needs to be separated from controversial matters including the examples above or the dispute over the Iranian nuclear program.

Track II negotiations can be helpful in gauging whether Iran has such high demands because it has no interest in establishing a security regime in the region at this time, or if it is open to discussion if offered the right incentives and political bargains. Another obstacle to an Iranian integration in a maritime security regime is the opaque role of the Revolutionary Guards (RG). The Iranian naval forces include both Iranian State Naval Forces and the Islamic RG Corps Naval Forces. Both are under the supervision of the Iranian supreme leader, Ayatollah Ali Khamenei, and should both participate in any regional security arrangements. In particular, the integration of the RG is essential. In most cases, it is the RG Naval Forces and not the state's that behaves "irresponsibly" and poses a security concern for other Gulf states. However, judging from the RG's naval actions over the past years, such as the kidnapping of the British sailors in January 2007, it appears that it has no interest in engagement with either the GCC states or the United States. Military maneuvers in the Gulf by the RG Naval Forces and the provocative public statements of Iranian RG commanders and from the supreme leader threatening to close the Strait of Hormuz in the case of a US or Israeli strike on Iran's nuclear facilities have increased the present tension in the Gulf and can be taken as a signal that Iran is not willing to cooperate at this time.

Conclusion

Establishing a comprehensive, effective, and sustainable maritime security regime in the Gulf would require certain conditions:

1. Key states must realize the need and value of such an arrangement.
2. Participants must have the capabilities and the required institutions to promote it.
3. A suitable political and security environment is necessary to implement such a regime.

4. Outside powers that have a stake in the security of the region must play a positive role and contribute to the establishment of such a regime.

While it would be difficult to meet all of these requirements in a short amount of time, the guidelines for a maritime security cooperation model proposed in this paper could be a starting point. This, however, requires a flexible attitude that takes into consideration the realities on the ground and allows for development of a modest initiative that could pave the way for a more comprehensive and effective maritime security cooperation arrangement that serves not only the interests of the region but also the international community.

Maritime Issues in South Asia

Geethangani de Silva

Maritime issues in South Asia are linked to the littoral and hinterland states that comprise the region. The Indian Ocean littoral states—Bangladesh, India, the Maldives, Pakistan, and Sri Lanka—and the hinterland states—Afghanistan, Bhutan, and Nepal—all have an interest in the Indian Ocean for political, security, economic, and maritime resource reasons. Apart from Sri Lanka and the Maldives, all South Asian countries share a border with India, the largest country in the region. As a result, any major development in India has repercussions in the adjacent countries. Bhutan and Nepal have access to the Indian Ocean through India, while Afghanistan has access through Pakistan.

Global and other regional powers interact with the South Asian region bilaterally and multilaterally in part due to their strategic and economic interests in the Indian Ocean. Global and political realities have also influenced the strategic importance of the region: the Soviet invasion of Afghanistan and the global "war on terror" following 9/11. Marine resources, navigation, and environmental changes contribute to the interest taken in the Indian Ocean by the great powers, by regional powers, and by South Asian countries.

"The Great Game"

There is a long history of involvement by outside actors in South Asia. Many have established and maintained a presence there and in the Indian Ocean to ensure their strategic interests. In modern times the key players include the United Kingdom, United States, the former Soviet Union, and more recently, China.

US interest and presence in the Indian Ocean increased during the Cold War period in order to counter the influence of the Soviet Union, which occupied Afghanistan and enjoyed a special relationship with India. One reason for the Soviet interest in Afghanistan was the potential for access to warm water ports in the Indian Ocean. In 1971, the United States established a military base on the British island of Diego Garcia, located in the middle of the Indian Ocean, following a lease agreement with the United Kingdom. Diego Garcia is home to one of the five ground antennas that comprise the US Global Positioning Satellite system.

US interest in the Indian Ocean increased following the fall of the Soviet Union and the subsequent end to the Cold War, and Diego Garcia was seen as crucial to furthering it. Starting in 2002, the military base began construction on new hangers for B-2 bombers and subsequent extensions of the runway. Similarly, "Camp Justice," a facility designed to hold soldiers involved in the "war on terror," and also rumored to hold a prison for suspected terrorists, was approved and completed.[1]

Aware of US interests in the Indian Ocean, China has made efforts to establish its presence in the region, initially through links with Pakistan (because of the strained relations that both countries have with India) and, more recently, with Sri Lanka. China's links to Sri Lanka are primarily related to defense cooperation. Trade, commercial, and cultural activities play a lesser, but still important, role. China's efforts to gain a foothold in the Indian Ocean are seen by many as an attempt to assert itself as a major consumer of Indian Ocean resources.

Maritime Resources

The Indian Ocean's rich resources—fisheries, offshore oil and gas, and undersea minerals—are of interest to the world's major and upcoming powers. Oil and gas reserves in particular beckon the major user countries to the region. Fishing vessels from around the world can also be found there. Additionally, Indian Ocean mineral resources have an economic and strategic value to both Indian Ocean countries and those that wish to establish a presence in the region.

Coral reefs throughout the Indo-Pacific region, stretching from East Africa and the Red Sea to the Central Pacific Ocean, are an important natural resource with a high biodiversity which serve as storage banks of food and medicine sources. The diversity of coral is greatest in the Indo-Pacific, particularly around Indonesia, Papua New Guinea, and the Philippines. These reefs also function to protect coasts from wave erosion.

Maritime Challenges

South Asia's maritime challenges vis-à-vis the Indian Ocean are immense. A perennial issue that causes tension in South Asia is the attempt by major global powers to get a foothold in the waters of South Asia for their economic, navigational, security, and strategic requirements. A more recent problem is terrorist and militant groups using the Indian Ocean to illegally transport weapons and conduct acts of terrorism along maritime routes. The Liberation Tigers of Tamil Eelam (LTTE), a terrorist group in Sri Lanka fighting for a separate state, buys weapons in Southeast Asia and transports them by ship to LTTE-controlled areas in northern Sri Lanka. The group also engages in acts of piracy in the Indian Ocean. Two years ago, the LTTE boarded a Jordanian ship in Sri Lankan waters carrying

a cargo of food items. The ship was allowed to drift toward the northeastern coast of Sri Lanka and ended up on the shore in an area controlled by the LTTE. Although the crew was allowed to leave the ship, the vessel could not be retrieved, as access to the area was not possible for security reasons.

With incidents of piracy in the Indian Ocean on the rise, the peaceful use of navigational routes by vessels of all nations is increasingly threatened. Somali pirates have expanded their area of activity from the territorial waters of Somalia to the high seas. Using "mother ships" as extensions of their mainland facilities, Somali pirates use smaller high-speed motor boats to attack seafaring vessels, cargo, and cruise ships. Their recent attacks took place in the Gulf of Aden, which is very close to South Asia. These acts of piracy have resulted in increasing insurance rates and transportation costs for shipping companies as vessels have to seek alternative routes to avoid the pirate-infested area, usually sailing around South Africa, which is a much longer route, incurring higher expenditures. While there is concern about piracy in the Malacca Strait, much of it is under control because of the collective vigilance exercised by India, Indonesia, Malaysia, and Singapore. The Indian Navy has already had to intervene in more than one incident in the Gulf of Aden. Following an attack by Somali pirates on a Chinese ship off the coast of Yemen, China sent naval ships to the region to serve as maritime escorts.

South Asian sea routes are also used for human smuggling and drug trafficking. Further, the movement of refugees has had an impact on the domestic political developments in the affected countries and causes friction among many countries of the region.

Illegal fishing is another maritime challenge in the Indian Ocean. Sri Lankan fishers are often apprehended in the territorial waters of India and the Maldives and taken into custody along with their boats. Often there is such a lengthy legal proceeding that the boats end up decaying. Similarly, Indian fishers commonly fish in Sri Lankan waters. As a means of settling these kinds of issues, Sri Lanka has entered into bilateral mechanisms with both India and the Maldives.

The relationship between maritime issues and the environment requires further exploration. The devastation caused by the December 2004 tsunami in India, Indonesia, Sri Lanka, and Thailand illustrates how far-reaching maritime catastrophes can be. Prior to the tsunami, fisheries in Sri Lanka provided employment for an estimated 142,500 fishers, and approximately 20,000 more people were employed in fisheries-related industries. Those working in the fisheries sector lived in 1,333 fisheries villages and used 703 boat landings, including fishery harbors, along the coast. Of the 30,000 people who died in the tsunami, a majority were fishers and their family members. A large number of fisher communities were displaced because of lost housing and coastal infrastructure. The tsunami either destroyed or damaged around 65 percent of the 29,700 working fishing boats. Fishing

implements—outboard motors, ice storages, fishing gear, and nets—were also destroyed. The loss of the fishing boats and gear had a severe impact on the fishing communities. The disaster almost paralyzed the industry and the livelihoods of those in dependent communities.

With assistance from the international community, UN agencies, and the nongovernmental sector, the government of Sri Lanka was able to provide fishing boats and other equipment to fishing communities. Temporary accommodations were provided in the immediate aftermath of the tsunami, as well as permanent housing later on. Fisheries harbors and boat landings were repaired. The industry has now recovered to a great extent, but the threat of future natural disasters remains.

Maritime Cooperation

In order to counter the challenges created by maritime issues, cooperative mechanisms should be developed that focus on an array of areas: security challenges, maritime threats posed by state and nonstate actors, navigational issues, the political and social dimensions of fisheries concerns, marine pollution and coastal degradation; the impacts of global warming and natural disasters, increasing joint management of the maritime environment, and exploiting maritime resources in a sustainable and mutually beneficial manner.

These mechanisms should function on many levels: bilateral, regional, and eventually global. In the case of South Asia, there are already some existing mechanisms. On the bilateral level, for example, there are meetings between the navies of Sri Lanka and India, an annual meeting of the Sri Lanka–India Joint Working Group on Fisheries and the Sri Lanka–Maldives Fisheries Subcommission. Meetings of the Indo–Sri Lanka Experts Group on the Sethusamudran Dredging Project which took place alternatively in Sri Lanka and India later lost their momentum and became nonfunctional. Informal consultations between India and Pakistan on a wide range of issues, including those related to the Indian Ocean, are particularly important and beneficial in view of the impact of Indo-Pakistan hostilities on South Asian stability. It has to be emphasized, though, that bilateral mechanisms are not adequate to address issues of major significance taking place in the Indian Ocean, although they could help mitigate irritants between two or among three nations.

A broader Indian Ocean–wide effort toward peace was undertaken in the 1970s. Motivated by security threats during the Cold War, Sri Lanka introduced a proposal to declare the Indian Ocean a "Zone of Peace," which was unanimously adopted by the UN General Assembly in 1971. Under UN Resolution 2832 (XXVI) of December 16, 1971, the General Assembly declared that the Indian Ocean "within limits to be determined, together with the air space above and the ocean floor subjacent thereto," to be designated for all time as a Zone of Peace. The proposal was also endorsed by the 113-member Non-Aligned

Movement. The impetus behind the declaration was the steady escalation of the arms race and the competitive military presence in the region. However, the end of the Cold War saw interest in such an arrangement diminish. Activities related to the Indian Ocean Zone of Peace came to an end.

Among the region's larger security issues, terrorism and piracy are two that must be addressed on the regional level and in a collaborative manner. The November 2008 terrorist attacks in Mumbai, India, point to the urgent need for the recognition of the maritime dimension of the security threat linked to terrorism.

