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Will New Multilateral Arrangements Help Southeast Asian States Solve Illegal Fishing?

MERYL J. WILLIAMS

Illegal cross-border fishing is an important maritime security issue in Southeast Asia. Southeast Asian states, along with other states with interests in the region, have created three new multilateral fisheries-relevant arrangements of agencies with overlapping but different memberships: the Regional Program of Action on Illegal, Unreported and Unregulated (IUU) Fishing; the ASEAN–Southeast Asia Fisheries Development Center Strategic Partnership; and the Coral Triangle Initiative. Each of these multilateral arrangements has the potential to help Southeast Asian states deal with fisheries-based security issues more effectively by building polycentric coalitions and capacity. So far, however, they have had a limited impact. This is partly because they are still principally technical support bodies rather than management organizations. In addition, states need to make greater strides towards settling outstanding border disputes and address fisheries overcapacity and overfishing in waters under their jurisdiction. States are unable to address these problems adequately because the fishery sector is typically low in national priority. Moreover, national interest in fisheries remains concentrated on immediate food and economic needs, and, in international relations, on jurisdictional rights.

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Keywords: fisheries, illegal fishing, multilateral organizations, fisheries management, regional cooperation.

Cross-border illegal fishing is one of Southeast Asia's most prominent maritime security problems. Accurate estimates concerning the extent of illegal fishing in Southeast Asia are not available, but general levels may be inferred from a global study published in 2009 in which Southeast Asian waters fall across three regions: the Eastern Indian Ocean, the Northwest Pacific and the Western Central Pacific.¹ The study shows that these three regions had among the highest estimated percentages of illegal fishing in the world, namely 32, 33 and 34 per cent respectively between 2000 and 2003. These estimates indirectly support anecdotal evidence from fishers and others involved in the fishing industry that Southeast Asian domestic and cross-border illegal fishing is a major threat to maritime and resource security, and may be of the order of one third of the reported catch. In addition to poaching the fish stocks of other states, illegal fishing is frequently associated with other illegal activities such as smuggling of fish, fuel and people, piracy and kidnapping.² Thus, illegal fishing, now commonly combined with unreported and unregulated fishing, generates diplomatic, territorial, military, food, fisheries and environmental security threats across Southeast Asia.

Addressing illegal cross border fishing is fraught with problems. First, since Illegal, Unreported and Unregulated fishing (IUU) can be entangled with other illegal activities, state agencies tasked with addressing illegal fishing often lack the resources to effectively tackle the problem and may themselves even be complicit in some of those illegal activities. Second, the extreme sensitivity and nationalism aroused over outstanding territorial and maritime jurisdictional claims, especially in the South China Sea, can lead states to protect their own transgressing fishers, and treat with extreme force those of offending states.

Southeast Asian states have traditionally preferred bilateral to multilateral action when problems arose, and tended to collaborate only in "soft" ways such as joint research. As problems have multiplied, however, they have taken steps to strengthen multilateral cooperation, resulting in the emergence of new regional actors to address IUU and related issues. Significantly, since 2007, three new multilateral agencies have been created: the Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region (RPOA [IUU]), the ASEAN–Southeast Asia

Fisheries Development Center Strategic Partnership (ASSP) and the Coral Triangle Initiative (CTI). These three new actors comprise both state and non-state actors from Southeast Asia and outside the region.

This paper examines the role played by these three new multilateral actors. It investigates whether they replace the activities of state actors or if they are tools to make state actors more effective, both in their management of fisheries and in resolving cross-border security problems. The paper argues that the three new arrangements augment cooperation between Southeast Asian states, but they are still too immature and low-key to change the way these states prevent cross-border IUU fishing. The article concludes by suggesting that as they grow and mature, these new arrangements may assist Southeast Asian states to attend to their existing shortcomings in fisheries management capacity and could lead eventually to more effective regional management arrangements.³

The Old Actors

Fish are important to Southeast Asian economies. Southeast Asian states produce 17 per cent of world fish caught in the wild. Six Southeast Asian countries (Indonesia, Myanmar, Malaysia, Philippines, Thailand and Vietnam) are among the world's top 20 fishing economies. In Southeast Asia, at least 10 million people fish, about a quarter of the total number of fishers worldwide; marine fisheries support the livelihoods of over 100 million people and are a valuable source of protein for hundreds of millions more.⁴ The fishing catch contributes significantly to Southeast Asian food sovereignty,⁵ export income, and regional and international trade, and directly benefits both the owners of capital and employees. However, while Southeast Asia's fishery resources are large and valuable, they are not well managed: most are over-exploited and marine environments are increasingly being degraded.

Over the past few decades competition for fish and other maritime resources in Southeast Asia has intensified, particularly since regional states declared their 200 nautical miles exclusive economic zones (EEZs) when the United Nations Convention on the Law of the Sea (UNCLOS) came into effect in 1994 — a process that accelerated what Butcher calls “the closing of the frontier” for Southeast Asian fishers.⁶ Combined with increasing market demand and the prevailing “boom and bust” of the fish stocks caused by modern (over)fishing,⁷ Southeast Asian states have become more

protective of their fish stocks, and increasingly sensitive to cross-border fishing incursions. Indeed, cross-border fishing has become conflated with territorial disputes, and fishers are increasingly the vanguard of territorial claims, supported by state maritime force. In particular, cross-border fishing enters the sensitive realm of international politics in disputed areas, especially the South China Sea. Given the importance and the complex, invariably transnational, nature of fishing, a range of state and non-state actors have been involved in fisheries management. Indeed, the new multilateral arrangements discussed in this article enter a field rich in pre-existing or “old actors” that can be categorized into five groups: first, Southeast Asian states plus external states and their fisheries, environment, enforcement, trade and scientific agencies; second, longer-established regional actors in fisheries, particularly bilateral and multilateral efforts and institutions; third, non-governmental organizations (NGOs) concerned with fisheries and the marine environment; fourth, fish harvest sector actors, including labourers, fishing companies, boat owners and masters; and fifth, other indigenous and transnational fish supply chain actors such as traders and supermarkets.

