ISSUES BRIEF | 1868

Fisheries Policies, Support Services and the Institutional Environment for Trade

KEY MESSAGES

- Globalization and market liberalization drive fisheries policies and institutional support in nine Asian fish-exporting countries — Bangladesh, China, India, Indonesia, Malaysia, the Philippines, Sri Lanka, Thailand, and Vietnam
- Future fish exports to developed countries depend mainly on compliance with food safety standards, potentially hampering trade by countries that use traditional postharvest and processing methods
- Development and growth in fisheries are sustainable only with adequate support for training, extension, credit, skilled human resources and market infrastructure, which lay the foundation for improved productivity and competitiveness
- Support services have traditionally focused on capture fisheries but have recently shifted toward aquaculture
- Small investors have little access to formal credit, mainly because of inadequate collateral and the perceived risks of fisheries investments
- Asian fish-exporting countries urgently need to develop such ancillary support services as administration, input delivery and market infrastructure to close the critical links between domestic production and foreign markets
- The vast potential for increasing aquaculture output calls for establishing a regional center for advanced education, research and training in tropical fisheries sciences and management
- As open-access aquatic resources are vulnerable to overexploitation, institutional arrangements at all levels are essential to sustain the resource base by determining the allocation of rights and implementing rules
- China and Malaysia have capable, centralized administrations and effective extension machinery that enables them to implement policies nationally, while Bangladesh, Indonesia and Philippines have promoted local administration and extension, community-based management, and the active participation of private business and NGOs to govern resource use and develop community capacities

The Philippines has promoted local administration and extension, community-based management, and the active participation of private business and NGOs to govern resource use and develop community capacities.

INTRODUCTION

Fisheries development depends on the policy and institutional environment comprising laws, administrative directives, institutions, services, infrastructure support and incentives. This document reviews and evaluates national policies and fisheries development plans in nine Asian countries that are major fish producers, consumers and exporters: Bangladesh, China, India, Indonesia, Malaysia, Philippines, Sri Lanka, Thailand and Vietnam. It also considers each country's institutions and support services for its fisheries sector.

FISHERY SECTORAL POLICIES

All nine Asian countries count fisheries as an agricultural priority in view of their significant contribution to livelihoods, food security, gross domestic product (GDP) and foreign exchange. In recent decades, globalization and market liberalization have become the dominant drivers of sectoral policies and institutional support.

Fisheries policy closely adheres to national goals in all nine countries. Moreover, all have in place institutions for fisheries management and development. The institution mainly responsible is either the fisheries ministry or department (as in Bangladesh, Indonesia, Sri Lanka and Vietnam) or a department or bureau in the agriculture ministry. Bangladesh, China, Malaysia and Thailand have developed effective fisheries planning during their long history of dependence on fisheries.

Bangladesh has declared fisheries an economic priority, providing subsidized credit to investors at a few percentage points below the commercial lending rate, and to exporters of fish products at a few points

lower still. The government's encouragement of private entrepreneurship in fisheries has spurred investment in fish feed processing, fish seed production and postharvest processing. Private hatcheries, which began emerging only in the 1980s, contributed about 98.5% of the total hatchling produced in 2006.

China currently targets support for fisheries at 8.5% of the sector's GDP, which is much higher than the historical public investment. Two important policy measures are institutional reform and responses to technical barriers to trade and sanitary and phytosanitary (SPS) aspects. The first policy milestone for the sector was renewal in the mid-1990s of long-term land leases of 30-50 years, which removed a disincentive to long-term investments in ponds and, combined with rising demand, has fuelled expansion in aquaculture.

India has been pursuing the goals of enhancing production and productivity, generating employment and higher income, improving socioeconomic conditions for fishers and fish farmers, augmenting exports, increasing fish consumption, adopting integrated management, and conserving aquatic resources and genetic diversity. The export augmentation goal is mainly being achieved by upgrading domestic processing and postharvest technologies to international standards.

Indonesia has created integrated aquaculture zones for both freshwater and brackish water. The strategic aquaculture development program intends to supply high-quality fish seed by developing private hatcheries, creating seed distribution and marketing channels, providing training to fish seed farmers, and creating a network of seed information systems.

Malaysia aims to make fisheries an efficient commercial industry by promoting intensive aquaculture through private sector participation and creating fisheries zones complete with the necessary infrastructure and government support services. It also pledges to intensify research and development to promote new culture systems, genetically improved fish species, and fish feed and fry production.