South Asia should also collectively focus on piracy and cooperate with other regions that are initiating action to bring piracy to an end in the Indian Ocean. There are a number of existing mechanisms and organizations that could facilitate such collective action, such as the Indian Ocean Rim Association for Regional Cooperation (IORAC),* which focuses on economic issues from South Africa to Australia, and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).† At a recently held summit meeting in New Delhi, the members adopted the BIMSTEC Convention on Cooperation in Combating International Terrorism, Organized Crime, and Illicit Drug Trafficking.

The South Asian Association for Regional Cooperation (SAARC) is an appropriate mechanism to play an active role in bringing about the necessary cooperation on maritime issues in the region. As South Asia occupies a central position in the Indian Ocean, it behooves the region to spearhead the response to maritime issues, collaborating with organizations in other regions, particularly those in Southeast Asia, West Asia, and the Horn of Africa. One possibility is to apply some of the provisions of the 1971 Indian Ocean Zone of Peace Declaration (IOZP) to the current mechanism of SAARC to ensure its focus on maritime issues. In addition to the SAARC member countries, there is a group of SAARC observers—China, the European Union, Japan, Iran, Mauritius, the Republic of Korea, and the United States—that can encourage SAARC members to take steps to address these very pertinent issues. It is imperative that Indian Ocean issues are addressed both regionally and globally, because their complex nature involves security and strategic concerns that affect the region and the wider Indian Ocean, as well as geographically distant countries with interests in the area.

The IOZP Declaration recommends that littoral and hinterland states of the Indian Ocean, permanent members of the UN Security Council, and other major maritime users enter into consultations with the goals of establishing a system of universal security without military

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* Members include all countries surrounding the Indian Ocean, with one notable exception, Pakistan.

† Member countries are Bangladesh, India, the Maldives, Myanmar, Nepal, Sri Lanka, and Thailand. Pakistan is also absent from this group.

alliances and strengthening international security through regional and other cooperation; guaranteeing free and unimpeded use of the Indian Ocean zone by vessels of all nations; and putting in place an international agreement that would maintain the Indian Ocean as a Zone of Peace. If realized, these goals would ensure the unrestrained use of the Indian Ocean by vessels of all countries and under secure conditions.

SAARC, however, is handicapped in taking up the complex issues related to the Indian Ocean because its charter forbids the inclusion of bilateral and contentious issues in the SAARC agenda. This policy decision must be revisited. After 23 years, and backed by a group of observers some of whom are major world powers, SAARC needs to change. Now may be the best time for SAARC to become an organization competent and credible enough to meet the excessive demands of maritime cooperation. Capacity building is necessary to deal with issues that were nonexistent when the association was established in 1985. Similarly, South Asian political leaders need to develop the political will necessary to update SAARC, bringing tangible results to the region and beyond.

Any effort to resolve South Asia's maritime issues should proceed in a collaborative fashion, with parties agreeing on a common agenda and timetable. This effort must be led by political leaders who are able to effectively engage the private sector, civil society, experts, academics, and a wide range of interest groups. In a region where little has been accomplished through regional cooperation, civil society could play an effective role in encouraging proactive political leadership. In the SAARC process, civil society organizations are already playing prominent roles, particularly in social, gender, cultural, and technical areas. Civil society can undoubtedly be influential in pressuring SAARC to address political, security, and strategic issues.

India, Sri Lanka, and the Palk Strait: A Case Study in Bilateral Maritime Issues

A narrow strip of ocean, the Palk Strait, separates Sri Lanka from India's eastern flank. There are a number of bilateral concerns that emerge from this proximity, including political, navigational, and fisheries issues. Because the southern Indian state of Tamil Nadu is so close to northern Sri Lanka, it plays an important role in India–Sri Lanka bilateral relations.

Political Issues

There is a long history of people moving across the Palk Strait from India to Sri Lanka, particularly to northern Sri Lanka, and from Sri Lanka to India. Yet the political issues of the last few decades are of a different and more complicated nature than those that caused migrations in the past. With ethnic tensions leading to serious conflict in Sri Lanka in the late 1970s and early 1980s, the Palk Strait became the access route between India and Sri

Source: Extracted from United Nations Department of Peacekeeping Operations, Cartographic Section."

Lanka for conflict-related travel. Different insurgent and terrorist groups of northern and eastern Sri Lanka sent their cadres to South India for training. This development led to a deterioration of Indo–Sri Lanka relations for most of the 1980s.

The Indo–Sri Lanka Accord, signed in 1987, was a landmark development in Indo–Sri Lanka relations. The accord sought to establish peace and normalcy on the island while devolving power to the provinces of Sri Lanka to meet aspirations of the minority communities, particularly the Tamils. The accord also required the LTTE to lay down its arms. One significant provision was that Trincomalee Port, or any other port in Sri Lanka, could not be used for military purposes by any country in a manner prejudicial to India's interests. The work to restore and operate the Trincomalee Oil Tank Farm would be undertaken as a joint operation between India and Sri Lanka,[*] preventing another country from having access to this vital area.

As one of Asia's largest natural harbors, Trincomalee has always been important because of its location (on the northeastern side of Sri Lanka) and capacity. Trincomalee is considered strategically important as it controls access to the northern Indian Ocean and has attracted the attention of the major powers, particularly during the two world wars. Even after Sri Lanka became independent from British rule in 1946, the former colonial power maintained a presence in Trincomalee until 1972, when Sri Lanka was declared a republic

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[*] The Trincomalee Oil Tank Farm is a collection of 101 oil storage tanks built by the British during WWII. They fell into disuse after the war, and in the early 1980s Sri Lanka considered leasing them to any country that could pay the most.

and severed its ties with the British monarchy. The LTTE's master plan was to gain control of Trincomalee and for it to be the capital of the separatist state the LTTE hoped to establish, Tamil Eelam. Successive governments in Sri Lanka contributed to the development of a security net around the port city due to the strategic importance of its location. Several of the oil storage tanks were leased to the Indian Oil Company. Foreign economic projects were established in the area. More recently, Indian companies are involved in setting up a coal power project there. The development of the city/port of Trincomalee itself is carried out by several foreign companies that work collaboratively.

Refugees

The close proximity of Sri Lanka's northern coast to the shores of the south Indian state of Tamil Nadu has led to an influx of Sri Lankan refugees into South India. This has resulted in the government of India intervening in Sri Lanka's ethnic conflict.

Whenever there is active fighting in northern and eastern Sri Lanka between the LTTE and the Defense Forces, many Sri Lankans, mostly from the Tamil community, leave the country, usually in fishing boats, and seek refuge in Tamil Nadu. Some people leave of their own volition, while it is alleged that some others are forcibly taken to South India by the LTTE in order to create a Sri Lankan refugee situation in Tamil Nadu and draw India's attention to the ethnic issue in Sri Lanka.

Fisheries

Fishers from the southern shores of Tamil Nadu have always been attracted to the fishing areas close to Mannar, in northern Sri Lanka, because of the rich harvest of shrimp, lobster, and crab. Although the Indo-Lankan maritime agreements in 1974 and 1976 provided Indian fishers an opportunity for rest and recreation and to dry their nets on the isle of Kachchativu, the waters surrounding the island were Sri Lankan territorial waters, making it illegal for Indian fishers to fish there. However, this has not prevented large numbers of Tamil Nadu fishers from venturing into Sri Lankan waters. At times, hundreds of Indian fishing boats have been sighted close to the Sri Lankan coast in the Mannar area.

For humanitarian reasons, fishers poaching in Sri Lankan waters are rarely taken into custody. There is also an arrangement to take straying fishers to the International Maritime Boundary Line and turn them over to Indian authorities.[*] They are not apprehended and kept in custody in Sri Lanka unless they have been involved in other nefarious activities, one of which is assisting the LTTE by smuggling contraband across the Palk Strait to the northern coast of Sri Lanka. Smuggling across the Palk Strait is an activity dating back

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[*] Sri Lankan fishers also poach in Indian waters. Sometimes they are apprehended and taken into custody. Because Indian laws are more complicated, Sri Lankan fishers are not released without going through the judicial process.

hundreds of years, and the LTTE has exploited this history in order to transport weapons and other material in fishing vessels.

The LTTE also uses the issue of Indian boats fishing in and outside Sri Lankan waters to whip up anti–Sri Lankan sentiments in India by alleging that the Sri Lankan Navy is harassing Indian fishers. The LTTE has been credibly accused of attacking Indian fishers, injuring and sometimes even killing them, and then placing blame on the Sri Lankan Navy in order to cause irritants in the bilateral relationship. Every now and then, in the southern Indian city of Rameshwaran, home to large fishing communities, there are demonstrations and the burning of effigies to protest alleged Sri Lankan Navy harassment of Indian fishers.

The fisheries issue has caused so much friction between the two countries that a Bilateral Joint Working Group on Fisheries has been established. Delegations to the working group meetings are led by senior officials of the Ministries of Foreign Affairs in India and Sri Lanka. The delegations include officials from the Ministry of Fisheries, Ministry of Defense, the Attorney General's Department, Immigration and Emigration Authority, and the Navy and related agencies in the two countries, representing the government. Prior to the formal meetings, informal discussions are conducted between the fishers' associations and governmental officials in order to obtain the views and recommendations of the local fishers.

Sethusamudran Dredging Project

As the Palk Strait between Sri Lanka and India is extremely narrow, India does not enjoy a continuous navigable sea route in its territorial waters. Indian vessels must circumnavigate Sri Lanka to travel from India's western to its eastern coast. The government of India established the Sethusamudran Ship Canal Project (SSCP) on July 2, 2005, in order to dredge the Palk Strait and facilitate direct transportation. The SSCP will substantially reduce the distance between ports in India. For example, the distance between Tuticorin, a port southwest of Chennai, and Chennai will drop from 769 to 335 nautical miles, and that between Tuticorin to Kolkata will be reduced from 1,371 to 1,031 nautical miles.[2] The direct navigation of ships is expected to save fuel costs and standing charges associated with longer voyages. The SSCP also includes plans to develop the Tuticorin port and promote economic development of the backward areas of the Ramanathpuram and Tirunelveli districts of Tamil Nadu. The SSCP also hopes to promote coastal shipping and generate employment opportunities for the area, and to increase foreign investment in the Tuticorin district.

There has been considerable objection from political parties and groups in Tamil Nadu to this project. Civil society organizations, environmentalists, and independent experts have expressed concern about the adverse impact the SSCP would have on economic and

environmental interests. More recently, a case was filed in the Supreme Court of India on cultural and religious grounds, protesting that Ram Sethu, also known as Adam's Bridge—and considered an Indian national treasure—would be damaged by the dredging process of the SSCP. There is also concern that even if the canal were deepened it could not accommodate the bigger shipping vessels that must navigate from east to west and *vice versa*. As a result, their need to circumvent Sri Lanka would continue. Also, dredging cannot stop once the work of the SSCP is over. It will be a continuous process to clear the seabed of sand that is redeposited in the dredged area over time.

The SSCP has implications for Sri Lanka, including concern over environmental and livelihood issues. These concerns include the impact on the marine ecosystem and water quality; the implications of dredging and dumping over 80 million cubic meters of ocean floor material; the possibility of blasting, resulting in destruction of marine life and disturbance of marine ecology; damage to the coral reef; and depletion of fish stocks and ensuing loss of local livelihoods.