State fisheries agencies are notionally the leaders in state fisheries matters, but their own weaknesses and the complexity and power of many of the other actors make this lead tenuous. The biggest problem in regard to managing fishery resources are Southeast Asian countries’ lack of management and enforcement capacities and the conflict of interests regarding, on the one hand, the economic benefits of fishing and, on the other hand, the protection of marine resources. The gaps in effective management of fisheries and enforcement capacities are widely acknowledged in Southeast Asia, even by state fisheries management actors themselves. A recent collaborative study by the RPOA state fisheries actors, for example, concluded that despite the strengths of individual agencies in some fields, many lack full capacity in basic fisheries management responsibilities, such as planning or scientific and economic expertise.⁸ Problems such as corruption that are inherent in national management and enforcement agencies also affect efficiency. For example, in Indonesia, Michael Heazle and John Butcher found that state agencies, including the Ministry of Maritime Affairs and Fisheries and the Indonesian navy, operate in a web of incentives that permits IUU.⁹ The navy, which is responsible for enforcing some fisheries regulations, for instance, must raise much of its own funds and this provides an incentive

to seek bribes from IUU operators. Also, J.J. Fox and his colleagues have shown how administrative decentralization in Indonesia in the post-New Order era created a fisheries management system fraught with tensions between overlapping and unclear responsibilities of agencies at different levels of government.¹⁰

Competing interests also adversely affect the willingness of states to protect marine resources. Driven by national objectives, Southeast Asian state actors are still oriented towards the paradigm of increasing fisheries production and income, rather than sustainable fisheries. National plans and policies emphasize increased fish production for food, markets, foreign exchange and jobs. This creates the problem of too many fishing vessels relative to resource limits, as well as over-fishing and weak controls on fishing. Given the large number of vessels allowed to operate, it is not surprising that both legal and illegal fishing contribute to over-fishing. Furthermore, even in countries where the number of boats is limited, problems remain. A 2009 Food and Agricultural Organisation (FAO) regional workshop held in Bangkok, for example, concluded that even in places where the number of vessels is tightly controlled, such as in Malaysia, fishing activity continues to escalate because the technical efficiency of the vessels is only minimally constrained.¹¹

The second set of old state actors comprises the longer-established regional fisheries bodies and other bilateral and multilateral actors. Overall, bilateral fisheries management is rare in Southeast Asia. China and Vietnam have possibly the only joint fisheries management arrangement, covering the disputed and hence highly sensitive Gulf of Tonkin.¹² A number of bilateral fisheries access agreements have been signed between Southeast Asian states, but these do not constitute joint management initiatives. In fact, in the case of Indonesia, fisheries access agreements have often functioned as the back door to illegal fishing.¹³ Multilateral regional efforts have so far only supported modest fisheries management cooperation. Indeed, with the exception of two tuna management bodies, all have been advisory, scientific or concerned with environmental and economic cooperation.¹⁴ The advisory bodies include the FAO-supported Asia Pacific Fisheries Commission (APFIC) and the Southeast Asian Fisheries Development Center (SEAFDEC). The scientific bodies include InfoFish for marketing information and technical advisory services for fisheries products, and the Asian Fisheries Society (AFS). Those concerned with the environment and economic cooperation include ASEAN, the Asia-

Pacific Economic Cooperation (APEC) forum and the Partnership for Environmental Management for the Seas of East Asia (PEMSEA).

Apart from the tuna fisheries management organizations, none of these agencies were established to support regional fisheries management, for a variety of reasons. For some regional political actors such as ASEAN, for example, fishing is only of minor interest among other political, security and economic issues, and fisheries cooperation is elevated mainly for economic purposes, and often at the expense of sustainable fishing. In fact, ASEAN aims to increase Southeast Asian cross-border fish trade as part of its economic integration strategy, an aim that because it increases trade in fish further may be counter to sustainable resource exploitation limits.¹⁵

In fisheries management, other regional actors have had limited involvement. Some regional and international agencies have, however, contributed significantly to raising awareness regarding the problem of over-fishing. These include, for example, regional scientific and technology actors that have helped publicize the extent of over-fishing in Southeast Asia. At the conclusion of a major eight-country scientific study of Asian (chiefly Southeast Asian) trawl fisheries,¹⁶ for instance, Gerry Silvestre and his colleagues concluded that coastal fisheries resources “show an alarming decline ... throughout the region, with biomasses down to 5 to 30 per cent of levels prior to the expansion of fishing. The relative abundance of the larger, more valuable fish has decreased sharply and there has been a proportionate increase in smaller, less valuable species.”¹⁷ A more recent FAO regional scientific workshop confirmed these conclusions.¹⁸ Although the region does not have standing bodies for scientific review of fisheries comparable to those that exist in Europe, North America and Australia,¹⁹ the scientific agencies of Southeast Asian state fisheries have conducted most of the fisheries surveys and stock assessments in the region, often supported by international development projects. While in some cases state science actors have been reluctant to publicly reveal the extent of over-fishing, regional collaborative reviews have provided state scientists some protection in announcing unwelcome news.²⁰

Most members of the third group of Southeast Asian actors, the NGOs, are still relatively new to the fisheries sector. However, an increasing number of NGOs have become involved in Southeast Asian fisheries conservation and a few are involved in fishers' welfare issues. Some NGOs have country fisheries conservation programmes

and small (local) scale fisheries improvement programmes. For example, the World Wildlife Fund (WWF) has country offices in Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam, which, together with WWF United States, conduct fisheries programmes in Southeast Asian waters. Also, over the past two decades, scientists and conservationists have recognized Southeast Asia for its “Coral Triangle”,²¹ the world’s richest area of marine biodiversity.²² Through their involvement in Southeast Asian coral reef and marine conservation, the NGOs have become an increasing force in fisheries because fisheries are among the most threatening pressures on coral reefs. For example, overfishing can destroy the fish population and consequently the reef itself and some fishing methods, such as trawling, have the potential to cause reef damage.²³

The fourth group — private actors in the harvest sector — consists of individual fishers, fishing labourers and fishing companies, each pursuing private/personal aims for profit and livelihood. Individual actors such as trawler owners, small scale fishers and fisheries labourers do not have strong, standing representative bodies, although weak cooperative bodies are found throughout the region. Yet, on specific issues, fishers will organize forcefully and intermittently. For example, local Malaysian fishermen’s associations at times protest illegal fishing by large trawlers in inshore zones,²⁴ and fishers band together to protest when fuel subsidies are reduced.²⁵ The fifth group also consists of private sector actors, and specifically, a very diverse and complex set of operators active in the fish supply chains. Some fish supply chains are long and secretive, such as those for the live reef food fish trade²⁶ into Hong Kong; others are short and secretive, such as the Malaysian trawler operators who illegally sell their catch directly at sea to Thai buyers.²⁷ While managing certain aspects of the trade in fish, these actors are less significant in regard to the management of fisheries.

New Multilateral Arrangements

While also driven by specific events, the new multilateral arrangements involved in fisheries management generally emerged as a result of, or in response to, international, regional and local political pressures in fisheries and marine conservation, and the failure of the established actors to adequately address problems related to IUU fishing. In Southeast Asia, weak regional fisheries cooperation, and hence an inability to effectively manage maritime security issues

such as illegal fishing, are a product of both historical relations among states and the limited capacity of the old actors. Many Southeast Asian states gained independence from colonial rule less than 60 years ago and some of them, e.g., Cambodia, Indonesia, the Philippines and Vietnam, only emerged in the last few decades from conflict and civil strife. Many of the states are faced with similar national and transnational challenges and opportunities, including rapid population and economic growth, environment and resource degradation, and political and sovereignty issues, including contested maritime borders.

