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**Department of Agriculture,
Fisheries and Forestry**
AusAID

Net Returns

A Human Capacity Development
Framework for Marine Capture
Fisheries Management in
South East Asia



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Executive Summary

Regional context:

Marine fisheries resources are of great national importance to South East Asian countries and, through trade, conservation and biodiversity value, are also of global and regional significance. Factors internal to fisheries, such as the dependence of millions of small scale fishers and their households on the resources and the stress on production at the expense of sustainability, plus external factors such as population growth, decentralised governance, high demand for seafood and looming impacts of climate change, have led to too much fishing pressure, overfished stocks, illegal fishing and weaknesses in fisheries management.

The national and provincial fisheries agencies, supported where relevant by fisheries surveillance, enforcement, environment and science agencies, are at the forefront of efforts to ensure the sustainable development of marine capture fisheries. These agencies however, recognise that the pace of fisheries development and the increases in overfishing and illegal, underreported and unregulated (IUU) fishing require that they urgently develop greater human and institutional fisheries management capacity. In 2007, 11 countries¹ in the South East Asian region signed the *Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unregulated and Unreported (IUU) Fishing in the Region* (RPOA). A priority of the RPOA participating countries, supported by the countries of Asia Pacific Economic Cooperation (APEC), was to prepare a Capacity Development Framework for Marine Capture Fisheries Management in South East Asia. This report presents that Framework.

Purpose of the Framework:

The overarching purpose of the Framework is to provide structured guidance to the 11 RPOA participating countries' fisheries management agencies, development assistance donor agencies, technical institutions and others involved in fisheries sector capacity development on the priorities to strengthen marine capture fisheries management at the regional, national and provincial levels. Reflecting the scope of the RPOA, the Framework focuses on building human capacity for the management of marine capture fisheries, rather than that for inland fisheries or aquaculture. At the request of the RPOA participating countries, this Framework was commissioned by the Australian Government Department of Agriculture, Fisheries and Forestry, with funding from the Public Sector Linkages Program of the Australian Agency for International Development (AusAID).

To arrive at this Framework, a participatory, bottom-up approach was taken to identify capacity development needs for fisheries management agencies at the national level. Regional priorities were then formulated through a workshop held in Da Nang, Vietnam, November 2010, of participating country representatives.

The **vision** of the RPOA participating countries is to have the ability, means and conditions to achieve the sustainable development of marine capture fisheries, at local to regional levels, for the benefit of all. The **overall goal** of this Framework is to increase the capacity of people and institutions involved in marine capture fisheries within RPOA participating countries to develop their abilities, individually and collectively, to ensure the sustainable development of the region's marine capture fisheries, based on current and emerging trends, challenges and needs.

¹ Republic of Indonesia, Australia, Brunei Darussalam, Cambodia, Malaysia, Papua New Guinea, The Philippines, Singapore, Thailand, Timor-Leste and Vietnam

During national consultations, and later refined and endorsed by the RPOA Regional Workshop, eight priority themes for capacity building were highlighted. Within each theme, between three to six specific capacity building priorities were identified.

Framework components:

In all themes, except ‘strengthening information systems’, ‘effective decentralisation’ and ‘strengthening regional and international cooperation’, specific capacity building opportunities are presented in order of regional priority. For the above-mentioned three themes, the priority is dependent on the individual circumstances of the participating country.

The themes and priorities are summarised in the following table. The Framework provides additional details on each priority and suggested deliverables and modes of delivery.