The government of Sri Lanka has conveyed these concerns to the government of India through official political channels. India agreed to cooperate and offered to facilitate the continuation of Indo–Sri Lanka consultations, including at the expert and technical levels, "with a view to reaching a common understanding"[3] on the environmental concerns and addressing them. The objective of the consultations is to formulate measures to monitor and mitigate any adverse impacts of the SSCP. The Bilateral Experts Meeting, which met in both India and Sri Lanka, focused on these concerns as well as on strategic and marine ecological issues. The delegation from Sri Lanka was led by an expert from the nongovernment sector and included personnel from the National Aquatic Resource Research Agency and the departments of marine studies from various universities, members of the private sector, legal advisors, representatives from the shipping sector, and government officials. Recommendations included joint monitoring and assessment of any adverse implications, creating a mechanism for exchanging information, joint assessment of risks through a common base of information, and creating modalities to address these concerns. The bottom line is that environmental concerns must be addressed jointly, and that close economic cooperation in the Palk Strait area must be established.

At the official level, the SSCP is being viewed as an opportunity for joint economic activity that benefits both countries. The government of Sri Lanka has expressed the view that the SSCP can be seen not only as a challenge but an opportunity. The complementary areas generated could be exploited by the Sri Lankan shipping industry. The commercial implications of opening and expanding ports in South India were also evaluated, and it was generally agreed that the port in Colombo would continue to attract international shipping business.

Conclusion

In some cases, bilateral relations and mechanisms have been sufficient to address emerging issues such as the Palk Strait. However, in other cases, bilateral relations can act as an impediment to pragmatic measures to address challenges that have a multifaceted nature. Examples include those over fisheries and maritime boundaries between India and Pakistan. The increasingly complex transnational nature of maritime challenges in the 21st century requires new multilateral and regional approaches. If SAARC proves unequal to this challenge, nations in South Asia will have to seek alternative mechanisms for collective action.

Interpreting the Trends

No Man's Sea:
International Rules and Pragmatic Cooperation

Amit Pandya

The Indian Ocean is the archetype of the globalized world. A high proportion of its seaborne trade originates in or is destined for countries outside its region, and a high proportion of the world's seaborne trade traverses the Indian Ocean. The Indian Ocean's significance to global trade in oil is particularly striking. Fishing fleets from nonlittoral nations play a prominent, arguably a dominant, part in Indian Ocean fisheries. We could say that for global trade, global food security, and global energy security, the Indian Ocean is critical. And it remains a stage for the pursuit of the global strategic and regional military interests of all world and regional powers. Accommodation of the diverse national interests at play demands clear rules and norms.

Beyond the uniform global standard of 12 miles of territorial seas, 200 miles of exclusive economic zones (EEZs), and the limited rights of coastal states to continental shelves,[*] lie the high seas, nonsovereign and not governed by any sovereign. In past ages, governance of the high seas was simpler. A small number of nations competed and collaborated to establish norms and rules. The capacity to venture forth on these waters was the preserve of the intrepid. The capacity to exploit its economic or strategic potential was limited to the few nations that possessed sophisticated fishing fleets to pursue food security and livelihoods, merchant vessels to engage in maritime trade, or navies to pursue security interests. The contemporary picture is rather more complex. More actors are on the stage. Almost all coastal states perceive and assert national interests in the seas. Technological progress and its dissemination have given more states, societies, and private interests the capacity to venture into and use the high seas. International law, particularly positive statutory law, has therefore been looked to as a framework for governing transactions and interactions.

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[*] Coastal states enjoy progressively diminishing measures of control over each of these: sovereignty in the territorial seas; economic and related (e.g., environmental) regulatory control in the EEZ but without prejudice to other uses by other states there; and rights of exploitation in seabed resources in the shelf, though not in the waters above it.

Limits of Law

On the high seas, all states enjoy almost unlimited rights. These are circumscribed by national jurisdiction closer to shore. The current contours of that national jurisdiction are not established in hallowed, ancient customary international law. The present situation is of very recent origin, and even so is already under challenge and likely to mutate further. Four decades ago, the majority of states claimed only 3-mile territorial seas, with only a few laying claim to 12 miles. Peru's claim to exclusive control of fisheries to a 200-mile limit shocked and appalled developed nations with its assault on conventional opinion. Today, the 200-mile EEZ is not only standard practice but is embodied in the 1982 UN Convention on the Law of the Sea (UNCLOS). UNCLOS also already provides a degree of national control over continental shelves beyond the EEZ; establishes detailed procedures for assertion of that control over continental shelves; and contemplates uses of the seabed under the high seas, as well as and providing procedures for the regulation of those uses.

Clearly, the legal rules governing the use of the oceans are not stable and are undergoing rapid change. Indeed it has always been so. Since the emergence of nation states, maritime law has seen both outrageous claims—such as the division of all the oceans between the Portugal and Spain—and some risibly modest ones—such as the cannon-shot rule, under which a nation's territorial waters extended only as far as a cannon shot could reach.

Even in the presence of a uniform legal regime under UNCLOS or other treaties and formal agreements (governing particular resources or issues such as marine pollution, ship safety, port security, or fisheries), the behavior of states and their nationals (citizens and corporations) remains unpredictable. The rule of law is undermined by the failure of some nations to formally accept some treaties or legal obligations, by the lack of enforcement mechanisms for existing obligations, and by the weakness that prevents some aggrieved states from asserting rights or jurisdiction. In those rare cases where international or national tribunals decide disputes, compliance with these decisions depends on the enforcement capacity of states or international bodies. The fact that even where clear maritime boundaries are agreed to they are invisible and mostly physically unmarked compounds the problem of compliance and enforcement.

Even where parties enjoy equal rights under the law, inequalities of political power and technological capacity conspire to undermine the rule of law. The conjunction of uncertain norms and rules and rapid advances in the technology for exploitation of ocean resources can be a significant source of instability and conflict. So can the highly differential capacities of states and their nationals in exercising what are extensive rights in high seas. Under such circumstances, comity between nations, goodwill, and pragmatic self-interest assume greater importance.

The preamble to UNCLOS adopts important universal principles. Among these are "a just and equitable economic order which takes into account the interests and needs of mankind as a whole" and "that the area of the seabed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction, as well as its resources, are the common heritage of mankind, the exploration and exploitation of which shall be carried out for the benefit of mankind as a whole, irrespective of the geographical location of states." These principles amplify the basic and long-standing notion that the high seas outside territorial jurisdiction are available equally for navigation, commerce, and fishing to all states equally.* However, the practical import of such freedom and equality is ambiguous. Is the common heritage to be exploited by whoever gets there first, or to be preserved or husbanded for the benefit of all? The former would favor those with superior technical and financial capacity. The latter would favor the poor and powerless.

The seabed and its resources are "the common heritage of mankind" not only in the preamble but under the operative provisions of UNCLOS. Activities there are regulated by and subject to an International Seabed Authority. Also subject to formal constraints is the universal right to fish on the high seas; fishing must be done with due regard to the interests of parties elsewhere in effects on shared fish stocks and the effects on migratory species. However, what is the practical effect of such communitarian constraints?

When poor states assert claims under UNCLOS to their continental shelves, they often depend on the technical and scientific assistance of governments or corporations far more powerful than themselves. And in the seabed beyond the continental shelf, applications for exploration and exploitation will clearly be the preserve of highly well-financed interests, public and private. Where technology is the source of advantage, it is not even necessary for a state to have a coastline on the ocean in question, and indeed a technologically advanced, landlocked state or its nationals could enjoy greater access to marine resources than might littoral states. The extent to which states can avail themselves of the advantages that the seas offer depends on power and on comity among states. In effect, legality at sea will depend on how well states behave toward each other in practice, and on the will and capacity of coastal states to exercise their rights and enforce legal obligations under their national laws or under international law.

Invisible Boundaries

States and their nationals act in the nonsovereign space of the oceans relatively unconstrained, or constrained by ambiguous standards, to the disadvantage of littoral states'

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* Traditionally, before the emergence of contemporary treaty law, the concept of the high seas included waters that are now EEZs as well as continental shelves, both of which are now under partial national jurisdiction of coastal states.

interests or the interests of others in international waters. On the other hand, the actions of states in their sovereign territorial waters can have an impact on the interests of states in international waters.

Contemporary scientific awareness makes increasingly untenable clear distinctions between areas of the ocean, divided only by imaginary lines defined by distance from the shore but otherwise part of an integral whole. For instance, fish stocks will be competitively exploited in international waters by those with technology and fleets equal to the task. A significant proportion of unregulated, unreported fishing takes place not in territorial waters or EEZs where states can regulate it, but in international waters. If these stocks are thereby depleted, this will disadvantage less well-equipped small-scale ocean fishers. And what about the detrimental effects on coastal fisheries from changes wrought in international waters to an indivisible ecology? Is it practical to segregate the effects of predatory practices in legally unconstrained international waters from those on more regulated constrained contiguous coastal areas?

Drawing clear boundaries, with rules for what is allowable in each area, has its limitations. Nature does not respect such boundaries. There is interdependence between these distinct legal realms. Not only do migratory species cross between them, migratory effects do so too. While operating legally within its rights in a unified ecology, a state (through its nationals) will affect other states, whether in the form of effects on coastal seas of actions in international waters or *vice versa*.

We should also note the importance of migratory maritime human behaviors. For example, there has long been an established and traditional pattern of artisanal fishers migrating along the East African coast in pursuit of migratory fish. These patterns are so well established that bonds of marriage and kinship have developed among quite far-flung coastal communities, as have corresponding mutual awareness and acceptance, and patterns of commercial exchange. While these may challenge the national regulatory jurisdictions of states, they are presumptively legitimate, at least as customary practice.

What is true of natural resources in the sea and their traditional or commercial exploitation is also true of predatory actors, such as commercial fishers or pirates. The case of piracy off Somalia points to the enormous difficulties, and sometimes bewildering complexities, of enforcing the rule of law on the oceans. Under UNCLOS, states have not only the authority but the duty to cooperate in repressing piracy. However, if ships are seized under this authority "without adequate grounds," the seizing state is liable to the vessel's flag state. Another source of difficulty is that the authority of states to act against piracy under UNCLOS is limited to high seas or "any other place outside the jurisdiction of a state." As a result, interim measures have had to be adopted such as UN Security Council Resolutions

1816 and 1851, which authorize member states to enter Somali territorial waters in pursuit of pirates.[*]

Sovereignty

The continuing viability and necessity of sovereign capacity in the maritime realm—and the need for its improvement and reform—are demonstrated by two recent examples. The failure of the Indian coastal defenses against the terrorist attackers of Mumbai in late 2008 was entirely a national failure, and quite unaffected by the availability or lack of international cooperation. In the Malacca Straits, the remarkable decline in incidents of piracy against international shipping has left the impression that the problem of piracy is under control there. However, local and smaller scale trawler fishers continue to be victimized and preyed upon, often by rogue agents of state law enforcement.

On the other hand, given the unified and indivisible characteristics of the maritime realm, in most cases attempts to provide order and stability through the segmented regulation of competing national interests will be unsuccessful.

Rather than seeking, after the fact, to reconcile and harmonize activities that are already initiated in the pursuit of narrow (national, sectional, or private) interests, it is preferable to approach the regulation of the entire range of such activities according to a unified approach—in effect a central planning mechanism for the international community's use of this shared resource. Leaving aside the ideological hostility that planning of any kind may be expected to attract from proponents of *laissez faire*, there is a more significant diplomatic and political obstacle.