The **Philippines** pledges expanded access to credit for producing, processing and trading aquatic products. Commercial fishers are eligible for subsidized long-term loans and exemption from taxes and duties to procure or improve fishing vessels and equipment. Duty and tax rebates also apply on fuel for commercial fisheries.

Sri Lanka promotes joint-venture cooperation with foreign vessels, both offshore and on the high seas, emulating the government-owned Ceylon Fisheries Corporation's entry into partnerships with foreign vessels. The private sector and local communities are encouraged to lead investment and entrepreneurship under government facilitation and regulation to ensure sound environmental and production practices.

Thailand, long a world leader in fisheries exports, depends on private sector investment in fisheries, with the government actively facilitating raw material acquisition, product certification, product regulation to maintain global standards, and international trade promotion. Fisheries investment aims to strengthen fisher communities, provide infrastructure for deep-sea fishing, develop advanced aquaculture technology including new species, and enhance efficiency in production and marketing.

Vietnam is shifting from traditional reliance on inshore capture fisheries toward aquaculture and the rationalized exploitation of marine resources. Aquaculture is the prime target of investment, along with such linked industries as feed production and broodstock hatcheries, targeting the increased production of finfish, shrimp and other aquatic

animals and plants from marine habitats; improved and enhanced shrimp farming technologies; and increased freshwater aquaculture, particularly of high-value species.

TRADE AND MACROECONOMIC POLICIES

The recent export surge from developing Asian countries has been driven in part by such agreements as the Generalized System of Preferences and international trade liberalization that has lowered tariff and non-tariff barriers. While room exists for further tariff reduction, current tariffs are not a major constraint on the growth of fish exports to developed countries. Future fish exports depend mainly on supply constraints and compliance with food safety standards in the form of SPS measures and other standards under the Technical Barriers to Trade Agreement. Many believe that these standards may negatively affect the export of fish and other food products from countries that use traditional postharvest and processing methods.

SPS implementation for fisheries products has largely shifted from product inspection to hazard analysis and critical control point (HACCP) certification of harvest, postharvest, and processing standards. Despite initial setup costs, the nine countries have made considerable headway in HACCP implementation, their compliance recognized by the European Union and the Food and Agriculture Organization, with compliance rates highest for Malaysia and Thailand. Malaysia — a net importer of fish in terms of quantity but a net exporter in terms of value — saw the value of fish exports almost double in the 1990s, its penetration of foreign markets perhaps linked to its handling of international food safety regulations.

Overcoming technical barriers to trade, on the other hand, still poses significant difficulties for all nine countries. Bangladesh amended in 1997 its fish and fish product inspection and quality control ordinance and related rules to accommodate HACCP procedures, but its exports remain vulnerable to foreign regulatory barriers. Underdeveloped handling and processing technologies have seriously impeded Sri Lankan fisheries exports.

Meanwhile, China has pursued tariff reduction, but this is not expected to subject most of the fisheries sector to large import shocks. India is another country that has rapidly reduced tariffs on fisheries products. Thailand has taken a number of steps to open its domestic markets to foreign trade; since 2002, selected fish and fishery products have been exempted from import duties and taxes, stimulating fisheries imports from Myanmar, Vietnam and Cambodia for processing and subsequent export to developed countries. Vietnam has made its export regulations more transparent, which has increased the role of private exporters, and has implemented measures to promote HACCP. Although announcing a deregulation policy in 1995, Indonesia has made little progress in eliminating government interventions in the market.

SUPPORT SERVICES

Development and growth in fisheries are sustainable only with adequate support services. Training, extension, credit and other financial services, skilled human resources, and market infrastructure lay the foundation for improved productivity and competitiveness. However, establishing an adequate support system is daunting, as it requires considerable investment, meticulous planning and activity integration to assure quality and timeliness in service delivery. Support services have traditionally

Table 1. Adequacy of Support Services for Fisheries

Country	Research and Development	Extension and Training	Human Resource Skill	Credit	Administration	Inputs	Marketing
Bangladesh	F	F	F	P	F	F	P
China	S	S	S	S	F	F	S
India	S	F	F	P	P	F	P
Indonesia	F	F	F	F	P	F	F
Malaysia	S	S	S	S	F	F	F
Philippines	S	S	S	P	F	F	F
Sri Lanka	F	P	F	P	P	P	P
Thailand	S	S	S	S	F	F	S
Vietnam	P	F	P	P	P	P	P

S = strong (well-defined goals, institutional infrastructure in operation, and benefited the target groups), F = fair (services available but yet to make significant impact on target groups), P = poor (absent or uncoordinated effort with little impact on target groups).