Despite the similarity and transnational nature of some of these challenges, cooperation between states has been limited, in spite of the establishment of ASEAN in 1967 the purpose of which was to improve economic and social development and support peace and stability. As Hiro Katsumata points out, mutual suspicion and/or the “ASEAN Way” of non-interference in national matters, has dominated regional relations since the foundation of the organization.²⁸ In recent years, he argues, ASEAN’s approach has changed somewhat.²⁹ Now, regional relations have displayed what he terms “mimetic adoption of external norms”, an approach that may be designed to achieve wider international legitimacy, even if this approach is sometimes in contradiction to the “ASEAN Way”. A further change is that even though economic integration through free trade and foreign direct investments remains a priority for ASEAN, and for supra regional bodies such as ASEAN+3 (ASEAN plus China, Japan, South Korea),³⁰ they have increasingly been engaging in, and responding to, global developments such as climate change.³¹ That means that while ASEAN still emphasizes economic development more than environmentally sustainable development, the organization is becoming more involved in initiatives that focus on the protection of the environment, including the marine environment.

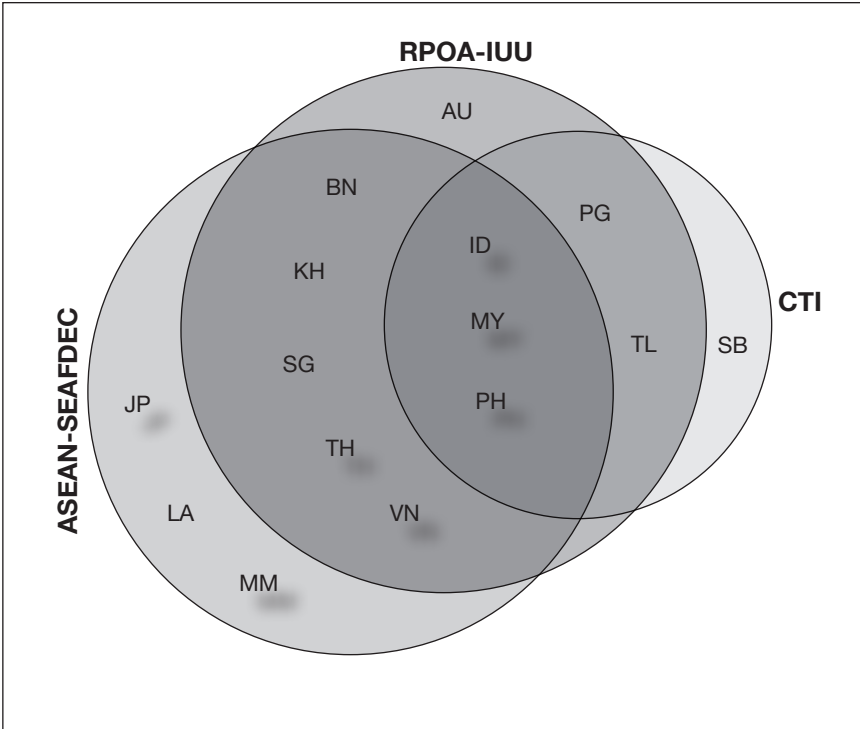
Other political and economic changes that are of interest in regard to fisheries management include the economic growth of many Southeast Asian countries, which enables governments to spend more on building fisheries management capacities and enforcement mechanisms. A further significant change is the spread of democratic forms of governance in the region. Democratization cuts both ways on fisheries. In one direction, public awareness of the environment and unsustainable fisheries practices, such as shark finning, has captured public attention; in the other direction, pressure groups such as fishermen and traders’ associations also have greater access to media and political processes to protect the status quo.

Lastly, direct and indirect international pressure and incentives to manage fisheries and address IUU fishing have impacted upon and facilitated regional and international cooperation. For example, the European Union, a major fish trading partner, is implementing new import rules that prohibit illegally caught fish.³² Significantly, Southeast Asian states have limited means of meeting the criteria without regional cooperation on IUU. Furthermore, other external state and non-state actors have argued for faster change in regional fisheries: Japan, through SEAFDEC, has supported changes and remains in dialogue with Southeast Asian states; Australia, fearing intruding IUU fishers, has pushed for stronger engagement; and prominent western scientists and citizen and state-funded NGOs have encouraged greater protection of the marine environment. To varying degrees, external actors have been frustrated that indigenous capacity in Southeast Asia did not, and would not, eventuate without the motivations of external ideas, pressure and support.³³ In part, as a response, the three new multilateral arrangements RPOA (IUU), ASEAN–SEAFDEC Strategic Partnership (ASSP) and CTI were formed and funded as coalitions involving Southeast Asian states and external actors, in attempts to remedy the institutional and capacity defects of the old state actors.

Geography and Memberships of the New Multilateral Arrangements

Each of the three new regional actors have different memberships and cover a different geographical area (see Figure 1 and Table 1). Formed in 2007, the RPOA (IUU) has geographic coverage of the ASEAN states minus Myanmar, plus Papua New Guinea and Australia. Geographically, all the member states' EEZs are included, except in the case of Australia where only the northern part of Australia's EEZ is incorporated. Also formed in 2007, the ASSP covers ASEAN (but not Timor-Leste) and includes Japan. The combined EEZs of the Southeast Asian states form the target geographic region. Formed in 2009, the CTI is smaller than the other two in terms of membership and geography. It covers the more eastern parts of archipelagic Southeast Asia, plus Papua New Guinea and the Solomon Islands. In some activities, Fiji and Vanuatu are also included. The CTI omits mainland Asia, Brunei Darussalam and the eastern Malaysian state of Sarawak.

Figure 1
**Overlapping State Memberships of the RPOA (IUU), ASEAN-SEAFDEC
 Strategic Partnership Initiatives and CTI**



Country legend:

- | | |
|------------------------|-----------------------|
| AU = Australia | PG = Papua New Guinea |
| BN = Brunei Darussalam | PH = Philippines |
| ID = Indonesia | SB = Solomon Islands |
| JP = Japan | SG = Singapore |
| KH = Cambodia | TH = Thailand |
| LH = Lao PDR | TL = East Timor |
| MM = Myanmar | SB = Solomon Islands |
| MY = Malaysia | VN = Vietnam |

Initials with shadows indicate that the country is a member of one of the top 20 fish producing countries in the world. Other Asian countries in the top 20 fish producers that are not in any of the three initiatives are Bangladesh (BD), China (CN), India (IN), Republic of Korea (KR) and Taiwan (TW). All but Taiwan are members of the ARF.

