

9

**FISHERIES IN SOUTHEAST ASIA:
CHALLENGES AND OPPORTUNITIES**

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Sixty percent of global fish production takes place in Asia, and developing countries produce over 75 percent of that share. Asia accounts for 34 percent of the world's exports of fish and a staggering 87 percent of all fishery and aquaculture employees.¹ The members of the Association of Southeast Asian Nations (ASEAN)—Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar, and Cambodia—are responsible for one-quarter of global production—21 million tons of fish products—every year. Fish consumption is higher in Asia than in any other region of the world and is increasing worldwide. It is likely that the role of fisheries in providing livelihoods, trade, and food security in the Southeast Asian region will continue to grow.

Fish account for 22 percent of global trade in agricultural commodities, compared to 17 percent for meat, and this share is rising.² As the global demand for fish products continues to grow and production increases, fish stocks will be in increasing peril of depletion from overfishing and harmful fishing practices. Environmental changes and degradation due to human activities and climate change will also affect fisheries. Both marine fisheries and freshwater fisheries, like those of the Mekong Basin, will be affected. The situation is further complicated by the links between fisheries and other sectors, such as agriculture, urban development, coastal industries, energy development, and shipping, all of which compete for land and water use. It will be necessary to negotiate solutions to these challenges.

The importance of fisheries' future contributions to livelihoods, food security, and regional relationships in Southeast Asia cannot be underestimated. Because of the globalized nature of markets, the huge economic stakes, and the weakness of international and regional institutions for cooperation and sustainable fishery management, there is currently little reason for optimism concerning the fate of a number of marine fisheries and species.

DEFINITIONS

The term *fisheries*—the capture or farming of aquatic animals and plants—covers a large number of organisms in habitats ranging from lakes to deep oceans. This diverse sector includes a wide range of occupations related to catching, growing, processing, and selling—from individuals with hook and line to multinational

companies with vessels roaming the high seas, and from small-scale farmers with fishponds to corporations operating large-scale coastal cage farms. All of these are found in many of the region's countries, adding complexities to the challenge of establishing equitable and sustainable management.

Fisheries can be divided into capture and culture (aquaculture). *Aquaculture* is broadly defined as the farming of aquatic animals and plants. Aquaculture production systems are commonly categorized as extensive, semi-intensive, or intensive, based on their sources of feeds and their stocking density. In extensive aquaculture, the fish depend entirely on natural food, such as plankton, in farm waters. In semi-intensive aquaculture, the production of natural food in farm waters is increased by fertilization, and supplemental feeds, such as rice bran, may also be given. In intensive aquaculture, the fish are given nutritionally complete feeds, either trash fish (captured fish that have little commercial value because of their small size or low popularity with consumers) or formulated feed in pellet form.

Capture fisheries involve catching or harvesting wild fish and other aquatic organisms in freshwater, brackish water, or seawater. Capture fisheries are often divided into two types: (1) large-scale, industrial or commercial fisheries, and (2) small-scale, or artisanal, fisheries. Large-scale fisheries employ capital-intensive technologies, with equipment owned by commercial entrepreneurs and operated by salaried crews. Large-scale fisheries operate primarily (but not exclusively) in marine waters. Small-scale, or artisanal, fisheries are defined by the Food and Agriculture Organization of the United Nations (FAO) as traditional fisheries involving fishing households.³ Some small-scale fisheries are mechanized, but most are labor-intensive, using small craft with traditional fishing gear, such as handlines, small nets, traps, and spears, or hand-collection methods. Small-scale fisheries operate in rivers, lakes, and wetlands as well as coastal waters. However, as small-scale fishers take advantage of technological improvements, develop business acumen, and range further offshore, they are increasingly taking on the attributes of commercial operators. When the fish are not sold but consumed by the fishers and their families, the fishery is called a *subsistence fishery*. The growth in small-scale fisheries is greater than that of industrial fisheries, but both can be expected to feel the pressures of increased demand and dwindling stocks in the coming decades.