Any attempt to constrain the pursuit of national interests (or private interests sponsored by nations) for the larger good will give rise to sensitivities about encroachment on sovereignty. What then might be a viable and constructive way out of this conundrum?

If nations recognize that their distinct national interests overlap in shared space, there might emerge an understanding based on overlapping sovereignties to address the overlap of their interests. Such an approach would sidestep sensitivities about truncation of national

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[*] The 1988 Convention on Suppression of Unlawful Acts Against the Safety of Maritime Navigation, adopted following the hijacking of the *Achille Lauro* in 1988, provides authority for parties to create criminal offenses, establish jurisdiction, and accept delivery of persons responsible for or suspected of seizing or exercising control over a ship by force or threat thereof or any other form of intimidation. However, the extent to which this authorizes action against piracy, particularly pursuit into territorial waters, has been subject to debate. Hence the adoption of recent UN Security Council resolutions. The US-led Naval Combined Task Forces had until recently suffered from a similar lacuna in jurisdiction, being empowered to enforce security against terrorism and extremism, but not unambiguously against piracy. The setting up of a new task force (CTF-151) with a specifically anti-piracy mandate rectifies this.

sovereignty. Indeed, it could be seen as an approach that vindicates and keeps intact the notion of national sovereignty even in the context of overlapping or competing interests. Sovereignty would thus be a building block of collective action, rather than an impediment to it, and it would facilitate international collaboration on maritime challenges.

We have begun to see the application of such an approach in practices such as those contemplated under UN Security Council Resolutions 1816 and 1851. The postulate of these resolutions is that the actions of foreign navies in Somali waters are less an encroachment on Somali sovereignty and more a vindication or perfection of it by the enforcing navy. The Memoranda of Understanding between the Somali and other governments imply that the latter are helping Somalia to better exercise its sovereignty in its territorial waters against acts of piracy.

International Cooperation

Pooled sovereignty is already established in the contemporary international order, as embodied in the United Nations system and other multilateral organizations. Collective norms and values reflect the common sovereign will of nations, not always on the basis of equal representation, but with a commitment to collaboration and cooperation.

Certainly, the International Maritime Organization (IMO), a specialized agency of the United Nations, offers one important tool for such collaboration and cooperation. Its activities encompass regulation of shipping, port security, and marine pollution. It offers a framework for international cooperation on the business of ports and ships, and many non-navigation matters that are affected by shipping. The IMO provides an integrated decision-making forum for issues as varied as safety at sea; ship and port security; marine pollution; implications of rapid developments in the technology and size of shipping and ports; and recruitment, training, and quality of seafarers. In other words, it is a vital part of the total maritime security picture.

The IMO also offers the advantage of well-established means of coordination with UN specialized agencies and with other multilateral bodies that are responsible for related aspects of maritime life. These include the UN Environment Programme, the World Health Organization, and the International Telecommunications Union. The IMO also offers a means for coordination with regional diplomatic organizations of general jurisdiction, such as the African Union (AU), the South Asian Association for Regional Cooperation (SAARC), and the Association of South East Asian Nations (ASEAN), as well as with nongovernmental international bodies such as Greenpeace or Friends of the Earth.

Nonetheless, as an intergovernmental body, the IMO can only be the sum of its component sovereign wills. Therefore, its effectiveness is undercut by significant ambiguity of purpose. For example, the IMO's Strategic Plan for 2008 to 2013 adopted as one of its major

strategic directions "developing and maintaining a comprehensive framework for safe, secure, efficient and environmentally sound shipping; enhancing the profile of shipping and instilling a quality culture and environmental conscience." This reflects a laudable and essential environmental principle. However, the potential immobility of collective action is revealed in the same document's subsequent evisceration of this principle. It makes clear that the IMO "will seek to ensure that measures to promote safe, secure and environmentally sound shipping do not unduly affect the efficiency of shipping."

The most glaring example of the IMO's limited capacity, even on an issue at the very heart of commercial shipping, is the threat of piracy. The scale and sophistication of that threat have rapidly outstripped the capacity of commercial civilian vessels and enterprises to protect themselves, and any solution calls for a substantial military component. Nonetheless, the security responses of the international community, and of powers with substantial maritime commerce to protect, have been limited. There have been unilateral initiatives by the Chinese, the Indian, and the US navies; and *ad hoc* joint efforts such as those of the European Union or the US-led coalition task forces. The latter have only recently acquired an unequivocal anti-piracy mandate. The secretary-general of the IMO has recently called for a UN mandate to aggregate and coordinate such efforts, as well as to engage other nations in a truly multilateral initiative. It remains to be seen how far naval powers with a presence in the region will adopt a systematic approach that is responsive to the needs of the shipping industry as a whole, rather than one that is principally designed to protect their own flag vessels.

It may be that more narrowly defined nonofficial bodies with more clearly defined interests, whether commercial or public service oriented, suffer from less potential immobility when it comes to collective international action. For example, the International Chamber of Commerce's International Maritime Bureau (IMB) provides a degree of resolute and effective action that seems to have eluded the world's governments, whether acting alone or in concert. On piracy, the most pressing maritime security issue of the day, and on other issues of maritime crime, the IMB has proved the most effective in providing a forum for cross-sectoral and international collaboration. The reports prepared by the IMB's Piracy Reporting Centre are major prompts to government action. Because it is not an intergovernmental organization, the IMB can be objective about real threats to shipping and can resist political pressures to understate or distort them.

However, such an unofficial organization also has its limits. On piracy, while the IMB can influence actions of governments piecemeal, it has not yet succeeded in securing adoption of an international consensus against ransom payments. Because consensus would have to depend on most of the global shipping industry agreeing to it, the IMB is the indispensable agent of that consensus. Without the prospect of ransoms, the incentives for piracy would diminish sharply. The shipping industry's failure to reach consensus on ransoms has rendered it powerless in the face of the leading threat to its profitability and to its personnel.

Crisis in Shipping: Vulnerable Lifeline of Global Commerce

The shipping industry is arguably the most globalized of industries. More than 90 percent of the world's international trade is seaborne. Threats to the health of this industry can profoundly affect the global way of life that it does so much to sustain.

Shipping, however, also remains largely invisible to the public, and often even to policymakers. It is conducted on the seas, where there are few witnesses, and on coasts. Shipping is also vulnerable to the physical dangers and the ineffective reach of law that together characterize the oceans. And it has recently become one of the many victims of the global economic downturn.

Several factors have converged very recently to create a crisis in the industry. Long-term challenges have been posed by rapid advances in the technology of seafaring (including substantial increases in the size of vessels), the shortage of seamen and officers, and a decline in their training and quality. A distinct but related trend is the building of new ports and of new facilities at existing ports that will change established patterns of trade and commerce

The alarming increase in piracy has grabbed the attention of policymakers, international opinion, and security thinkers on the current vulnerability of the shipping industry. However, while the increase in piracy is a factor in the current economic vulnerability of the industry, other important dimensions of that vulnerability should not be neglected.

In the course of 2008, the shipping industry saw an approximate 80 percent decline in dry bulk cargo rates. This reflected a global decline in demand for goods as well as excess cargo capacity. As a result of sharply diminished revenues, the industry's capacity to make payments on new vessels (ordered in anticipation of growing demand) has diminished, leaving it exposed to a dangerous degree of indebtedness. Letters of credit in shipping, the lifeblood of trade, have fallen victim of the larger global financial crisis, as lenders have curtailed riskier lending. Cancellation of orders for new ships (with forfeit of deposits) has threatened employment in shipbuilding. Increases in shipping companies' insurance premiums, or worse still the diminished availability of insurance as a result of threats from piracy, have added to the financial burden of most shipping companies. The need to take longer routes to avoid the worst pirate-infested sea lanes has added further to the financial burden.

At the same time, governments and investors are asking the industry to shoulder more of the burden of protecting ships from pirates and other crimes, and to take more responsibility for mitigating marine pollution originating from ships.

Conclusion

Effective, enforceable, and justiciable mechanisms remain to be developed for resolving the complex interests at issue in the maritime realm. For the present, as is commonly the case in all aspects of international relations, we are left with hortatory legal principles, to be interpreted through diplomacy and comity, rather than with binding law. The global

community must continue to depend on the identification of shared pragmatic interests through international organizations or industry associations.

Much of positive value can be accomplished *ad hoc* in the spirit of common interest. A given state or particular sector can benefit from information routinely gathered by others. For example, global systems for tracking seaborne vessels for purposes of safety and security could benefit from information sharing. So could the tracking of fish stocks. The regulatory and management efforts of individual nations to ensure safe navigation or protect fish stocks would also be enhanced thereby. Satellite imagery of marine geology can serve varied interests: environmental protection, commerce, and fishing; official and private; entrepreneurs, scientists, and advocates. Of course, the details of collaboration and information sharing give rise to possible divergences of interests between commercial and scientific objectives, or military and civilian ones, where concerns about protection of proprietary and sensitive national security information abound. Surely, the divergence of interests can be resolved if safeguards are adopted to balance them.

We noted earlier that instability or even conflict can arise from the combination of uncertain rules, rapid technical advance, and changing national interests. Even where legal and quasi-legal rules are relatively stable, or practical means of cooperation are well established, the threat of instability remains. Rapid advances in technical or financial capacity can lead to demands for changes in the rules, as can other reasons for shifts in the definitions of national interest by states or changes in practices on the high seas. Where financial benefit or national security is at stake, such demands can by themselves become sources of instability, as those resisting changes to the international regime resent the perceived pressure from proponents of change, and proponents come to think of defenders of the *status quo* as obstacles. If the legal regime continues to be as uncertain as it is, it will contribute both to the sense of insecurity of those with something to lose and to the sense of entitlement of the new claimants.

The Indian Ocean: A Critical Arena for 21st Century Threats and Challenges

Ellen Laipson

Think of the Indian Ocean as a geographic region where one-third of the world's population lives in the two dozen states along its rim, interacting as neighbors and sometimes competitors, outside powers pass through for economic and strategic purposes, and resources vital to international trade and environmental stability must be managed and protected. The global quest for energy security coupled with the recent rise of Asian economies have made this region even more critical for the stability of the international system.

This paper assesses how the Indian Ocean region is coping with the challenges of globalization and its very different effects on states and societies around the ocean's rim. The issues are complex; some are obviously interrelated (fishing and environmental concerns), and some that seem unrelated are not, such as the evolving role of great power navies in responding to human trafficking, piracy, and drug smuggling. These interactions are not governed by well-established rules and protocols. The speed, transparency, and economic consequences for diverse global interests have increased, and thus merit new attention and cross-disciplinary analysis.

This discussion is primarily focused on questions of governance. How do states manage the sometimes competing interests of the environment, economics, and security in their policymaking? Are there models for national governments that effectively integrate and balance the domestic social and economic interests of coastal populations with national security concerns in the maritime domain? Do states coordinate their maritime policies with neighbors and outside powers? Do all parties understand and respect the rules that govern maritime space and activities that occur on the sea? Where do states' interests intersect with global interests? How are questions of sovereignty resolved in maritime space?