Table 1
Membership and Characteristics of RPOA, ASSP and CTI

<i>Member States</i>	<i>RPOA</i>	<i>ASSP</i>	<i>CTI</i>
• ASEAN states	Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam	Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam	Indonesia, Malaysia, Philippines
• Other states	Australia, Papua New Guinea, Timor-Leste	Japan	Papua New Guinea, Solomon Islands, Timor- Leste
Regionally relevant states not included	Bangladesh, China, India, South Korea, Taiwan	Bangladesh, China, India, South Korea, Taiwan	Bangladesh, China, India, South Korea, Taiwan
Non-state agencies	Several informal technical agencies and groups	Little engagement of NGOs	International and national level environmental NGOs (WWF, Conservation International, The Nature Conservancy, etc), corporate entities in the Regional Business Forum.

Area of coverage	EEZs of Southeast Asian member states and the northern part of Australia's EEZ	EEZs of Southeast Asian member states	Eastern Malaysia and Indonesia, EEZs of Philippines, Papua New Guinea, Solomon Islands and Timor-Leste
Legal form	Agreement signed by fisheries ministers	Partnership agreement (memorandum status) signed by the parties.	Six country partnership formed in 2007 by heads of states
Secretariat(s)	In Ministry of Maritime Affairs and Fisheries, Indonesia	SEAFDEC, Thailand	Multiple secretariats to be established. Existing Interim Regional Secretariat in Indonesia
Financial support mechanisms	National budgets, Australian foreign assistance	National budgets, Japan and other assistance from foreign assistance budgets (e.g., Sweden)	National budgets, Global Environment Facility, foreign assistance, environmental non-government and private sector support

Source: Compiled from websites <<http://www.rpoa.sec.kkp.go.id>>, <<http://www.aspfisheries.net>>, <<http://www.coraltriangleinitiative.org>> and publications of the multilateral arrangements.

Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices Including to Combat Illegal, Unreported and Unregulated (IUU) Fishing

The origins of the RPOA (IUU) lie in Australia in the late 1980s when the number of incursions by illegal Indonesian fishing vessels into Australian waters increased dramatically. In response, Australia steadily intensified operations against illegal fishing,³⁴ culminating in 2005 with “Operation Clearwater”. The operation was conducted in Australia’s northern waters and has been described as the country’s largest operation against illegal fishing to date.³⁵ This led to many detentions as well as acrimony over the manner in which the arrested fishers and their boats were treated, creating tensions in Australia–Indonesia relations.³⁶ To ease these tensions, Australia and Indonesia began bilateral talks and in 2006 announced the introduction of bilateral maritime patrols.³⁷ In April 2007, the two states jointly convened a regional meeting to discuss IUU problems, resulting in the establishment of a new multilateral actor, the Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices Including to Combat Illegal, Unreported and Unregulated (IUU) fishing. The RPOA (IUU) agreement was signed by the fisheries ministers of the eleven member countries.

Whereas the motivation of the RPOA was to help resolve a bilateral problem, a multilateral coalition was built in 2007, partly to avoid attributing blame over IUU fishing in the waters between Indonesia and Australia and because all regional states suffered from similar international and domestic IUU. As the 2007 Joint Ministerial Statement declared, the new multilateral coalition offered a “common and collaborative approach to promote responsible fishing practices and to combat IUU fishing in the region, in particular, in the South China Sea, the Sulu–Sulawesi Seas, and the Arafura–Timor Seas”.³⁸ RPOA is therefore a coalition of traditional or state actors and receives most of its financial support from state agencies, particularly through Australian fisheries and development assistance funds and Indonesian fisheries funds. However, RPOA and its activities have also attracted in-kind support from other regional actors, such as the Fisheries Working Group of APEC, SEAFDEC, InfoFish, the WorldFish Center and the Asia Pacific Fisheries Commission (APFIC), even though these links are to date neither strong nor formal.

The objective of the RPOA is to “enhance and strengthen the overall level of fisheries management in the region, in order

to sustain fisheries resources and the marine environment”.³⁹ The RPOA Coordinating Committee meets annually to develop and oversee annual work plans, and reports to the signatory fisheries ministers and the biennial meeting of the FAO Committee on Fisheries. Indonesia hosts the secretariat within its Ministry of Maritime Affairs and Fisheries; and states host regional meetings and events. Recent activities include a project that developed priorities for fisheries management capacity building,⁴⁰ a workshop to assist states to implement the new 2009 FAO Port State Measures Agreement,⁴¹ and a meeting to discuss how to implement the forthcoming EU requirements to control IUU fishing.⁴² The RPOA is also interested in helping countries use fisheries monitoring, control and surveillance (MCS) to link with financial intelligence units to “follow the money trail” of illegal activities.⁴³ Although low profile, the RPOA is finding topics of substance to address at the technical level.

ASEAN-SEAFDEC Strategic Partnership (ASSP)

Formed in 1967, the Southeast Asian Fisheries Development Center (SEAFDEC) promotes “sustainable fisheries development in the Southeast Asian region through research, training and information services”.⁴⁴ SEAFDEC was conceived of and continues as a Japanese–Southeast Asian state partnership; its membership is composed of ten Southeast Asian countries and Japan. SEAFDEC is staffed by scientists and experts from Southeast Asia and Japan. Although Japan originally made substantial financial as well as in-kind contributions to SEAFDEC, it has decreased its contributions over time in order to hand over responsibility for SEAFDEC to Southeast Asian states. From the 1990s, Southeast Asian member countries largely assumed responsibility for funding SEAFDEC, with some additional project funds made available from ASEAN and other donor and partner agencies from countries such as Australia and Sweden. SEAFDEC not only received funds from ASEAN countries but a closer partnership between the two organizations was forged, which further facilitated regional control of SEAFDEC. Conversely, SEAFDEC provided ASEAN, which supported a secretariat, with decent fisheries technical capacity.

In 1998, ASEAN and SEAFDEC established a fisheries partnership, the ASEAN–SEAFDEC Fisheries Consultative Group. This led gradually, in 2007, to a more formal ASEAN–SEAFDEC Strategic Partnership (ASSP). ASSP has important regional objectives,

including to help ASEAN establish an ASEAN Regional Fisheries Management Mechanism (ARFMM) and to formulate common stances on international issues. In effect, therefore, ASEAN has co-opted SEAFDEC to be its main fisheries technical advisor.⁴⁵ Notably, in 2009 SEAFDEC helped ASEAN to establish the ASEAN Fisheries Consultative Forum that has agreed on key theme areas for fisheries cooperation and has nominated lead countries. The themes of most interest to maritime security are combating IUU Fishing (Indonesia to lead), fishing capacity and responsible fishing practices (Malaysia), and strengthening ASEAN joint approaches/positions on international trade related issues (Thailand). In addition to fostering regional cooperation, the ASSP focuses on subregional cooperation around selected IUU hotspots. The Gulf of Thailand and the Andaman Sea are the first two priority subregions.⁴⁶ A series of meetings in each subregion is developing monitoring, control and surveillance approaches and measures to manage fishing capacity at the subregional level. From his analysis of subregional initiatives, Magnus Torrell concludes that the subregions are meaningful units for combating IUU and more of them should be identified in Southeast Asia.⁴⁷ He also sees opportunities for pooling the strengths of SEAFDEC and RPOA to address IUU fishing.