Marine capture fisheries depend on either demersal or pelagic resources. Demersal organisms reside near the bottom of the sea and are thus most commonly found in soft-bottom areas (sandy or muddy substrates) and near reefs. Commonly harvested demersal organisms are ponyfish, squid, threadfin bream, and blue crab. Fishing for demersal species is typically conducted at depths of 40 meters or less. Pelagic resources consist of finfish that are found in open water. These fish are further subdivided into small pelagics and large pelagics. Common small pelagic species include round scad and Indian sardine. Most small pelagic fish are captured in water less than 200 meters deep. Small pelagics account for more than

half of the total production of marine capture fisheries. Tuna is an example of a large pelagic species; these species are found in deeper waters. Most (about 70 percent) of capture fishery production now comes from marine fisheries resources.

LIVELIHOODS, TRADE, AND FOOD SECURITY

The total world fish production in 2001 was 130 million tons, of which 79 million tons came from Asia.⁴ The total fish production of the ASEAN countries was 21 million tons in that year. Some of these countries are among the world's major producers of marine capture fish. Indonesia is the third-largest fish producer in the world, followed by Thailand, the Philippines, and Vietnam. (China and India are number one and two, respectively.) Indonesia produces 4.7 million tons, Thailand 2.8 million tons, and the Philippines 2.2 million tons annually. Myanmar, Malaysia, and Vietnam all produce more than 1 million tons annually.⁵

Trade in fish represents a significant source of foreign currency earnings in Asia. Developing countries have become net exporters of fisheries products: in terms of value, 50 percent are exported, while only 15 percent are imported (see Figure 1).⁶ Between 1980 and 1999, the value of developing countries' net exports increased from US\$5 billion to US\$16.5 billion.⁷ Within ASEAN as a whole, fisheries contribute up to 10 percent of the gross domestic product (GDP).⁸ Regional trade in fisheries products is also growing, in part as a result of the removal of tariffs and quotas. Nontariff barriers (food safety regulations, quality standards, and leveling requirements) are becoming major factors affecting regional trade.

The proportion of people employed in fishery-related jobs in Asia—87 percent of the world's total—has doubled since the 1970s.⁹ That these workers are responsible for 60 percent of global fish production demonstrates how important fisheries are to livelihoods within the region. Fisheries in ASEAN nations employ 30 million people.¹⁰ With average households numbering five individuals, the segment of the population directly dependent on fisheries for food and income comes to 150 million people. Another 60 million people work in associated industries such as boatmaking, manufacture of fishing gear, bait preparation, marketing, and processing.¹¹ In the Philippines, fisheries provide employment to roughly 12 percent of the labor force working in agriculture, fisheries, and forestry and to about 5 percent of the country's total labor force.¹² It is important to note that women constitute a large proportion of the workers in fisheries, employed mostly in processing.

The importance of fisheries to food security within the region cannot be overestimated. The average annual per capita consumption of fish worldwide is 18 kilograms.¹³ Fish consumption is considerably higher in Asia, where annual per capita consumption is now estimated to be around 24 kilograms.¹⁴ Fish constitute over 50 percent of the average animal protein intake in some countries. In the Philippines, where per capita fish consumption was estimated at 26.8 kilograms per year, fish contributes 12.3 percent of total food intake, 22.4 percent of protein intake, and 56