The Nature of the Challenges
Economics and Environment

There is no doubt that the Indian Ocean is becoming a more critical area of the world, when measured by the international energy and commerce that crosses its waters. To some, the

ocean has been restored to its earlier glory, when it was the "cosmopolitan arena animated by encounters between East and West."[1] One-fifth of the world's energy supplies now travel across the Indian Ocean, largely from west (Persian Gulf) to east (China, India, Japan). In the reverse direction, superships carry manufactured goods from Asia to the Middle East and Europe. Between 2003 and 2012, the volume of that trade is expected to triple.[2] Singapore is the world's busiest container port, handling nearly one-fifth of the world's container transshipment throughput. The interdependent linkages of shipping, ports, and maritime trade across the Indian Ocean are expanding. For example, the Port of Singapore Authority helps build and operate ports in Kuwait, Pakistan, the United Arab Emirates, and Yemen.

It is important to emphasize that the Indian Ocean's strategic economic value is linked primarily to global trade; less than one-quarter of its trade is among the littoral states, and the economic value of coastal subsistence activities is a modest portion of national income. This global dimension has impeded a deep sense of comity and shared interests among the littoral states, which often perceive themselves as small players in the transactions of global powers that ply the Indian Ocean.[3]

The sea itself is an economic resource—from fisheries to deep sea minerals to the tourism that depends on tropical islands and coral reefs. The health of the marine environment is essential to the sustainability of these economic activities, yet the balance between resource exploitation for short-term economic benefit and preservation of the marine environment for long-term value has not been achieved to date.[4]

Fisheries and Fish Stocks

Fishing has risen in importance for human security worldwide. Technology has enabled higher yields, and population growth has created more demand for this essential protein. But stocks have been adversely affected by these evolving demands and are sorely depleted in some key subregions of the Indian Ocean. In others, total quantities may still be high, but the quality has changed; higher value fish have been overfished. Security conditions have prevented the harvesting of fish in some locations, such as northern Sri Lanka, due to the conflict between the government and the Liberation Tigers of Tamil Eelam (LTTE). Yet another issue is how environmental factors—changes caused by pollution, global warming, or other reasons—affect the viability of the fisheries sector.

Deep Sea Minerals

After the Pacific Ocean, the Indian Ocean is the richest in minerals, including oil and gas, polymetallic sulfides, cobalt-rich crusts, and other materials that are promising arenas for development and exploitation.[5] Rising global demand for the resources beneath the ocean increases the value of these products and the likelihood that exploration and exploitation will continue to expand, as will prospects for conflict over the rights to these resources.

Coastal Issues

Littoral states face daunting challenges to the viability of the natural habitats along their coasts. Throughout the Indian Ocean region, coral reefs are being degraded by natural processes, human activities, and climate change. Mangroves—coastal forests that are important natural barriers from extreme weather and which prevent soil erosion—are also threatened, sometimes directly by the construction of more modern fisheries, alternative cash crops, tourism, or housing for coastal populations. Indirectly, they are threatened by changes in water supply from rivers or human activities that affect water salinity and the survivability of the mangrove forests.

Historically, the Indian Ocean has been the locus of more of the world's coral reefs than any other body of water, yet these reefs are badly damaged, with poor prognosis for recovery. The tsunami of 2004 and human activities have eroded Indian Ocean reefs more severely than reefs in other oceans. In the highest of four categories of threat, roughly a third of the reefs are at risk, compared to much smaller percentages other reef-rich zones.[6] The causes of the dramatic decline in coral reefs fall into three broad categories: global change threats such as climate change; direct human pressures; and inadequate governance, awareness, and political will.[7]

Livelihoods

The sea and its resources employ millions of people in diverse activities, with fishing, tourism, and shipping the most prominent. Any significant changes in the health of the ocean or its security environment can have an impact on employment and, indirectly, on domestic stability.

It is estimated that 15 million people—often the poorest of the poor—earn their livelihoods from fishing. Employment trends in the fishing sector vary across the region. In some cases, increasingly industrial techniques of fishing have moved the locales and labor to inland or coastal fish farms. In the dramatic and perhaps exceptional case of Somalia, where the state has ceased to provide legal authority and structure to economic activity, the fishing sector has been adversely affected by large-scale commercial fishing, and some Somalis have resorted to illicit activities, including piracy. Small island states depend heavily on fishing, often by traditional methods, for national income. In other cases, fisheries provide a small portion of national income (usually under 5 percent), but a significant portion of the economy for coastal communities; this is sometimes at odds with development plans and the larger scale fishing activity of outside powers.

The Indian Ocean is also affected by the combination of natural and manmade phenomena that have an impact on the ocean as a natural habitat, influencing its ability to support and sustain economic activity. The tsunami of 2004 was one of the most extreme weather

events of recent history, and its toll was severe on humans as well as on the ocean rim and its agriculture and plant life. The United Nation's Food and Agriculture Organization (FAO) estimates the human losses in Sri Lanka at 7,500 killed, 5,600 missing, and 5,000 fishing families displaced; in Indonesia, 115,000 were killed, about one-tenth of those fishers.[8]

These diverse natural and benign economic activities create interactions that are sometimes difficult to disaggregate—or to assign clear causality to. Economic development and construction along coastal areas often unintentionally or inadvertently create loss of formerly sustainable economic activities such as artisanal fishing.[*] Commercial fleets, vital to world commerce, need to disgorge their waste and are a major source of marine pollution; while this is one area that is subject to careful regulation, enforcement is not always robust.[†] Sometimes these trade-offs play out in different time frames, so that a seemingly benign activity can create damage to another interest or maritime asset over time, but governments may not respond until the problem reaches an acute stage. Governments will often deal with the short-term concerns and defer consideration of the longer term policy issues.

The Dark Side of Globalization

In recent years, this compelling economic and ecological story has been complicated by other trends from the dark side of globalization: manmade problems such as human trafficking, smuggling of illicit goods and materials, movement of proliferated weapons and weapons components, and piracy; or naturally occurring problems such as infectious disease, the impact of which can be accelerated by globalized behavior and interaction. The prosperity of the Indian Ocean rim states and the economic value of the cargo that plies the seas have stimulated various forms of predatory and exploitative behavior that risks lives and livelihoods, and adds cost and danger for those who use these vital trade and commercial sea lanes.

Power Relationships That Affect the Indian Ocean

An asymmetry of interests and power compounds the challenge. Great powers use the high seas for strategic objectives, including energy security. Many great power navies and major shipping companies are attentive to the impact that their economic and security-driven activities have on the sea itself, as compared to the level of technical and scientific knowledge in poor rim countries and island states, which may have unique local understanding but less capacity to collect data and analyze trends. Many of the outside actors try

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[*] Artisanal fishing: traditional fishing, using modest amounts of capital and technology, often for local consumption.

[†] Experts also point out that land-based activities, such as those involving factories and cars, contribute more to marine pollution than ships.

to minimize the harmful impact of their activities, but not all of the Indian Ocean's users accord similar priority to the preservation of natural habitats and prevention of maritime pollution.

The Indian Ocean and adjacent bodies of water (the Arabian Sea, the Bay of Bengal, and the Persian Gulf) play a role in conflicts: the Sri Lankan struggle with Tamil separatists has a naval dimension; India and Pakistan have had maritime disputes as part of their long-standing rivalry; and Gulf Arab states share the narrow and strategic Gulf waters with the US Navy's Fifth Fleet and with Iranian Revolutionary Guard Naval Forces, to name a few. Over the years, the geopolitical struggles in the Gulf region have had a naval dimension: it was the Iranian threat to Kuwaiti tankers during the Iran-Iraq war (1980–88) that enabled the United States to establish a military presence in the region. The two wars between the United States (with its coalition) and Iraq since 1991 have also had a naval dimension, insofar as the United States has used naval platforms to launch its precision missiles against Iraqi targets. Such activities have an environmental impact, as well as generating obvious political tensions.

Finding Solutions and Addressing Governance Gaps

In an earlier age, maritime policy was considered the exclusive purview of the great powers; naval presence was a vital dimension of that geopolitical contest. In today's interdependent and highly mobile world, we can suggest that all states with coastlines on great bodies of water need a maritime policy. They need to manage resources and set national rules for outside actors that have economic or security interests in adjacent waters. A sampling of Indian Ocean states suggests a wide range of approaches to maritime policymaking.

The ocean has no government, and the two dozen nation states around its rim are extremely diverse in size, natural characteristics, physical geography, influence in global affairs, and perceptions of their fundamental maritime interests. It is not self-evident at what level of governance (national, regional, or global) decisions should be made that will affect the realities and the prospects for a peaceful and thriving Indian Ocean region.

It is clear from a brief survey of public policy concerns in the Indian Ocean states that there is no easy consensus on setting the agenda of issues that need to be addressed and that are increasingly acute for these states. There are many chicken-and-egg problems related to how development, trade, and the marine environment affect and are affected by each other. In the short run, large-scale development schemes within nations that disrupt more traditional economic life in coastal zones can lead to more poverty and potential instability, thus impairing development goals. For example, Indian Ocean states have made large investments in converting the traditional fishing sector to higher value commercial fish farms, but in so doing, have destroyed mangroves essential to coastal management and

displaced coastal communities. When the modern facilities fail for lack of capital or training, the local population may be worse off than before the "development" activity took place. There are also important differences in how various actors perceive an alleged crime or injustice: one person's victim in the maritime realm can be another's predator. Neighboring states, motivated to protect coastal communities and sovereign rights, can fall into belligerent postures rather than work to adjudicate or resolve conflicts when boundary disputes arise in which all parties are, in part, victims of circumstance, not malign intent. While responding from a *national* interest perspective may be legitimate and may enjoy political support, it does not always solve the problem or lead to cooperative efforts. India and Pakistan, for example, have made important progress in managing occasional fishing disputes, when fishers unintentionally cross the marine boundary between the two states; as a result of some confidence-building work,[*] they no longer arrest the fishers but simply allow them to return to their national waters.

National Level Maritime Governance

It is a daunting task to balance economic, environmental, and security interests at the national level. Maritime policy can be seen as the purview of coastal defense, so that the navy or coast guard would have the lead or sole role in determining policy. Maritime policy can also be deeply domestic, directed by those responsible for tourism, or fisheries, or other basic economic interests. Few countries have addressed the challenge of integrating complex and diverse national interests into a coherent maritime policy. There are always compelling practical and political reasons to keep maritime decision-making bodies separate. Fisheries and piracy, for example, can logically be addressed by separate legal authorities, but who is responsible for linking them when circumstances require?[†]

Countries around the Indian Ocean approach maritime policy in sharply different ways:

- For Kenya, maritime policy is driven by economic interest and the centrality of the port of Mombasa as an entry and export point for African trade. The Navy is a minor

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[*] The Initiative on Confidence and Cooperation in South Asian Waters, established in 2001, is a project of the Regional Maritime Security Program at the Centre for Foreign Policy Studies, Dalhousie University. The initiative has organized symposiums, bringing together retired former heads of the Indian and Pakistan navies to discuss issues of mutual concern including maritime boundary issues, humanitarian issues relating to the detention of fishers, and the use of resources located along the continental shelf of the two countries. The Stimson Center hosted members of the symposium on September 13, 2005, where they provided an update on their progress and highlighted some of the technical questions they hope to address in future symposia.