Source: Expert opinion from the ADB RTA 5945 Regional Workshop in Penang, 1-16 June, 2004.

focused on capture fisheries but recently shifted toward aquaculture. Table 1 summarizes fisher experts' assessment of the adequacy of support services in nine Asian countries under study.

Extension systems are at the frontlines for disseminating technological innovations to enhance productivity, but their extent and quality vary from country to country, depending on sector importance and government priorities. China has very strong extension service, with about 2,800 stations employing over 15,000 field staff.

Credit support is essential for developing and expanding any industry. In fisheries, sources of credit, both formal (commercial banks, finance companies, and government-initiated institutions and schemes) and informal (money lenders, traders and relatives), are available for production, processing and marketing. However, small investors have little access to the formal sector, mainly because of inadequate collateral and the perceived risks of fisheries investments. Poor fishers thus remain dependent on informal credit, which is easy to obtain and sometimes allows flexible repayment but is generally more expensive. In contrast, large firms and listed companies drawn into the fish sector have enjoyed good access to bank borrowings in recent years.

Bangladesh, Indonesia, Malaysia and Thailand assist fishers by channeling subsidized loans to fisheries associations, special agencies and loan schemes. In Thailand, Indonesia and Philippines, farming prawns and tilapia under contract with big firms has

Inland fishing in Bangladesh; small investors have little access to formal credit, mainly because of inadequate collateral and the perceived risks of fisheries investments.

enabled many poor communities to reap some of the benefits.

The recent aquaculture and export boom has prompted international funding agencies to extend more loans to developing countries than in the past. The Asian Development Bank, World Bank, and such bilateral institutions as the United States Agency for International Development, United Kingdom's Department for International Development, and Danish International Development Agency have actively funded resource management, aquaculture development, and postharvest and processing projects.

Ancillary support services such as administration, input delivery and market infrastructure have received little attention from planners and are, for the most part, weakly organized or at rudimentary stages of development. A major impediment to growth for aquaculture is the inadequacy of delivery for such inputs as fingerlings, feed, fertilizers and chemicals. Downstream, producers and traders are similarly plagued by primitive infrastructure and weak links in a long supply chain. Standardizing fisheries processes and products to global norms lags for lack of efficient institutional mechanisms for harmonization.

The recent surge in aquaculture investment, production and exports, combined with the need to conform to stringent international regulations and requirements, calls for establishing a one-stop administrative center to provide guidance on all fishery matters, from production to international trade. Such a center could take the initiative in standardizing products, coordinating fishery institutions, processing stakeholders' needs, providing industry information, and serving as a depository for national, regional and international data on fish.

While China and Thailand, the leading fish-producing countries, have strong core support services, their ancillary services are not yet fully developed. Other countries lack both core and ancillary support services. All nine Asian fish-exporting countries urgently need to develop such ancillary support services as administration, input delivery and market infrastructure to close the critical links between domestic production and foreign markets.

Support services depend heavily for their success on such specialized professionals as marine biologists, oceanographers, breeders, biotechnologists, nutritionists, food technologists, environmentalists and social scientists. These professionals are needed to support anticipated growth in aquaculture, especially with international markets imposing stringent hygienic standards requiring precise, traceable and environmentally friendly production systems. Yet, such expertise is in short supply, and few universities in the region provide good undergraduate and graduate training in these areas. China has advanced the furthest in human resource development, with a fisheries educational system able to underpin its strong extension and support system.

The vast potential for increasing aquaculture output in the nine Asian fish-exporting countries calls for establishing a regional center for advanced education, research and training in tropical fisheries sciences and management. Such a center could facilitate pooling regional brainpower and experience and promote regional collaboration.

FISHERIES INSTITUTIONS

Aquatic resources are vulnerable to overexploitation. Institutional arrangements at all levels are essential to sustain the resource base by determining the allocation of rights and implementing rules. In China, Indonesia, Malaysia, Sri Lanka and Thailand, formal laws cover the most important aspects of fisheries management. In Bangladesh, Philippines and Vietnam, by contrast, informal rules play important roles, as they do to a lesser extent in India.