FISHERIES MANAGEMENT PLANNING	+ Developing fishery specific management plans, incorporating the ecosystem approach to fisheries and participation
FISHING CAPACITY MANAGEMENT	+ Vessel licensing and/or registration
	+ Rights based fisheries management
	+ Developing alternative livelihoods
	+ Commercial capacity reduction schemes
STRENGTHENING INFORMATION SYSTEMS ²	+ Strengthening fishery independent monitoring systems
	+ Strengthening Information management
	+ Design of information collection systems
	+ Strengthening monitoring of fisheries trade
	+ Strengthening fishery dependent monitoring systems
STRENGTHENING THE SCIENTIFIC AND ECONOMIC BASIS FOR FISHERIES MANAGEMENT	+ Strengthening scientific analytical capability and the capacity to gather information
	+ Integrating scientific advice into management planning
	+ Economic impact analysis
	+ Strengthening capacity for assessment of climate change adaptation/mitigation in fisheries, inc. fishing vessel emissions
	+ Research planning
EFFECTIVE DECENTRALISATION ³	+ Strengthening coordination and accountability between national/local levels
	+ Strengthening implementation at local level
	+ Community-based management of fisheries
	+ Strengthening legal basis to support decentralisation
STRENGTHENING MONITORING, CONTROL AND SURVEILLANCE (MCS)	+ Strengthening MCS information systems
	+ Strengthening MCS co-ordination
	+ Building entry/mid level MCS skills
	+ Port state measures
	+ Risk assessment/compliance planning
	+ Encouraging voluntary compliance

² Country specific priorities, depending on unique circumstances of each country; stage and system dependent

³ Country specific priorities

STRENGTHENING REGIONAL AND INTERNATIONAL COOPERATION ⁴	+ Strengthening capacity for complementary management of transboundary stocks
	+ Strengthening capacity for joint (and common) stock assessment (RPOA stock assessment platform; defining stock structure)
	+ Strengthening capacity for cooperative MCS
	+ Strengthen capacity for international engagement
STRENGTHENING LEGAL, POLICY AND ADMINISTRATIVE SUPPORT ⁵	+ Clarifying institutional roles/responsibilities
	+ Encourage strengthening of legal frameworks (inc. improving compatibility; capability to address emerging issues)
	+ Strengthening capacity of senior executives to promote importance of fisheries
	+ Strengthening capacity for internal needs assessment
	+ Public performance reporting

Key: High Priority Lower Priority

In order to achieve a RPOA capacity building program for marine capture fisheries, roles and responsibilities are described, based on the principles of (1) prioritisation of key needs, (2) achieving greater equity in the region's human and institutional fisheries management capacity, (3) long-term sustainability of capacity development, (4) participation and cooperative partnerships, (5) country-level responsibility for self-development, (6) scalability of the capacity building initiatives, and (7) advancing gender equity in and through national and regional capacity building initiatives.

Next steps

The following actions are recommended as next steps in implementing the Framework:

1. The RPOA should serve as the lead forum to oversee, facilitate and encourage the implementation of the Framework among its participating countries with the RPOA Secretariat tasked to provide an initial focal point in this regard, commensurate with available resources.
2. A follow-up workshop should be convened to bring together key partner entities (relevant national, regional and international institutions, and interested donor agencies) to develop a plan of action to progress the agreed priorities of the Framework. Key tasks for this meeting should be to:
 - a. establish a coalition of the key partner entities to plan and support future activities under the Framework, including consideration of the administrative and structural arrangements needed to facilitate and coordinate the required action
 - b. develop an agreed plan of action including a list of specific activities aimed at the highest priority needs, giving realistic attention to targeted funding and other support resources. In this respect, recognition should be given to relevant ongoing or recently completed related activities both inside and outside the RPOA region
 - c. review possible activities at national or sub regional levels with particular attention given to opportunities for cross sharing of resources and experience between countries.
3. Taking into account the outcomes of the follow-up workshop, participating countries, with the assistance where necessary of partner entities, should begin specific projects to build capacity according to their priority needs under the Framework, and include clear performance targets and deadlines for project deliverables.
4. Participating countries should report at the annual meeting of the RPOA Coordination Committee on the action taken in support of the Framework priorities.
5. RPOA participating countries should agree a process to regularly review and update the priorities listed in this Framework. This process should be participatory in nature and designed to ensure the Framework remains responsive to emerging needs and priorities.

4 No strong preference among activities

5 First two are clear priorities but no strong preference between them, depending on country; little distinction between 3 and 4, though 3 is a common issue; last one clearly least preferred



Crab tangle net boats, Kien Giang, Gulf of Thailand, Vietnam, Lawnin Crawford

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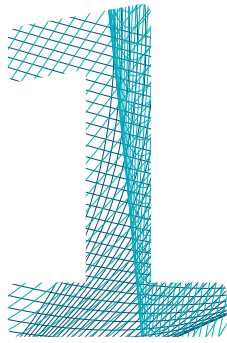
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Introduction

The marine fisheries resources of South East Asia are of great national importance and, through trade, conservation and biodiversity value, are also of global significance. Coastal fisheries in particular provide the primary source of food and income for many millions of rural households, while industrial fisheries generate valuable wealth and export income for national economies. In addition, South East Asia plays a key role in post-harvest processing and trade of marine fisheries products, with several countries among the world's leading exporters of seafood.