The Coral Triangle Initiative

The CTI emerged from advocacy and on-the-ground action by the conservation scientific community and international NGOs. The scientific case for conserving Southeast Asian marine ecosystems had been building since the mid-1980s when Australia, Canada and the United States funded three ASEAN marine science projects. The three initiatives covered living coastal resources (coral reefs, mangroves, seagrasses), marine environment quality and coastal resources management. Each of these programmes created scientific networks that linked to international networks and helped to drive new regional and global programmes in marine resource assessment and management⁴⁸ NGOs also became increasingly interested in marine conservation projects in Asia, particularly after 1993 when international coral reef expert C.R. Wilkinson warned of the worsening condition of reefs in Southeast Asia and elsewhere.⁴⁹ In the late 1990s and early 2000s, international conservation NGOs began projects in the Coral Triangle, forming domestic and regional coalitions of support. Eventually, scientists and NGOs helped persuade Southeast Asian states and donors of the need for

marine conservation at the regional level. In 2006, Indonesia took the lead and the CTI initiative was publicly mooted by Indonesian President Susilo Bambang Yudhoyono at the Conference of the Parties of the Convention on Biological Diversity in Brazil. It was then formally announced at the 2007 APEC Summit in Australia, and launched by the six CTI state leaders in May 2009 at the Manado World Ocean Conference.⁵⁰

Although an intergovernmental initiative, the CTI was strongly moulded by NGOs, especially four prominent international conservation NGOs: the World Wildlife Fund, The Nature Conservancy, Conservation International and the Wildlife Conservation Society. These NGOs, together with several private sector companies, continue to feed into the formal CTI structure. While still in its early stages, the CTI has a Council of Ministers supported by a Senior Officials Meeting, technical working groups, national coordinating committees and the United States CTI Support Program for the four international NGOs. The CTI Regional Secretariat is hosted by the Ministry of Maritime Affairs and Fisheries in Jakarta.

The CTI has its own RPOA which focuses on priority seascapes, fisheries management, marine protected areas, climate change and endangered species. Given its important mission and clear vision, the CTI is a rallying point for international development assistance and conservation funding. For example, the Global Environment Facility provided grant funds with the Asian Development Bank (ADB) as the implementing agency. The ADB and the Australian, US and German governments have also made financial contributions, along with the NGOs and member state agencies. The total new budget commitment is difficult to estimate but, when the CTI was launched in May 2009, The Nature Conservancy reported that more than \$100 million in grants and \$300 million in co-financing would be committed over a five-year period.⁵¹

However, while CTI aims to transform CT marine resource governance structures, including fisheries management, observers have rightly cautioned on the complexity and the difficulties of reconciling the competing objectives of many actors such as conservation and food security/development⁵² Moreover, at present CTI is still more of a project, though institutional structures are being established. Several secretariats are being set up, including the main CTI Secretariat, state CTI coordinating committee secretariats, and those for other fora such as the CTI Regional Business Forum and the Secretariat for the US CT Support Partnership. The CTI is developing into a coalition of cooperating organizations resembling

those established to solve other complex, interconnected international problems, including public–private health arrangements.⁵³ Only time will tell whether the coalition will endure and achieve its aims, especially as these aims are difficult to achieve in the face of countervailing forces for development and economic rent.

New Multilateral Arrangements and the State: Will the New Arrangements Help the Old (State) Actors Solve Illegal Fishing?

The three new multilateral arrangements were established to achieve greater international collaboration to address the problem of exploitation of marine resources and illegal fishing. State actors, from Southeast Asia and outside the region, realized that better regional solutions were needed because previous state and regional efforts were still too weak to address the problems. The traditional state actors were therefore clearly willing and involved in the creation, running and definition of missions of the new arrangements. However, although the old actors helped set up and support the new multilateral arrangements, they are not the sole owners. All the new arrangements were motivated, and are partly supported by, external actors, including in the case of CTI non-state actors, and all have members from outside Southeast Asia.

Given the close links between state agencies and the new arrangements, the old state fisheries actors generally embraced the RPOA (IUU) and ASSP, but are not yet fully involved in the CTI. State fisheries actors welcomed the RPOA (IUU) because it focused on management of IUU fishing in a political climate of declining attention to fisheries. Senior fisheries officials welcomed further opportunities for regional mechanisms to solve common problems. The state fisheries actors have also embraced the ASSP, partly because it gives fisheries a higher profile in ASEAN state economic agencies. It focused the work of two existing intergovernmental platforms (ASEAN and SEAFDEC) and helped them attract new funding, e.g., from Sweden. It also has direct technical support from SEAFDEC. The state fisheries actors consider it complementary to the more specialized RPOA (IUU). With their common fisheries agency members, RPOA and ASSP work closely together, by, for example, scheduling follow-on events to take advantage of their meetings, and they divide their subregional priority areas to complement each other.

In regard to CTI, fisheries and other state agencies involved with fisheries security (such as coast guards and navies) have different

levels of engagement in the initiative, depending on state structures and governmental decisions. At present, in most CTI states the main actors are the environment ministries. Despite this, CTI has the highest public and political profile of the three new arrangements. An indication of the prominence of CTI is that it was launched by the six state leaders, whereas the RPOA was only launched by eleven ministers responsible for fisheries. Also, unlike RPOA (IUU) and ASSP, the CTI offers new ways of working with non-government actors, including both NGOs and private sector actors. What still causes concern though is the initiative's lack of strong fisheries expertise, and its understanding of core fisheries, economic and social issues has been described as being too simplistic.⁵⁴

As the new arrangements were established and run by government agencies, they do not challenge the role of the state as the sole provider of security, nor are they likely to replace the state providers. Rather, through capacity development and cooperation, the new arrangements are expanding state maritime security agencies' roles to include regional cooperation and coordination. They help build state capacity to address IUU problems and meet international commitments such as EU regulations and the Port State Measures Agreement. They also help the old actors to solve problems in subregional hotspots and bring new funding to supplement state fisheries budgets, including maritime security budgets. Finally, they help build trust and cooperation through regular meetings and working together to address problems and shared concerns.