All nine Asian countries have sufficient implementing agencies armed with necessary legal instruments, but implementation effectiveness is questionable in terms of transparency and institutional capability for enforcing fisheries regulations.

Fisheries rights allocate and conserve fisheries resources effectively. Bangladesh, India and Sri Lanka define fisheries rights primarily to benefit disadvantaged groups. Indonesia, Malaysia, Philippines and Thailand apply zoning to clarify fisheries rights, with coastal zones reserved for local communities. In all nine countries, formal and legal instruments are sufficient to guarantee fisheries rights. In China and Vietnam, legal and formal institutions overshadow potentially complementary informal instruments, which are also weak in Bangladesh, India and Thailand. In Sri Lanka and Philippines, informal rights assurance carries more weight than in the other countries.

A management trend is to delegate authority to the unit closest to the resource or organization being managed through decentralization, co-management and community-based management. The Philippines is relatively advanced in this regard, as it devolved central authority to local communities in 1991. Indonesia and Thailand follow the trend, but China and Vietnam retain strongly centralized public administration. Bangladesh, India and Sri Lanka are unclear on their decentralization policies.

The private sector, as opposed to government, uniformly dominates investment in fisheries production, processing and trade. The role and importance of local organizations (including local government units, fisheries cooperatives, groups and associations) in fisheries management varies.

Local organizations are very important in Indonesia, Philippines, Sri Lanka and Vietnam, and increasingly so in Bangladesh, China, India and Thailand. The role of NGOs is highly important in Bangladesh and the Philippines and fairly important in Sri Lanka and Thailand, but much less so in China, India, Indonesia, Malaysia or Vietnam.

With respect to resolving social and environmental conflicts, all countries except the Philippines have moderately adequate institutions. In terms of their effectiveness, the Philippines and Vietnam rated low, China high and the rest moderate. With its strong emphasis on decentralization, the Philippines may also face problems of institutional coordination, as fishery resources are mobile and good management by one local body may be nullified by mediocre or poor management of another. Further study is needed to determine the impact of decentralization on fisheries management and enforcement.

Implementation is rated low to moderate in terms of adequacy and effectiveness (except in China, which has long historical experience in centralized administration). Institutional and regulatory inefficiencies are widespread. A major problem is that many institutions have overlapping roles and responsibilities. For instance, most Asian countries have a confusing array of institutions directly or indirectly involved in approving land use for aquaculture. In Bangladesh and Malaysia, as many as 10 agencies are involved in the process, delaying approval by years. In Sri Lanka, more than 10 government departments have legal or administrative responsibility for coastal zone and resource management, which can complicate program implementation. The Philippines, Sri Lanka, Thailand and Vietnam appear to suffer low institutional cooperation.

CONCLUSION

Fisheries policies, institutions and support systems have attempted to keep pace with the sector's economic transformation, the changing global environment, and the dwindling resource base. Planning and policy setting have generally recognized the importance of fisheries and the significance of impending threats, but specific responses, arrangements and implementation vary. Strong states such as China and Malaysia have capable, centralized administrations and effective extension machinery. Bangladesh, Indonesia and Philippines — burdened by bureaucratic inefficiency, institutional weakness, and fragile human resources — have sought to promote local administration and extension, community-based management, and the active participation of private business and NGOs. The contrasting experiences deserve further study through cross-country comparisons and the identification of models that can be adopted for the institutional systems in each country.

This Lessons Learned brief is based on the results of a three year project (2001–2004) carried out in Bangladesh, China, India, Indonesia, Malaysia, the Philippines, Sri Lanka, Thailand, and Vietnam funded through Asian Development Bank Regional Technical Assistance 5945. It was conducted jointly by the WorldFish Center and national research teams composed of fisheries specialists, economists, extension workers, and experts from other relevant disciplines.

The WorldFish Center
PO Box 500 GPO, 10670 Penang, Malaysia
Tel: +(60-4) 626 1606 Fax: +(60-4) 626 5530
Email: worldfishcenter@cgiar.org

© 2008 The WorldFish Center
All rights reserved. This brief may be reproduced without the permission of, but with acknowledgment to, The WorldFish Center.

Printed on 100% recycled paper