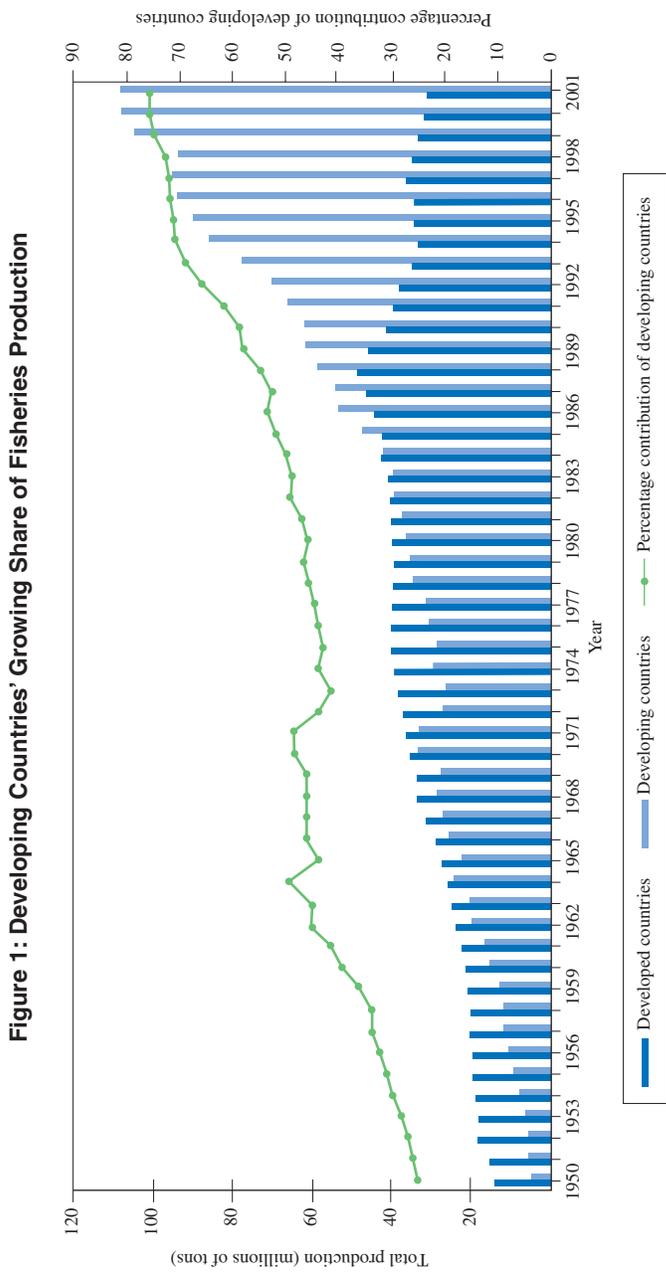


Figure 1: Developing Countries' Growing Share of Fisheries Production

Source: United Nations Food and Agriculture Organization (FAO) *FishStats* (2004).

percent of animal protein intake.¹⁵ Per capita consumption of fish in the Southeast Asian region is expected to increase by an additional 2 percent per year until 2020.¹⁶ However, as a result of circumstances that will be explored next, fish are becoming less available and relatively more expensive than other food items. This trend, which disproportionately affects poor people, is likely to continue.

DECREASING FISHERIES AND MARINE BIODIVERSITY

Overexploitation of many species, destructive fishing practices, and habitat losses are the main causes of declining levels of biodiversity in marine environments. Valuable aquatic resources are becoming increasingly susceptible to both natural and human-caused environmental changes. Researchers have long believed that the area with the highest diversity of marine fish species is the Indo-Malay-Philippines Archipelago (IMPA). A recent analysis of distribution of marine fish species indicates that the global center of biodiversity is the central Philippines islands, with a second center between peninsular Malaysia and Sumatra.¹⁷

Based on mapping of the geographic distributions of reef fishes, corals, snails, and lobsters—organisms identified as “reasonable surrogates for reef diversity as a whole”—researchers have identified the world’s ten richest coral reef ecosystems.¹⁸ There is a high level of concordance in the patterns of species richness for the four categories, with peaks occurring in the so-called coral triangle of Southeast Asia. The richest ecosystems are found in the southern Philippines and in central Indonesia. Species richness falls off rapidly as one moves from the coral triangle east across the Pacific and less rapidly as one moves west across the Indian Ocean.

Marine biodiversity is threatened both by overexploitation of commercial species and by physical damage to ecosystems by certain destructive fishing practices. The process of “fishing down the marine food web”—that is, depleting higher-value fish species, thus making less valuable species dominant in the ecosystem—contributes heavily to loss of marine biodiversity.

Resource Declines and Overcapacities

Total world catches of marine fish continue to flatten, as most major fishing areas of the world are either fully exploited or overexploited. In some places, the fisheries are already in a senescent phase. It is generally recognized that most of the nearshore fishing areas in Southeast Asia are overfished.¹⁹ Production by coastal capture fisheries has been declining. Some researchers estimate that overfishing in South and Southeast Asia has depleted coastal fish stocks by 5 to 30 percent of their unexploited levels.²⁰ Among the overexploited stocks are coastal demersal and small pelagic species in the Java Sea and the waters between Indonesia and the Philippines, demersal and small pelagic species and prawns in the Gulf of Thailand, and green mussels and pearl oysters off the coast of Vietnam.