However, the new arrangements are not a panacea for addressing maritime security threats such as illegal fishing, mainly because of structural weaknesses of these multilateral actors, their lack of engagement with some core fishing issues, dependence on support from members and inadequate cooperation with other fisheries actors. In terms of their status, all three new arrangements are not formal legal bodies and their long-term funding is not secure. At best, they create structured dialogues and opportunities for shared capacity development. At worst, ASSP is linked to ASEAN and aims to eventually help ASEAN establish a Regional Fisheries Management Mechanism, although it is weak on policy advocacy for fisheries management. The RPOA (IUU) and CTI are not even linked to regional political bodies. Depending on the point of view, the RPOA (IUU) and ASSP are strengthened or weakened by the extra-regional memberships of Australia and Japan respectively. They can be strengthened by access to funds, advice and capacity building from extra-ASEAN members and weakened by the fact

that the non-ASEAN members have their non-ASEAN agendas that they use the regional bodies to further. This has been quite pointed in the case of Japan and SEAFDEC as Japan has such a strong fisheries agenda, which at times may not be the best for ASEAN countries, given their stage of development and their economic and environmental interests.

The three new arrangements also do not address a number of core fisheries issues. For example, on the social issue of coastal communities being over-dependent on fisheries, none of the new arrangements have programmes to address this issue. They also do not tackle problems such as the presence of too many vessels, the use of increasingly powerful fishing equipment, and the existence of strong incentives, including state support, to trade fish rather than to sustainably manage fish stocks. They also do not address the problem of incomplete information, including such critical maritime security matters as which resources are shared and what is the status of fish stocks. In terms of their functions, the new system's actions are also hampered by disputed maritime borders, a problem they have no role in resolving. Most critically, the new arrangements cannot address the most powerful countervailing interests of their own and non-member states, namely tensions in international relations linked to territorial claims and internal state practices to shore up fishing interests for political purposes, e.g., with hand-outs and fuel subsidies.

Furthermore, the interests that led to the establishment of the new arrangements wax and wane. In the case of the RPOA (IUU), the primary driver, Indonesian illegal fishing in Australian waters, has reportedly dropped dramatically since 2005.⁵⁵ Australian and Indonesian political interest in the RPOA (IUU), however, has not diminished thanks to a vigorous agenda that has developed on subregional IUU issues and regional capacity building for monitoring, control and surveillance. Despite the waning of one of the early drivers, interest in the RPOA (IUU) remains high because members now have greater internal capacity to tackle IUU fishing and important new external drivers have arisen, namely the 2009 Port State Measures Agreement and the 2008 EU IUU regulations. A sign of this new state capacity is that Southeast Asian states have started taking action on bilateral IUU issues, such as the new agreement between Indonesia and Malaysia on handling fisheries disputes in areas of overlapping boundaries in the Straits of Malacca.⁵⁶ Finally, except for the CTI, the new arrangements do not create opportunities

to engage with the fishing sector (harvest and supply chain). The CTI, however, is weak on fisheries management and will need to reconcile conservation and fisheries targets.

Conclusion

The three new multilateral arrangements are primarily comprised of multi-state actors. Essentially, they were not created to solve the problem of illegal fishing themselves but to create a platform for state action and to strengthen the capacity of the states to solve the problems on their own and collectively. The new arrangements are helping to move Southeast Asian states towards multilateral management action. However, even though they are further along the track than the other multilateral arrangements that focus on technical assistance, they are still a long way from achieving multilateral fisheries management. Yet the establishment of the three new arrangements has had a positive impact. The coalition building has breathed some new life into state and regional efforts to combat IUU fishing. Specifically, two of the three new arrangements, the RPOA (IUU) and ASSP, collaborate with each other. All three actors also have important links to other actors. ASSP's links with ASEAN are significant but to yield results would require efficient and effective regional fisheries management support which is currently lacking. The CTI, on the other hand, because of its design, public and political profile and level of support, contains the seeds of a major long-term strategic alliance for marine management, including non-state actors. It is still too early to predict, however, if CTI can fulfil this promise.

Southeast Asia is a large and complex fisheries region, and its fisheries and maritime security issues are many and multifaceted. While it has to be acknowledged that all the new multilateral arrangements are still works-in-progress, they may create a way to manage regional fisheries in the long term. Overall, the establishment of a single Southeast Asian regional fisheries management organization is unlikely in the foreseeable future, and in any case may not necessarily be the best solution. Major obstacles to a regional fisheries solution include the size, extent and complexity of the fisheries concerned and the fact that negotiations would involve more than twenty interested states, among which unresolved political issues, including disputes over maritime borders, exist. A number of subregional forums, such as the three new arrangements,

created to solve issues in specific hot-spots may therefore be the way forward.⁵⁷ Such solutions specific to subregions, and even to specific fisheries in a subregion (e.g., the Gulf of Tonkin fisheries shared by China and Vietnam),⁵⁸ may be effective first steps or may even work in the long term.

On the other hand, these new arrangements may not offer fisheries management solutions and may simply shift the burden of action to the future when the fisheries problems grow worse and become more difficult to solve; or they may disappear if fisheries resources become less significant. Indeed, there are still many problems to overcome and the question remains as to whether or not the new arrangements and their programmes are sufficient enough to meet the scale of IUU fishing challenges in Southeast Asia. Clearly, within state waters, Southeast Asian states are still largely unwilling to control the over-exploitation of fisheries resources — resources on which the whole region depends for a share of its protein and which 100 million people rely on for their income and livelihood. Except for small pockets of locally effective fisheries management, the pressure is still immense to exploit fishery resources even further and to bend the rules and regulations, inside and across state borders. Southeast Asian states are also very slow in resolving the disputed maritime borders and have not started to define the extent to which they share particular fisheries resources. Under such conditions, the most likely outcome is that illegal fishing will persist and that it will continue to create tensions between regional states and remain a significant problem in regard to resource, food and environmental security.

NOTES

- ¹ D.J. Agnew, J. Pearce, G. Pramod, T. Peatman, R. Watson, J.R. Beddington and T.J. Pitcher, “Estimating the Worldwide Extent of Illegal Fishing”, *PLOS ONE*, 25 February 2009, <<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0004570>>.
- ² Carolin Liss, *Oceans of Crime: Maritime Piracy and Transnational Security in Southeast Asia and Bangladesh* (Singapore: Institute of Southeast Asian Studies and International Institute for Asian Studies, 2011).
- ³ In other regions with mature regional fisheries management bodies, progress has come after decades, not years, and they have been supported by the right incentives, threats and capacity of state and multilateral arrangements. External fisheries incentives such as maintaining market access, and internal challenges such as meeting increased fish demand might accelerate the efforts of the new actors.