[†] Only recently has the United States been able to articulate maritime policy in a way that transcends the jurisdictional boundaries of the US Navy, the Marines, and the Coast Guard. The US maritime strategy of 2007 spelled out the shared mission and directed the three institutions to coordinate when needed, so that each of the entities can respond to various missions (terrorism, piracy, smuggling) when required, rather than maintain a strict protocol that prohibits the Navy, for example, from performing a law enforcement function.

player. Recently, Kenya, as well as neighboring Tanzania, have worked to devise "national maritime authorities" that link the diverse government entities and coordinate the sometimes redundant or overlapping mandates.[*]

- For Sri Lanka, the long-standing conflict with Tamil separatists defines maritime policy in the north and eastern areas of the island. Some of the coastal areas are off limits to civilians, who are forced to forgo rich fishing opportunities so that the government can deny the Tamil Tigers use of the sea for its terrorist or insurgency operations.

- For Singapore, the stewardship of vital sea lanes is its highest national security mission and has led to productive cooperation with Malaysia and Indonesia to ensure safe passage for commercial ships.

- India's national security community sees the maritime space as an important dimension of its rising power status and a key component of its economic growth and energy security, although the strategic concepts of its maritime role have yet to be fully developed, partially due to lack of knowledge or interest on the part of some civilian leaders. Enhanced maritime capabilities will nonetheless have consequences for how its neighbors view India's role and ambition and its ability to contribute to regional peace and security.[†]

- Indonesia, an archipelagic nation, has struggled to create effective maritime policy mechanisms for decades, but faces a lack of consensus about threats and how to set the maritime agenda, as well as the challenge of multiple actors whose legal authorities do not mesh.

Sometimes there are cultural values, notions of national identity, or policy trends that affect maritime policymaking which may derive from historic experience, colonial legacies, or a more recent shift in leadership, ambition, or entrepreneurial skill. Large countries with long coastlines concede that their maritime regions are often considered the hinterland, not the heartland, of the nation, and policymaking reflects a passive or underdeveloped approach to maritime governance. One Indian expert refers to his country as a maritime state where policy is made by "landlubbers." A Malaysian makes the distinction between maritime and coastal nations: Singapore is an example of the former, Malaysia the latter. Oman, unique among Arabian peninsula states, has a deeply rooted maritime identity, whereas its neighbors tell their histories of desert conquests. Vietnam and other countries on fast tracks to economic modernization tend to care less about traditional economic activities along their coasts but may want to develop deep sea capabilities, from mining to fishing to commercial transport. Vietnam, for example, is now investing in Danang Port to assert a role for itself

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[*] See Kimani, Okemwa, and Kazungu paper on fisheries.

[†] For a discussion of India's and China's naval roles in the Indian Ocean, see Robert Kaplan, "Center Stage for the 21st Century: Power Plays in the Indian Ocean," *Foreign Affairs* 88(2) (March/April 2009).

on the global trade route. Pakistan is developing Gwadar Port for similar reasons: to manage the rising demand for trade between China and the oil-rich Gulf states via Central Asia and to plan strategically for the already overburdened ports of South Asia.

Regional Level Maritime Governance

It is evident that national level policies for the Indian Ocean are insufficient to address the real-world problems that arise. The seas and many of the activities on and under them respect no boundaries. Neighbors need to know how to share the resources of the ocean, such as migratory species of fish, and to manage cross-boundary or deep sea disputes without triggering conflict. Groups of countries have common purpose in ensuring the safe and free passage of goods along their shared coastlines, and this has led to many forms of regional cooperation and coordination.

Regional organizations such as the South Asian Association for Regional Cooperation (SAARC), the Association of South East Asian Nations (ASEAN), and the Gulf Cooperation Council (GCC) have focused on formal state-to-state relations; with some effort, they could develop these institutions to contribute more governance to their common maritime concerns. Each institution faces constraints born of the specific historic circumstances of their creation or the evolving politico-cultural norms. For example, ASEAN places great value on the principle of non-interference in internal affairs, which has been sorely tested by the demand to try to influence conditions inside Myanmar (Burma) in recent years. SAARC, deeply aware that it must not become hostage to changing fortunes in Indo-Pakistani relations, scrupulously avoids bilateral issues and requires consensus of all its members to act, so its ability to respond to regional crises is severely circumscribed. The GCC, created in 1981, has avoided placing security issues high on its agenda because of a lack of trust and an imbalance in military capabilities among the members. Saudi Arabia, the largest member of the GCC, is not deeply interested in maritime security and has a disproportionate say in setting GCC priorities. The other members are relatively young states that are still trying to build up their sovereignty, not seeking ways to break down barriers among states for common purpose.

In light of these limitations, the regions have found other ways to promote cooperation on maritime issues. There are many positive examples of *ad hoc* consultative mechanisms for cooperation and regional organizations created to manage a distinct maritime issue, such as the following:

- The Gulf organization on port security and control (Riyadh Memorandum of Understanding, headquartered in Oman, established in 2004)
- An anti-pollution institution of eight Persian Gulf states based in Kuwait (Regional Organization for the Protection of the Marine Environment, established in 1981)

Maritime Cooperation in the Indian Ocean: Success Stories

Jumaina Siddiqui

Despite the lack of cohesive, comprehensive cooperation on the wide range of maritime issues in the Indian Ocean, there are examples of effective, multilateral efforts to address hard security concerns in the maritime realm—notably MALSINDO and the Riyadh Memorandum of Understanding (MOU).

Over 90,000 ships pass through the Malacca Straits each year; this is estimated to increase to 120,000 by 2015. Malaysia, Singapore, and Indonesia, facing a variety of maritime security threats in the Straits of Malacca, formed the Trilateral Coordinated Patrols for Malacca Straits—more commonly known as MALSINDO—in 2004, with Thailand joining in 2008. The goal of MALSINDO is to effectively police this active and strategically critical waterway. Under the agreement, Malaysia, Singapore, and Indonesia conduct joint 24-hour patrols of the Straits. Today, the activities of MALSINDO include the Malacca Straits Sea Patrols and Eyes in the Sky joint patrols, under the Malacca Straits Patrols initiative.

Concerns about sovereignty and perceptions on critical maritime concerns initially hindered cooperation among the three countries. Singapore is highly concerned about maritime terrorism because of the crucial importance of sea trade; Malaysia is less concerned about the nexus of terrorism and piracy, as trafficking in people, arms, and drugs is its critical maritime security challenge. Indonesia has the most to gain from MALSINDO's success as its greatest maritime challenges are illegal fishing and smuggling, but it often lacks the ability to police its waters effectively. Despite initial concerns, this comprehensive naval cooperation has been the key factor in MALSINDO's success to date. In 2004 there were 38 attacks by pirates, with only two as of September 2008, just four years after MALSINDO's establishment. However, piracy and crime in the Straits have decreased significantly.

Some observers call for a further expansion of MALSINDO to include India because of its economic interests in the Malacca Straits. Over 40 percent of India's trade passes through the Straits, making its security paramount. Additionally, a significant amount of sea traffic in the Straits passes through a channel bordered by both India and Indonesia. Because India already cooperates with many Southeast Asian countries both bilaterally and multilaterally on other maritime issues, joining MALSINDO would be a natural extension of theses activities. For example, India has been coordinating with Indonesia since 2001 and Thailand since 2005, conducts annual naval exercises with Singapore, and is a member of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia.

While MALSINDO focuses on transnational crime and piracy, the Riyadh MOU on Port State Control in the Gulf Region establishes regional cooperation to ensure safer shipping in the Gulf. It was signed in June 2005 by Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The Riyadh MOU regulates the procedures for inspecting foreign ships docking at the national ports of member states. The inspections verify that the ship and its equipment comply with international regulations and calls upon member states to cooperate on port state control issues and share information inspections. To facilitate information sharing, the Riyadh MOU includes the Secretariat and Information Center in Oman.

The Riyadh MOU is the newest of nine regional instruments on port state control signed under the auspices of the International Maritime Organization. According to the secretariat, 329 ships were inspected between April 2007 and December 2008. Thirty ships were detained between September 2007 and December 2008 because they did not meet the international safety standards.

- A regional fisheries management initiative based in Kenya (the Southwest Indian Ocean Fisheries Commission, established in 2004)
- An anti-terrorism and anti-piracy coalition to guarantee secure navigation routes in the Strait of Malacca (MALSINDO—the Trilateral Coordinated Patrols, established in 2004)
- Most recently, an Asia-wide effort to enhance multilateral cooperation and information sharing on piracy, based in Singapore (the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia), which came into force in 2006.

Global Level Maritime Governance

The core concepts of global governance for the maritime realm continue to evolve.[*] Seas are by definition outside the realm of sovereign states and can be considered ungoverned space. Over many years, the notion that sovereign states have territorial seas has been embedded in numerous agreements, treaties, and regimes, but the extent of those territorial seas has changed. The UN Convention on the Law of the Sea (UNCLOS) governs the exploitation of the resources of the seas and sets rules for maritime boundaries. The international standard has moved from a 3-mile limit to 12 miles, beyond which a country can declare up to 200 miles as its exclusive economic zone (EEZ), permitting states to exploit and protect resources. Under UNCLOS, states can also lay claim to the resources in their continental shelves beyond their EEZ according to a painstaking formula for measurement and resolution of competing claims.[†]

Nonstate actors, principally from the private sector, are important for the national and regional levels of governance. The energy industry, represented by major international oil companies, and the shipping industry, through the authoritative International Maritime Bureau of the International Chamber of Commerce or through the International Chamber of Shipping, are powerful actors which are a source of information for governments and can drive or shape government action. Particularly when those actors represent global interests that are vital to the economic stability of Indian Ocean states, they can have great influence on choices before states. The international community's maritime interests are

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[*] See Pandya's paper for a more complete discussion of the international legal norms governing maritime space.

[†] UNCLOS faces an important milestone in May 2009, when states that ratified it on or before May 1999 (including 18 Indian Ocean states) must make their claims for extension of their continental shelf. One dispute has already surfaced: Bangladesh is eager to define its maritime boundary with Myanmar (Burma) so that it can explore the Bay of Bengal for natural gas resources. Myanmar faces the May 2009 deadline, whereas Bangladesh, a later ratifier of UNCLOS, is not obligated to define its sea boundary until 2011. Should the dispute not be resolved through current bilateral negotiations, it can be referred to the International Tribunal on the Law of the Sea in Hamburg.

governed at the official level by the International Maritime Organization, part of the family of specialized UN agencies.

Promoting More Integration of Effort

The Indian Ocean region offers a metaphor for the challenges of governance in the age of globalization. It is abundantly clear that the strategic interests of states and societies often require cooperative approaches, whether to managing resources in a sustainable way or to reconciling overlapping and potentially conflicting uses. Yet legal frameworks and a heavy reliance on national sovereignty as a sacrosanct principle can lead to behaviors that provide short-term satisfaction but no long-term certainty. The trade-offs between exploiting the sea's rich resources and its sea lanes for economic benefit and maintaining its biodiversity over time are often too hard for governments to balance. Increasingly, civil society and communities of interest, including scientific experts and affected populations, have learned to organize across national boundaries and can create positive momentum for national and regional authorities to do a better job in achieving a more effective balance between short-term and long-term interests.