Resources decline is associated with excess fishing capacity or overcapacity. According to some researchers, “based on current trends, production from capture fisheries in the Asia-Pacific region will decline over the next ten to twenty years unless excess capacity and fishing effort [are] greatly reduced.”²¹ Larger, more valuable fish species have decreased sharply, and there has been a disproportionate increase in smaller, less valuable, or nonedible species. Excess fishing capacity varies from country to country. The excess capacity of Indonesia in the Java Sea is estimated to be between 86 and 207 percent, while that of the Philippines is between 120 to 130 percent.²²

Unlicensed vessels contribute to the problem of overfishing. Overfishing is also accentuated by the harvesting of immature or undersize fish, as well as the use of destructive fishing techniques, such as cyanide and dynamite fishing. The vast worldwide increase in fishing capacity is exacerbated by the use of fine mesh nets, which capture large numbers of juveniles, in many countries and by post-harvest losses due to spoilage, which vary among countries.

Habitat and Environmental Degradation

Habitat and environmental degradation is having negative impacts on fishery resources. Loss of habitat means that fish have fewer areas in which to reproduce and grow. Human activities that continue to cause widespread destruction and alteration of important fish habitats in coastal zones include reclamation of intertidal areas, destruction of mangrove forests for fuel and to build aquaculture ponds for shrimp, damming of rivers (which disrupts flooding cycles), foreshore development and the creation of flood control structures (both of which alter patterns of sediment movement), extraction of corals and sand for construction materials or to create navigation channels, and use of destructive fishing methods.

In the last century in Southeast Asia, some 70 percent of mangrove forests, 11 percent of coral reefs, and at least 20 percent and as much as 60 percent of seagrass beds were lost.²³ Anywhere from 41 percent of mangrove forests (in Indonesia) to 75 percent (in Thailand) have been destroyed.²⁴ Most of these mangrove areas have been converted into fishponds, or the trees have been cut down so that the wood can be made into charcoal or used for other household purposes. The plight of the coral reefs reflects that of the mangrove forests. It is estimated that 56 percent of Southeast Asia’s coral reefs are threatened by destructive fishing techniques.²⁵ In the Philippines, only one-quarter of the reefs surveyed had a live coral cover of more than 50 percent.²⁶ In Thailand, over 60 percent of coral reefs are in fair or poor condition.²⁷ Most nearshore reefs in Vietnam are heavily exploited.²⁸ The use of explosives and sodium cyanide to harvest fish destroys coral reefs and causes major economic losses, estimated to be US\$3.8 billion over the past 20 years in Indonesia alone.²⁹

Some commercial fishing techniques are affecting the ecologically valuable soft-bottom fishing areas. Bottom trawling in intensively fished areas also causes disturbances to other ecosystems. Trawling usually results in a substantial *bycatch*

consisting of undersized fish or unwanted species, which do not survive when returned to the sea. Worldwide, 27 million tons of fish are killed and discarded in this way, representing more than half of all annual marine captures for direct human consumption.³⁰ Trawling can also destroy or modify plant and animal communities on the seabed, removing important shelter for juvenile fish and reducing biodiversity.³¹

Destruction and alteration of habitats are considered to be the greatest threats to biodiversity, and the most widespread human impact occurs in coastal zones. Much of the damage is due to land-based sources of pollution, such as sediments from unregulated forestry practices and effluents such as inorganic fertilizers and pesticides from agricultural and industrial activities. Excess nutrients from agriculture and forestry also promote the growth of epiphytic algae and increase the risk of toxic algal blooms, which render fish unsafe for human consumption.