- ⁴ Meryl Williams and Derek Staples, "Southeast Asian Fisheries", in *Handbook of Marine Fisheries Conservation and Management*, edited by R. Quentin Grafton, Ray Hilborn, Dale Squires, Maree Tait and Meryl Williams (New York, NY: Oxford University Press, 2010), pp. 243–57.
- ⁵ "Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity." Via Campesina quoted in Raj Patel, "What does food sovereignty look like?", *The Journal of Peasant Studies* 36, no. 3 (July 2009): 665.
- ⁶ John G. Butcher, *The Closing Frontier: A History of the Marine Fisheries of Southeast Asia c. 1850–2000* (Singapore: Institute of Southeast Asian Studies, 2004).
- ⁷ After the introduction of modern fishing gear and technology, global fish stocks have been exploited in a similar pattern across oceans. Due to increased fishing capacity, more and more fish are caught until each water area reaches its maximum productivity and then starts to decline. G.R. Morgan and D.J. Staples, "The History of Industrial Marine Fisheries in Southeast Asia", *RAP Publication 2006/12* (Bangkok: Bangkok Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Pacific, 2006), p. 27.
- ⁸ Department of Agriculture, Fisheries and Forestry, "Net Returns — A Human Development Capacity Building: Framework for Marine Capture Fisheries Management in South East Asia" (Canberra: Department of Agriculture, Fisheries and Forestry, 2011).
- ⁹ Michael Heazle and John G. Butcher, "Fisheries Depletion and the State in Indonesia: Towards a Regional Regulatory Regime", *Marine Policy* 31 (2007): 276–86.
- ¹⁰ J.J. Fox, D.S. Adhuri and I.A.P. Resosudarmo, "Unfinished Edifice or Pandora's box? Case Studies in Governance Decentralisation and Resource Management in Indonesia", in *The Politics and Economics of Indonesia's Natural Resources*, edited by B.P. Resosudarmo (Singapore: Institute of Southeast Asian Studies, 2005), pp. 92–108.
- ¹¹ FAO, "Report of the Second Workshop on the Assessment of Fishery Stock Status in South and Southeast Asia, Bangkok, 5–9 October 2009", *FAO Fisheries and Aquaculture Report*, no. 940 (Rome: FAO, 2010).
- ¹² Jianwei Li and Pingping Chen, "China-Vietnam Fishery Cooperation in the Gulf of Tonkin Revisited", *South China Sea Studies*, Second International Workshop, Ho Chi Minh City, November 2010, <<http://nghiencuubiendong.vn/en/conferences-and-seminars/-second-international-workshop>>.
- ¹³ Thai trawlers, for example, then have licences to fish in Indonesian waters but whether they observe the conditions of those licences is another matter. Meryl J. Williams, *Enmeshed: Australia and Southeast Asia's Fisheries*, Lowy Institute Paper 20 (Double Bay, NSW: Longueville Media, 2007).
- ¹⁴ David Lymer and Simon Funge-Smith, eds., *Handbook on Regional Fishery Bodies and Arrangements in Asia and the Pacific*, RAP Publication 2009/07 (Bangkok: FAO Regional Office for Asia and the Pacific, 2008).
- ¹⁵ Thitapha Wattanaputtipaisan, "Priority Integration Sectors in ASEAN: Supply-side Implications and Options", *Asian Development Review* 24, no. 2 (2008): 64–89.

- ¹⁶ Trawling is a fishing method that involves the use of a large fishing net that is pulled behind one or more boats to capture fish.
- ¹⁷ Geronimo T. Silvestre, Len R. Garces, Ilona Stobutzki, Mahfuz Ahmed, Rowena A.V. Santos, Cesar Z. Luna and Weidong Zhou, "South and South-East Asian Coastal Fisheries — Their Status and Directions for Improved Management: Conference Synopsis and Recommendations", in *Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries*, edited by G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly, WorldFish Center Conference Proceedings 67 (Penang: WorldFish Center, 2003), pp. 1–40.
- ¹⁸ FAO, "Report of the Second Workshop on the Assessment of Fishery Stock Status in South and Southeast Asia. Bangkok, 5–9 October 2009", op. cit.
- ¹⁹ These include the International Council for the Exploration of the Sea, the Australian Fisheries Management Authority, the National Marine Fisheries Service, the Marine Resource Assessment Committees, the Northeast Fisheries Science Advisory Committee and the Northern Prawn Fishery Scientific Advisory Committee.
- ²⁰ See Silvestre et al., "South and South-East Asian Coastal Fisheries", op. cit.
- ²¹ Bert W. Hoeksema, "Delineation of the Indo-Malayan Centre of Maximum Marine Biodiversity: The Coral Triangle", in *Biogeography, Time, and Place: Distributions, Barriers, and Islands*, edited by Willem Renema (Dordrecht: Springer, 2007), pp. 117–78.
- ²² J.E.N. Veron, *Coral in Space and Time: The Biogeography and Evolution of the Scleractinia* (Ithaca, NY: Cornell University Press, 1995); P. Halpin, J. Cleary, B. Donnelly, A. Carroll, F. Biasi, R. Bullington, S. Hickox, D. Crist and F. Baker, *Ocean Life Map* (Washington, D.C.: National Geographic Society, 2010).
- ²³ *Proceedings of the Global Aspects of Coral Reefs: Health Hazards and History, 7–11 June 1993*, edited by R.N. Ginsburg (Miami, FL: University of Miami, 1994).
- ²⁴ Andrea Filmer, "Cracking Down on Illegal Trawlers", *The Star*, 20 January 2012.
- ²⁵ Alina Simon, "Dearer Fuel Hits Fishermen", *New Straits Times*, 9 March 2005. Fishers from one country are often suspicious of those from other countries. See, for example, "Fishermen Picket against Poaching by Foreigners", *Sin Chew* [Malaysia], 21 May 2011. Yet commercial interests triumph. Informal deals are becoming more common through complex, probably illegal, cross-border leasing of fishing licenses between private operators from Indonesia, Thailand and Malaysia. See, Meryl Williams, "Comments by Dr Meryl Williams, Asian Fisheries Society", *The Riau Bulletin* 5, no. 3 (2011): 3.
- ²⁶ According to the WWF "The Live Reef Food Fish Trade involves the capture of reef fish which are kept alive for sale and consumption mainly in Hong Kong and mainland China. Smaller markets exist in Malaysia and Singapore." World Wildlife Fund, "Building a Sustainable Live Reef Food Fish Trade", <http://wwf.panda.org/what_we_do/where_we_work/coraltriangle/solutions/live_reef_fish_trade/>.