As the Indian Ocean witnesses more activity by commercial shipping and by navies of countries large and small, it may be necessary to develop a clearer paradigm for the various security concerns and their interrelationships. Can one set a hierarchy for security problems, with local or human security at one end threatened by piracy or drug smuggling or human trafficking, and threats to nations from terrorists and weapons of mass destruction (WMDs) at the other? As a practical matter, the Indian Ocean actors are not always able to distinguish among threats at different orders of magnitude; the lower scale threats are more prevalent and probably likely to produce more casualties than the higher order threats. How should regional states and the navies present respond to challenges that are in a gray area between national security threat and conventional crime? States face the dilemma of fashioning appropriate responses where there may not be available or sufficient law enforcement authorities present, either within national armed forces or as separate civilian coast guards or marine police. Should the military be used for tasks that could better be addressed with other instruments of national policy? What are the longer term implications of "securitizing" criminal activity or militarizing governments' responses to threats that may not make the threshold of national security concerns? Conversely, the recent Mumbai attack by sea seems to reveal the problem of underequipped and undertrained coast guard and marine police forces, and a navy with no authority to act in coastal waters.

One of the regional proposals in this volume advocates for understanding maritime threats and promoting regional cooperation along a continuum. At one end are soft security problems, which could be humanitarian issues such as spread of disease or environmental problems. On this set of issues, the appropriate actors may be international organizations, either

governmental, such as the UN specialized agencies, or important NGOs, that have the capacity to respond to humanitarian or natural disasters. At this end it might also include the shared responses to keeping the sea lanes open for commercial purposes.

Next on the continuum would be a set of semi-hard security problems from the dark side of globalization. This would include piracy, smuggling, and human trafficking. Responses could come from national level coast guards, land-based law enforcement, or the armed forces. Some would prefer to avoid the use of the military in ambiguous cases or where the military may not have proper training for a law enforcement mission. Cooperation among coast guards, marine police, and port authorities, formalized or *ad hoc*, would be the likely and effective response to these kinds of threats close to shore, but other responses might also be required, including by navies when they have the capacity, on the high seas.

The recent experience with Somali piracy suggests that its scale and reach may well require a more robust response by states, allies, and regional organizations, since these small bands of brigands have reached the high seas and attacked very large vessels. Most successful have been the efforts of the three Malacca Straits nations—Singapore, Indonesia, and Malaysia—which formed joint patrols in the straits and witnessed a dramatic drop in piracy incidents from 2000 to the present. Their success was based on the primacy of local actors, rather than the international community, which has the lead in the Somalia-related events.[9]

The United States, in its role leading the Combined Maritime Forces in the Gulf region, has worked to establish new and more agile mechanisms to deal with the changing threat environment. To date, the Maritime Forces have created three new Combined Task Forces (CTFs) to patrol in distinct areas around the Arabian peninsula for distinct purposes. One task force, CTF-151, operates under UN Security Council resolutions related to Somalia, which have provided authority to the CTFs to pursue the mission of deterring and responding to acts of piracy. Participation in anti-piracy efforts now includes over 20 countries, including India and China, both of which have become more active in protecting their commercial ships and oil tankers off the coast of Somalia. For China, the late 2008 decision to send its warships was historic; this was its first operational use of warships in the Western Indian Ocean.

Some maritime threats clearly reach the domain of national security, namely threats from other states or from nonstate actors with lethal capabilities and intentions, including the possible use of the sea for transit of illicit materials related to WMDs. In this more sensitive realm, states are often inclined to act alone or with predetermined security partners, as these matters require trust, intelligence sharing, and highly trained personnel. Several of the states along the Indian Ocean rim now realize they have underinvested in naval capability and are working hard to compensate.

As with the anti-piracy maritime task forces, like-minded states have found innovative ways to cooperate and coordinate their activities in the hunt for WMDs and materials. The Bush administration, wary of treaties or of empowering the United Nations, created the Proliferation Security Initiative (PSI) in 2003. This informal mechanism counts 93 countries as participants. The PSI has featured several dramatic ship-boarding incidents in which suspicious cargo en route from Asia to the Middle East was seized. With a new US administration committed to more robust multilateralism, some of these activities related to transnational threats could well evolve into more formal governance mechanisms. However, it is clear that there have been some advantages to the informal approach, so that states can engage when there is a compelling need without a permanent binding commitment.

Navies, of local states or the great powers including the United States, are often important players in public diplomacy, crisis management, and humanitarian responses to natural disasters. With sufficient resources, navies can expand the contact and influence of a nation state in a maritime space of strategic and economic significance. Commanders of the US Fleets in the Indian Ocean and adjacent bodies (the Fifth and Seventh Fleets) are proud to report on their humanitarian activities, including medical visits that are not linked to acute crises, as a form of projecting soft power. The expansion of the Indian and Chinese naval fleets in the Indian Ocean could also be intended to serve the soft power interests of those states.

Whether relying on navies or civilian capabilities, states and regional organizations might find this continuum of maritime threats useful in determining responses. Cooperation is easiest on the soft security agenda, although some states do not allocate significant resources for those purposes or have not yet created effective mechanisms at the national level for the integration of expertise from fields as diverse as disease surveillance, fisheries, maritime pollution, climate change effects, and national security. While regional organizations have structural constraints, effective leadership could well channel states' interests in the direction of making these organizations relevant for 21st century priorities, rather than acquiesce in their weaknesses.

Conclusion

More inclusive and comprehensive approaches to maritime cooperation are needed to grapple with the difficult trade-offs between short-term economic interest and the long-term stability and viability of the Indian Ocean as a natural resource for littoral states and communities, or the security of local actors versus the strategic interests of great powers. Economic, environment, and security issues interact in the Indian Ocean in dynamic and potentially destructive ways. Today the region has generated many partial forms of governance.

At the national level, most stakeholders from the private sector and from distinct economic or environmental communities do not feel represented in national level decision making. They would rather seek help from regional or specialized agencies that advocate on behalf of their specific area of concern than look to national governments to adjudicate or balance the competing claims of different maritime actors.

Weak regional organizations may find the maritime agenda within the shared vision and the spirit of promoting regional cooperation, but lack the political will or the resources to develop new capabilities beyond encouraging recent efforts at information sharing. At the international level, there are interesting developments, and new mechanisms have emerged in the last few years, from the Bush administration's promotion of *ad hoc* mechanisms to deal with proliferation and terrorism, to new US attention to the Law of the Sea and climate change. What is needed is more effort at the national level to integrate civilian and military aspects of maritime policy. We also need a fresh look at the regional and international levels to ensure that governance of the maritime realm strives to manage the complex interplay of human and natural activity and to maintain the Indian Ocean as a sustainable zone for commerce, energy, security, and peace.

Appendix 1:
Author Biographies

Mustafa Alani is a Senior Advisor at the Gulf Research Center and Program Director in Security and Terrorism Studies. He is also an Associate Fellow at the Royal United Services Institute for Defense and Security Studies in the United Kingdom. His research focuses on security developments in the Gulf region, with particular emphasis on Iraq and Iran, and on Islamist terrorist organizations and fundamentalist groups. Since 1988, Dr. Alani has acted as consultant and advisor to numerous official and nongovernmental institutions, and has spoken in front of the House of Commons on a number of issues.

Edward N. Kimani is a Research Scientist and Senior Program Officer (Fisheries and Aquatic Ecology) at the Kenya Marine and Fisheries Research Institute (KMFRI), a state corporation in the Ministry of Livestock and Fisheries Development of the government of Kenya mandated to conduct aquatic research covering all the Kenyan waters and the corresponding riparian areas including the Kenyan exclusive economic zone in the Indian Ocean waters. Dr. Kimani also serves as the Marine and Coastal Fisheries Research Programme Coordinator, supervising a marine fisheries research team of eight scientists and six technicians at KMFRI, as well as coordinating fisheries research activities between KMFRI and other local and international organizations. He received his PhD from the University of Nairobi, Kenya. **Gladys M. Okemwa** is a Research Scientist with the Kenya Marine and Fisheries Research Institute. **Johnson M. Kazungu** is the Director of the Kenya Marine and Fisheries Research Institute.

Ellen Laipson is currently President and CEO of the Stimson Center. She joined Stimson in 2002 after nearly 25 years of government service. Key positions included Vice Chair of the National Intelligence Council (NIC) (1997–2002) and Special Assistant to the US Permanent Representative to the United Nations (1995–97). At the NIC, Ms. Laipson co-managed the interdisciplinary study Global Trends 2015 and directed outreach to think tanks and research organizations on a wide range of national security topics. Her earlier government career focused on analysis and policymaking on Middle East and South Asian issues. At Stimson, Ms. Laipson directs the Southwest Asia project, which focuses on a range of security issues in the Gulf region. She is a frequent speaker on Middle East issues and on

US foreign policy and global trends. Ms. Laipson is a member of the Council on Foreign Relations, the International Institute of Strategic Studies, the Middle East Institute, and the Middle East Studies Association. In 2003, she joined the boards of the Asia Foundation and the Education and Employment Foundation.

Mak Joon Num is an independent analyst specializing in maritime security issues in Southeast Asia. His research particularly focuses upon how the interplay between external and domestic political and economic variables affects the security of both states and societies, including local and marginalized communities. He has just completed a comprehensive study on illegal migration in Malaysia, with the focus on Sabah and the Sulu and Celebes Seas. Mr. Mak is also finalizing a book on the problems of and prospects for maritime cooperation in Southeast Asia, in addition to his recent writing on various dimensions of piracy.

Amit Pandya directs the *Regional Voices: Transnational Challenges* project. He has previously been Counsel to the Government Operations and Foreign Affairs Committees of the House of Representatives, and held senior positions at the Departments of Defense and State and at the US Agency for International Development. He is a South Asia expert and international lawyer, and was formerly an ethnographer and teacher. He holds degrees from Oxford, Yale, the University of Pennsylvania, and Georgetown.

Geethangani de Silva is Associate Director of the Regional Center for Strategic Studies and currently holds the position of Interim Executive Director. Ambassador de Silva spent over 25 years as a member of the Sri Lanka Foreign Service (SLFS) and last held the position of Secretary, Ministry of Foreign Affairs. During her career as an SLFS officer, she held a variety of posts including serving as Sri Lanka's High Commissioner to Canada and Deputy Chief of Mission with Ambassador rank at the Sri Lankan Embassy in Washington DC. While at the Ministry of Foreign Affairs, Ambassador de Silva has functioned as the leader of Sri Lanka's delegation to numerous international and regional conferences. She holds a diploma in international relations from the University of Ceylon.