Climate Change

Climate change has become an important new threat to the productivity of fisheries. Fisheries, including aquaculture, are threatened by changes in temperature and, in freshwater ecosystems, in precipitation. As climate change progresses, storms may become more frequent and extreme, imperiling fish stocks and fishery infrastructure and, consequently, livelihoods. Greater variability in climate complicates the task of identifying areas of vulnerability. Research to devise and promote coping strategies and improve the adaptability of fishers and aquaculturists will become increasingly important.

Energy

The cost of fossil fuels will become a more critical factor for fisheries in the coming decades. Worldwide, some 50 billion liters of fuel are used to catch 80 million tons of fish. Marine capture fisheries are acknowledged to be the most energy-intensive food production method in the world. They rely almost completely on internal combustion engines that use petroleum-based fuels. Since the trend in developing countries is toward mechanization, small-scale fisheries are increasingly affected by energy costs. In terms of levels of employment, it is important from a social perspective to improve and maintain energy efficiency within small-scale fisheries.

LEGAL AND GOVERNANCE FACTORS

Political Factors

Political stability and policy continuity are important to effective fisheries management. Political changes—at times, upheavals—are realities to be contended with at both the national and the local levels. A turnover in political administrations may lead to a change in priorities or focus for fisheries. In the Philippines,

for example, a local election is held every three years. In both democratic and authoritarian countries, the power of special interests, the low level of scientific literacy among leaders and policy makers, and nationalism undermine the pursuit of cooperative and sustainable marine fisheries management.

Property Rights and Conflicts

Many conflicts in marine capture fisheries may be traced to unclear property rights. Despite national and local policies, rules, and regulations, many fishing areas remain virtually unregulated. Types of conflicts vary among countries.³² In Cambodia, conflicts tend to be about the allocation of fishing rights. In the Philippines, there are conflicts between small-scale (municipal) and large-scale (commercial) fisheries. Although the municipal fishers have proprietary rights up to 15 kilometers from the shoreline, commercial fishers often intrude into these waters. The situation is exacerbated in some cases when local governments explicitly permit commercial fisheries to operate between 10 and 15 kilometers from shore. In the Gulf of Thailand, for example, this kind of conflict arises between commercial anchovy fishers and small-scale operators such as net fishers.

Traditionally, inshore fishing areas have been *open access*, meaning that almost anyone may engage in fishing there without limit and with minimal state interference. In this “free-for-all” environment, resources are likely to be overexploited. Unless appropriate property rights are established, it will be extremely difficult to control and rationalize the access to fishery resources. When long-term rights of the fishers and associated users are well defined and secure, fishery resources are more likely to be used in a sustainable manner. Fishers are not likely to adopt sustainable fishing practices without an assurance that the ultimate economic or ecological benefits of such practices will redound to them.

Governance Failure

Generally, the institutional structures and mechanisms for fisheries management are either inadequate, inappropriately set up, or not in place at all. Three key factors contribute to this problem of governance. First, there is the perennial issue of limited institutional capabilities. Fisheries administration is often shared by national government agencies, local government units, and local communities. These institutional entities have varying resource limitations that prevent them from effectively fulfilling their mandated responsibilities. Fisheries management agencies are often hampered by inadequate financial and human resources. Within the agricultural sector, comprising crops, fisheries, and livestock, the lowest priority is accorded to the fisheries, despite their growing share of output.

A second factor is that fisheries management agencies are constrained by inadequate or inconsistent policies. Development-oriented policies are given priority over resource conservation at the national level. Policies that promote economic

growth, such as those related to energy and coastal industrial development, are given preference over fisheries-related policies. In the Philippines, contradictory policies on fisheries make their management difficult. That country's 1997 Agriculture and Fisheries Modernization Act promotes the full industrialization of fisheries, whereas its 1998 Fisheries Code pursues food security through management and conservation of fishery resources. In some cases, national policies and local regulations have either a limited technical basis or no scientific basis at all. International conventions or commitments may also have adverse impacts on fisheries, at least over the short term. For instance, trade policies on import liberalization are putting small-scale fishers at an economic disadvantage. Cheaper imported fish products compete with these people's already meager catch.