- ²⁷ Sean Augustin, “Fish ‘Sale’ at Sea Foiled”, *New Straits Times*, 26 July 2008.
- ²⁸ Hiro Katsumata, “Reconstruction of Diplomatic Norms in Southeast Asia: The Case for Strict Adherence to the ASEAN Way”, *Contemporary Southeast Asia* 25, no. 1 (April 2003): 104–21.
- ²⁹ Hiro Katsumata, “Mimetic Adoption and Norm Diffusion: ‘Western’ Security Cooperation in Southeast Asia?”, *Review of International Studies* 37 (2011): 557–76.
- ³⁰ Yiping Huang and Bijun Wang, “From the Asian Miracle to an Asian Century? Economic Transformation in the 2000s and Prospects for the 2010s”, in Reserve Bank of Australia, 2010 Conference Volume (2011), pp. 8–30. However, when it came to regional integration and food sovereignty, Chandra and Lontoh found that during the 2007–08 food price crisis, Southeast Asian states did not pay any heed to ASEAN’s regional recommendations. States tended to take unilateral actions, e.g., price distorting subsidies and stockpiling of foods such as rice, thus increasing price volatility, including for fish. Alexander C. Chandra and Lucky A. Lontoh, “Regional Food Security and Trade Policy in Southeast Asia: The Role of ASEAN”, Series on Trade and Food Security, Policy Report 3 (International Institute for Sustainable Development, Trade Knowledge Network, 2010).
- ³¹ ASEAN, “Chair’s Statement of the 19th ASEAN Summit, Bali, 17 November 2011”, 19 November 2011, <<http://www.asean.org/archive/documents/19th%20summit/CS.pdf>>.
- ³² European Union, “Council Regulation (EC) No 1005/2008 Establishing a Community System to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing”, 29 September 2008, <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:286:0001:0032:EN:PDF>>.
- ³³ These observations are based on the author’s extensive decades long practical experience in this field.
- ³⁴ N. Stacey, *Boats to Burn: Bajo Fishing Activity in the Australian Fishing Zone* (Canberra: ANU Asia-Pacific Environment Monograph, 2007).
- ³⁵ “Australian Blitz on Fish Poaching”, 21 January 2012, <http://en.wikinews.org/wiki/Australian_blitz_on_fish_poaching>.
- ³⁶ Ruth Balint called for faster legal processing. See “Academic Pushes for Quicker Processing of Illegal Fishermen”, ABC News, 21 January 2012, <<http://www.abc.net.au/news/2005-05-16/academic-pushes-for-quicker-processing-of-illegal/1571594>>. Jim Fox promoted helping fishers find alternative livelihoods. See “Scientists Helping Illegal Fishermen Find Alternative Industries”, ABC Local Radio, 2 July 2005. The Governor of South Sulawesi was asked to assist in repatriating stranded fishers to their home towns. See “12 Fishermen Deported from A’lia Stranded in Makassar”, Antara News, 29 April 2006.
- ³⁷ ABC News, “Australia, Indonesia Join Forces to Stamp Out Illegal Fishing”, 16 November 2006, <<http://www.abc.net.au/news/2006-11-16/australia-indonesia-join-forces-to-stamp-out/1311336>>.
- ³⁸ “Joint Ministerial Statement”, Regional Ministerial Meeting on Promoting Responsible Fishing Practices including Combating IUU Fishing in the Region, Bali, 4 May 2007.

- ³⁹ “Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region”, Appendix D, <<http://www.fao.org/docrep/010/ah998e/AH998E18.htm>>.
- ⁴⁰ Department of Agriculture, Fisheries and Forestry, “Net Returns — A Human Development Capacity Building: Framework for Marine Capture Fisheries Management in South East Asia”, op. cit.
- ⁴¹ This agreement includes several measures to address IUU fishing and the European Union, for example, will not let in fish from countries that cannot comply with the agreement. This is the first agreement of its kind and will be binding once it is ratified. FAO, “Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing”, 2009. <<http://www.fao.org/docrep/013/i1644t/i1644t00.pdf>>.
- ⁴² The requirements are based on the Council Regulation (EC) No. 1005/2008. See Council of the European Union, “Regulations. Council Regulation (EC) No. 1005/2008”, *Official Journal of the European Union*, L 286/1, 29 September 2008.
- ⁴³ Very little information is available regarding how this is done, but following the money trail involves attempts to determine who owns which boats, which companies are involved, where they are registered and where the product is sold. Murray Johns, “The Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices Including Combating Illegal, Unregulated and Unreported (IUU) Fishing in the South-East Asia Region”, paper presented at the conference “Environmental Crime: Fish, Forests and Filthy Lucre”, University of Wollongong, Australia, 22–24 February 2010.
- ⁴⁴ Southeast Asian Fisheries Development Center, “About SEDAFEC”, SEAFDEC, <http://219.93.200.217:70/mfrdmd/main.php?g2_view=core.DownloadItem&g2_itemId=6364>, p. 1.
- ⁴⁵ However, some fisheries matters are dealt with in other ASEAN arenas, such as fish trade and investment which is encouraged in the Initiative for ASEAN Integration. ASEAN, “Roadmap for an ASEAN Community 2009–2015”, ASEAN Secretariat, Jakarta, 2009, <http://www.meti.go.jp/policy/trade_policy/asean/dl/ASEANblueprint.pdf>.
- ⁴⁶ Ekmaharaj et al. list six subregional areas of interest in Southeast Asia, including these two. Siri Ekmaharaj, Magnus Torrell and Samboon Siriraksophon, “Towards Sustainable Fisheries and Aquaculture in Southeast Asia: A Call for the Development of Regional Fisheries Management Strategies”, *Fish for the People* 7, no. 1 (2009): 2–10.
- ⁴⁷ Magnus Torrell, “Management of Fishing Capacity”, paper presented at “Fish for the People 2020: Adaptation to a Changing Environment”, The ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security Towards 2020, The Sofitel Centara Grand Bangkok Hotel, Thailand, 13–17 June 2011.
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- ⁴⁹ C.R. Wilkinson, “Coral Reefs of the World are Facing Widespread Devastation: Can We Prevent This Through Sustainable Management Practices?”, in *Proceedings of the 7th International Coral Reef Symposium 1*, edited by R.H. Richmond (Guam: University of Guam Press, 1993), pp. 11–21.

- ⁵⁰ Pedro Fiedelman and colleagues give a more detailed chronology of events since 2006. P. Fiedelman, L. Evans, M. Fabinyi, S. Foale, J. Cinner and F. Rosen, “Governing Large-scale Marine Commons: Contextual Challenges in the Coral Triangle”, *Marine Policy* 36 (2012): 42–53.
- ⁵¹ TNC (The Nature Conservancy), “Coral Triangle Initiative: Bold Vision and Unprecedented Commitments”, 2009, <<http://www.nature.org/ourinitiatives/regions/asiaandthepacific/coraltriangle/overview/coral-triangle-initiative-goals-and-commitments.xml>>.
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- ⁵³ Examples include the Consultative Group on International Agricultural Research (CGIAR), the Global Environment Facility (GEF) and public-private health arrangements like GAVI (Global Alliance on Vaccines and Immunization).
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- ⁵⁸ K.Y. Zou, “The Sino-Vietnamese Agreement on Maritime Boundary Delimitation in the Gulf of Tonkin”, *Ocean Development & International Law* 36 (2005): 13–24.