Appendix 2:
Experts Consulted

Khurram Abbas, PSA Gwadar, Pakistan

Thabit Zahran Al Abdessalaam, Environment Agency, Abu Dhabi, United Arab Emirates

Raja Javed Afzal, National Center for Maritime Policy Research, Bahria University, Pakistan

Arshad Munir Ahmed (ret.), former Managing Director, Karachi Shipyard and Karachi Dockyard, Pakistan Navy

Manjur Murshed Zahid Ahmed, Institute of Water Modelling, Bangladesh

Mustafa Alani, Gulf Research Center, United Arab Emirates

Abdulla Alhayyas, Dubai Maritime City Campus, United Arab Emirates

Nicolas Bailly, WorldFish Center, Philippines

Amrit Bart, Asian Institute of Technology, Thailand

Barbara Best, Bureau for Economic Growth, Agriculture, and Trade, US Agency for International Development

Rujarek Bumrasarinpai, Southeast Asian Fisheries Development Center, Thailand

David M. Catarious, Center for Naval Analysis, United States

Junaid K. Choudhury, Mangrove Expert (Independent Consultant), Bangladesh

Antonio Contreras, De La Salle University, the Philippines

Kevin J. Cosgriff (ret.), former Commander, US Naval Forces Central Command, US Fifth Fleet and Combined Maritime Forces

Geethangani de Silva (ret.), Regional Centre for Strategic Studies, Sri Lanka

Jo Espinoza-Ferrey, International Maritime Organization, United Kingdom

Len Garces, WorldFish Center, the Philippines

Saif Mohammed Al–Ghais, Marine Environment Research Section, United Arab Emirates University

Mariam Al-Hammadee, Federal Environmental Agency, United Arab Emirates

Rupert Herbert-Burns, Lloyd's Marine Intelligence Unit, United Kingdom

Begi Hersutanto, Secretariat General of the House of Representatives, Indonesia

A. Hettiarachchi, International Union for the Conservation of Nature, Sri Lanka

Joshua Ho, S. Rajaratnam School of International Studies, Singapore

Shahid Iqbal, Commander, Pakistan Fleet

Jaber Al Jaberi Environment Agency, Abu Dhabi, United Arab Emirates

Edward N. Kimani, Kenya Marine and Fisheries Research Institute

Christian Koch, Gulf Research Center, United Arab Emirates

Darin Liston, Office of the Chief of Naval Operations, US Navy

Dwijen L. Mallick, Bangladesh Centre for Advanced Studies

Hamood Al Maskry, Riyadh-Memorandum of Understanding for Port State Control Secretariat, Oman

Efthimios Mitropoulos, International Maritime Organization, United Kingdom

Pottengal Mukundan, International Maritime Bureau, United Kingdom

Admiral Jayant Nadkarni (ret.), former Chief of the Naval Staff, Indian Navy

Tajuddin Najmi (ret.), Pakistan Navy

Patrick J. Neher, Office of the Judge Advocate General, US Navy

Mak Joon Num, Independent Maritime Analyst, Malaysia

Nirmalie Pallewata, University of Colombo, Sri Lanka

Bronson E. Percival, Center for Naval Analysis, United States

Somnuk Pornpatimakorn, Southeast Asian Fisheries Development Center, Thailand

Mohamed Raouf, Gulf Research Center, United Arab Emirates

Rahul Roy-Chaudhury, International Institute for Strategic Studies, United Kingdom

Abdulaziz O. Sager, Gulf Research Center, United Arab Emirates

Jaafar Sidin, Dubai Maritime City Campus, United Arab Emirates

Nicole Stracke, Gulf Research Center, United Arab Emirates

Purbasari Surjadi, Sustainable Fisheries Partnership, Indonesia

Ruangrai Tokrisna, Kasetsart University, Thailand

Nualanon Tongdee, Southeast Asian Fisheries Development Center, Thailand

Itrat Zehra, University of Karachi, Pakistan

Appendix 3:
Partner Institutions

Middle East

Gulf Research Center (GRC). Based in Dubai, United Arab Emirates, the Gulf Research Center is a privately funded, nonpartisan think tank, education provider, and consultancy specializing in the Gulf region (the six Gulf Cooperation Council countries, and Iran, Iraq, and Yemen). Established in 2000, the Center conducts research on political, social, economic, security, and environmental issues from a Gulf perspective, redressing the current imbalance in Gulf area studies, where regional opinions and interests are underrepresented. With "Knowledge for All" as its motto, the GRC strives to promote different aspects of development and facilitate reforms in the region in order to secure a better future for its citizens.

Issam Fares Institute for Public Policy and International Affairs (IFI). The Issam Fares Institute for Public Policy and International Affairs at the American University of Beirut (AUB) was inaugurated in 2006 to harness the policy-related research of AUB's internationally respected faculty and other scholars in order to contribute positively to Arab policymaking and international relations. In the established tradition of AUB, IFI is a neutral, dynamic, civil, and open space where people representing all viewpoints in society can gather and discuss significant issues of the day, anchored in a long-standing commitment to mutual understanding and high-quality research. The main goals of IFI are to raise the quality of public policy–related debate and decision making in the Arab world and abroad; to enhance the Arab world's input in international affairs; and to enrich the quality of interaction among scholars, officials, and civil society actors in the Middle East and abroad. It operates research-to-policy programs in the areas of climate change and environment, Palestinian refugee camps, youth-related issues, and think tanks and public policymaking in the Arab world.

South Asia

Asia Foundation, Sri Lanka. Recognizing that a sustainable peace is tied to overcoming deeper problems of a weakened democracy, lack of justice, and human rights violations,

the Asia Foundation's program in Sri Lanka seeks to identify and support organizations and institutions that promote democratic governance and the rule of law as essential for lasting peace and prosperity. The Asia Foundation programs in Sri Lanka date back to 1954. The Foundation has been a pioneer in strengthening community-based legal services and mediation for the poor in Sri Lanka. The Foundation supported a definitive study on the relationship between aid, conflict, and peace-building in Sri Lanka, and a follow-up study on the US involvement in the country's peace process. The Foundation distributes some 80,000 new English-language publications a year to libraries throughout Sri Lanka.

Institute of Peace Studies and Conflict Resolution (IPSCR). The Institute of Peace Studies and Conflict Resolution was established in January 2007 under the aegis of the Centre for Study of Society and Secularism, Mumbai. The overarching goal of the Institute is to create enabling conditions for peace and security by creating awareness in the society of factors affecting peace; addressing myths attributed to religious teachings; research and study into communal and sectarian conflicts; capacity building and peace advocacy, especially among youth; and supporting women's empowerment. IPSCR collaborates with other institutions, including the Tata Institute of Social Science Research, and the Department of Civics and Politics and the Department of Sociology, University of Mumbai.

Institute of Policy Studies (IPS). The Institute of Policy Studies based in Islamabad and founded in 1979 is an autonomous, nonprofit, civil society organization, dedicated to promoting policy-oriented research on Pakistan affairs, international relations, and religion and faith. IPS provides a forum for informed discussion and dialogue on national and international issues; formulates viable plans; and presents key initiatives and policy measures to policymakers, analysts, political leaders, legislators, researchers, academia, civil society organizations, media, and other stakeholders. Periodicals and publications, interaction, dialogue, thematic research, and capacity-building programs are instrumental in its research endeavors. IPS garners collaboration as well as extends its active cooperation to other organizations in one or more areas of research.

Pakistan Institute of Legislative Development and Transparency (PILDAT). The Pakistan Institute of Legislative Development and Transparency is an indigenous, independent, and nonpartisan research and training institution committed to strengthening democracy and democratic institutions. PILDAT works to increase the legislative capabilities of elected officials, carries out in-depth analysis of the democratic developments of the country, provides performance reviews of the Parliament and provincial assemblies, and encourages the culture and value of democracy in youth through the first-ever Youth Parliament of Pakistan. The Institute also facilitates the formulation of issue-based caucuses across party lines, including the Young Parliamentarians' Forum, the Parliamentary Consultative Group on Women's Issues, and the Parliamentary Group on Inter-Faith Relations. PILDAT also facilitates non-Parliamentary groups of leading intellectuals and thinkers for

discourse on issues such as free and fair elections, the electoral process, youth and politics, and dialogue between Muslims and the West.

Regional Center for Strategic Studies (RCSS). Based in Colombo, the Regional Center for Strategic Studies is an independent, nonprofit, and nongovernmental organization that fosters collaborative research, networking, and interaction on strategic and international issues pertaining to South Asia. RCSS coordinates research on strategic and security-related issues; promotes interaction among scholars and other professionals in and outside the region who are engaged in South Asian strategic and international studies; and fosters relationships and collaboration among institutions studying issues related to conflict, conflict resolution, cooperation, stability, and security in South Asia.

Sustainable Development Policy Institute (SDPI). The Sustainable Development Policy Institute, based in Islamabad, was founded in 1992 as an independent, nonprofit organization which would serve as a source of expertise on socioeconomic development and environmental issues in Pakistan. The Institute works to conduct policy-oriented research and advocacy from a broad multidisciplinary approach; promote the implementation of policies, programs, laws, and regulations of sustainable development; strengthen civil society through collaboration with other organizations; disseminate research findings through media, conferences, lectures, publications, and curricula development; and contribute to building up national research capacity and infrastructure. The Institute acts as both a generator of original research on sustainable development issues and as an information resource for concerned individuals and institutions. SDPI's function is thus twofold: an advisory role fulfilled through research, policy advice, and advocacy; and an enabling role realized through providing other individuals and organizations with resource materials and training.

The Energy and Resources Institute (TERI). The Energy and Resources Institute was formally established in 1974 in New Delhi with the purpose of tackling the acute problems that mankind is likely to face in the years ahead resulting from the depletion of the earth's energy resources and the pollution their unsustainable use causes. The Institute works to provide environment-friendly solutions to rural energy problems, tackle global climate change issues across continents, advance solutions to the growing urban transport and air pollution, and promote energy efficiency in the Indian industry. TERI is the largest developing country institution devoted to finding innovative solutions toward a sustainable future. TERI has established affiliate institutes abroad: TERI-NA (North America) in Washington, DC; TERI-Europe in London, UK; and has a presence in Japan and Malaysia.

Southeast Asia

Centre for Strategic and International Studies, Jakarta (CSIS). The Centre for Strategic and International Studies based in Jakarta and established in 1971, is an independent,

nonprofit organization focusing on policy-oriented studies on domestic and international issues. Its mission is to contribute to improved policymaking through research, dialogue, and public debate. CSIS believes that long-term planning and vision for Indonesia and the region must be based on an in-depth understanding of economic, political, and social issues including regional and international developments. In the area of foreign policy, the Center's research is complemented and strengthened by its relations with an extensive network of research, academic, and other organizations worldwide. CSIS's research is used by government, universities, research institutions, civil society organizations, media, and businesses.

S. Rajaratnam School of International Studies (RSIS). Based in Singapore, the S. Rajaratnam School of International Studies was established in January 2007 as an autonomous school within the Nanyang Technological University. RSIS is a leading research and graduate teaching institution in strategic international affairs in the Asia-Pacific region. Its name honors the contributions of Mr. S. Rajaratnam, who was one of Singapore's founding fathers and a well-respected visionary diplomat and strategic thinker. RSIS includes the International Centre for Political Violence and Terrorism Research, the Centre of Excellence for National Security, the Centre for Non-Traditional Security Studies, and the Consortium of Non-Traditional Security Studies in Asia. The focus of research is on issues relating to the security and stability of the Asia-Pacific region and their implications for Singapore and other countries in the region.

Singapore Institute of International Affairs (SIIA). The Singapore Institute of International Affairs is a nonprofit, nongovernmental organization dedicated to the research, analysis, and discussion of regional and international issues. Founded in 1961 and registered as a membership-based society, SIIA is Singapore's oldest think tank. Its mission is to make Singapore a more cosmopolitan society that better understands the international affairs of its region and the world.

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Toward a Comprehensive Maritime Security Arrangement in the Gulf

"Most GCC states lack long-term national and regional maritime strategies and governments handle maritime security issues on an *ad hoc* basis, varying from case to case and state to state… While different governments have occasionally indicated that maritime security cooperation is necessary, they have never moved beyond rhetoric."

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Maritime Issues in South Asia

"Any effort to resolve South Asia's maritime issues should proceed in a collaborative fashion, with parties agreeing on a common agenda and timetable. This effort must be lead by political leaders who are able to effectively engage the private sector, civil society, experts, academics, and a wide range of interest groups."

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