A third factor is the issue of weak institutional partnerships. Most often, this situation is the result of limited coordination (horizontally, vertically, or both) among organizations and institutions established to deal with fisheries management. Under ideal conditions, the better equipped national law enforcement agencies should collaborate closely with local law enforcement units. In most cases, however, the collaboration is ad hoc, resulting in weak on-the-ground enforcement of fisheries rules and regulations. Agencies whose primary mandates are in research and development also have formed few partnerships, which results in limited use of new knowledge and technical innovation.

OPPORTUNITIES FOR IMPROVED MANAGEMENT

Transnational Cooperation

Regional economic integration offers a key opportunity. Economic integration is manifested or exemplified by the ASEAN Free Trade Area (AFTA), the ASEAN Framework Agreement on Services (AFAS), and the ASEAN Investment Area (AIA). ASEAN is committed to deepening and broadening its regional economic integration, with the participation of the private sector, in order to realize an ASEAN Economic Community by 2010. Fisheries were among the 11 priority sectors identified by ASEAN leaders in 2004. "Roadmaps" were developed to ensure that the various measures are implemented effectively and in a timely manner to create an integrated market and production base for each of the priority sectors.

The Roadmap for Integration of the Fisheries Sector focused on four areas:

1. Food safety issues, including use of sanitary and phytosanitary (SPS) fishing methods and reduction of use of TBT (tributyltin—a highly toxic biocide used in antifouling paints for ship bottoms), implementation of antipollution measures, compliance with international good practices and standards, strengthening of testing facilities in ASEAN countries, and recognition of testing results and product certification by regulators;
2. Research and development;

3. Human resource development; and
4. Information sharing.³³

There has been a generally positive attitude toward the effects of market integration in both the public and the private sectors in Southeast Asia. Many believe that the integration will be good for the member countries as a whole, since it will bring higher product standards, greater investment, more exports, better market access, and improved cooperation. Moreover, because the ASEAN countries share common products and markets, economic integration will give those countries a stronger position in trade negotiations with non-ASEAN countries.

Worldwide, more networks are being established that are supportive of fisheries. The World Forum of Fishharvesters and Fishworkers is a prominent one. At the regional level, over 35 multilateral or regional fisheries organizations have been established, with functions ranging from consulting and advising to management, decision making, and enforcement. Several networks exist within Southeast Asia for transnational communication and cooperation among governments, NGOs, the private sector, and civil society groups. Multilateral bodies, such as the United Nations Food and Agriculture Organization–Asia-Pacific Fishery Commission (FAO-APFIC), have a role to play. There are regional research institutions such as the Southeast Asian Fisheries Development Center (SEAFDEC), whose departments are strategically located in various member countries. Some networks are habitat-specific in focus; for example, the International Coral Reef Initiative (ICRI), which is supported by over 60 countries, focuses on coral reefs and their associated ecosystems.

In the last decade, there has been a growing regional awareness of the importance of integrated, comprehensive management of fisheries. There are a number of regional programs and initiatives to encourage better management of fisheries resources. The Regional Programme on Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), sponsored by the Global Environment Facility, the United Nations Development Programme, and the International Maritime Organization, and the South China Sea (SCS) Project, sponsored by the United Nations Environment Programme and the Global Environment Facility, are two such regional programs. PEMSEA has an environmental focus and aims to protect the life support systems of the seas of East Asia and to promote the sustainable use of their renewable resources through inter-governmental and inter-sectoral partnerships. The SCS Project aims to enhance collaboration among stakeholders in addressing the environmental problems of the region and to increase the capacity of governments to integrate environmental considerations into national development planning.

Finally, the approach known as integrated coastal management (ICM) or integrated coastal zone management (ICZM) repositions fisheries management within the broader societal contexts of livelihoods, trade, human development, and food

security. Through the ICM framework, the link between capture fisheries and aquaculture can become stronger. For example, ICM promotes the use of trash fish and low-value fish from capture fisheries as aquaculture feeds. The Philippines has recently committed to an ICM approach with Executive Order 533, signed by the President in June 2006, which declared ICM a national strategy for sustainable development of the country's marine and coastal resources.

The Local Level

In order for international or transnational cooperation to be effective, there must be organizational, institutional, and policy changes at the local level. Some changes are becoming evident in Southeast Asia. There has been a recent trend in Indonesia, the Philippines, and Thailand toward decentralization, which gives local governing bodies more control over local fishery practices. Although decentralization can be positive, it imposes requirements in terms of personnel, funding, and even time. Decentralization will fail if the local government bodies do not have the personnel or funds to undertake effective fisheries management. Building human capacity and providing funding are imperative in order to make decentralization a viable option in improving fisheries management.

Another promising trend is the institutionalization at the local level of internationally accepted fisheries management standards. It is essential to establish practices and standards that comply with international guidelines on fisheries such as the FAO's Code of Conduct for Responsible Fishing (CCRF). There is also a need to establish an ASEAN certification program for good practices and standards for capture fisheries and aquaculture. An early warning system for health hazards and disease outbreaks in fishing and aquaculture production is particularly desirable.

CONCLUSION

The present situation confronting the fisheries of the Southeast Asian region is largely the result of laissez-faire attitudes on the part of national governments, which have found it difficult to manage fisheries from the central level, and, where decentralization has occurred, on the part of local government bodies, which do not have the capacity or funds to undertake effective fisheries management. There is a clear disjunction between fisheries policy research (theory) and actual, on-the-ground management (action). Fisheries management measures are not currently addressing the identified challenges confronting the sector.

There is also a disjunction between inter- and intra-sectoral integration. Integration is not very apparent between small-scale and large-scale fisheries. Likewise, links between capture fisheries and aquaculture are not well established. Capture fisheries are also not effectively linked with associated economic sectors. For example, there are still very few integrated management policies covering coral reefs that are used both by capture fisheries and for ecotourism (e.g., the diving industry).

Without near-term action, over the next 5 to 20 years, several developments can be expected in Southeast Asian fisheries. Production from marine capture fisheries will likely not keep up with demand, causing concerns for food security in the region, because of both insufficient supply and the associated rising prices. The increasing demand for fish by an expanding population will create more stress on the already depleted coastal and inshore fishery resources in the region. External factors such as climate change also pose threats to fisheries.

There are several mechanisms by which change might come about. One approach is to change consumer preferences. The unbridled consumption of such fish as sub-adult coral red trout is simply not sustainable from the production standpoint. Likewise, the killing of sharks for shark fin soup puts tremendous pressure on already dwindling shark populations. Another approach might be to attempt to counteract traditional beliefs and practices. The increasing consumption of gonads of sea cucumbers for health reasons has already contributed to collapse of some stocks. Some age-old practices need some rethinking in relation to the sustainability of the fisheries. Third, change may come in economic terms. The ASEAN Economic Community, if it were to follow the European model, could contribute to better economic management of wild stocks. One sobering reality, however, is that agreements to promote sustainable fisheries management in European waters have not prevented European fishing fleets from carrying out industrial-scale commercial fishing in African and Southeast Asian waters. The European Commission estimates that US\$1.6 billion of illegal seafood finds its way to European markets annually, while the World Wide Fund for Nature (WWF) estimates that up to half of the seafood consumed in Europe has been illegally caught by Chinese and other Asian fleets as well as by “pirate fishing” by European fleets closer to home.³⁴ Fourth, stronger regional cooperation—through AFPIC, SEAFDEC, and other bodies—will help promote change. Fifth, there must be greater adherence to implementation of international agreements, including, among others, CCRF and the International Plan of Action (IPOA).

Information, education, and communication campaigns should be accelerated to elicit changes in patterns of fish consumption. Such campaigns could serve as focal points for regional cooperation and joint management. They might also act as catalysts for funding for technical assistance and for collaborative efforts at restoration, rehabilitation, and conservation and as facilitators of neutral mediation in resource-use conflicts.

Southeast Asian countries must also commit to continuous, long-term strengthening of institutions whose purpose is to sustain the management of capture fisheries in the region. It is essential to establish a monitoring program to ensure compliance with rules of origin, standards, and tariffs. Unfortunately, the political will, governance capacity, and effective institutions for cooperation do not currently exist. If the challenges explored in this paper are not effectively addressed, further declines in resources, greater environmental degradation, and more conflicts related to fisheries resources can be expected throughout the region.