The organisations at the forefront of efforts to ensure the sustainable development of marine capture fisheries in the South East Asian region are the national and provincial fisheries agencies, supported where relevant by associated groups such as environment agencies and those involved in fisheries surveillance and enforcement. Important advances have been made in the management of marine capture fisheries in the region over the past few decades. National fisheries policies and plans are in the process of being realigned from being solely production-driven to include sustainable development-driven approaches. New community-based and ecosystem-based approaches to fisheries management are being trialled, and a number of regional structures have been established to support national agencies.

Nevertheless, all countries recognise that much remains to be done and that the pace of fisheries development and overfishing has outpaced countries' abilities to cope. The fisheries of South East Asia are at a critical stage of development with common challenges across the region in excess fishing capacity, overharvesting, weak information systems, illegal fishing and dissipated resource rents, among others. These challenges continue to put at risk marine fisheries resources, the impacts of which are felt across the sector and in particular by the rural poor.

Box 1: Human Capacity, Fishing Capacity

The word 'capacity' has two important but distinct uses in this document and care has been taken to distinguish between the two. The first and more important here is in the term '*human capacity*' for which we follow the definition of Bolger (2001), namely, 'abilities, skills, understandings, attitudes, values, relationships, behaviours, motivations, resources and conditions that enable individuals, organisations, networks/sectors and broader social systems to carry out functions and achieve their development objectives over time'. The second use is in the term '*fishing capacity*', which is defined by FAO as 'the amount of fish (or fishing effort) that can be produced of a period of time (e.g. a year or a fishing season) by a vessel or a fleet if fully utilised and for a given resource condition⁶'.

In 2007, to help address these challenges, Fisheries Ministers of 11 countries⁷ in the South East Asian region signed the *Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unregulated and Unreported (IUU) Fishing in the Region (RPOA)*. 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, and to optimise the benefit of adopting responsible fishing practices*'. The RPOA recognises that action on a range of fronts is required to support effective fisheries management including conservation of fisheries resources and their environment, managing fishing capacity, and combating IUU fishing in the areas of the South China Sea, Sulu-Sulawesi Seas (Celebes Sea) and the Arafura-Timor Seas.

⁶ <http://www.fao.org/fishery/topic/14856/en>

⁷ Republic of Indonesia, Australia, Brunei Darussalam, Cambodia, Malaysia, Papua New Guinea, The Philippines, Singapore, Thailand, Timor-Leste and Vietnam

This Framework seeks to support the implementation of the RPOA by strengthening the human capacity of participating countries to implement, in a durable way, initiatives agreed under the plan (as well as those in related initiatives such as the FAO's Code of Conduct for Responsible Fishing – CCRF). It does so by focusing on the human capacity development needs of those agencies in the front line of fisheries management, namely the national and provincial fisheries agencies in each participating country.

A participatory, bottom up approach was taken to identify capacity development needs for fisheries management agencies at the national levels. Regional priorities were then formulated through a workshop of participating country representatives. At the regional level, eight main capacity building 'themes' have been identified, together with specific capacity building priorities within each theme. At the national level, capacity building challenges and opportunities specific to each country have been identified, based around five core components of fisheries management – governance and legislation, fisheries management planning, fisheries science and economics, monitoring, control and surveillance (MCS) and international engagement.

1.1 About this Framework

Purpose and mandate

The overarching purpose of this Framework is to provide structured guidance to fisheries management agencies, donor agencies, technical institutions and others involved in fisheries sector capacity development on the priorities to strengthen marine capture fisheries management at the regional, national and provincial levels among the RPOA participating countries. The Framework is intended to operate as a prioritised prospectus of opportunities for capacity development assistance.

For the purposes of this Framework capacity development is defined as 'the process by which individuals, groups, organisations, institutions, and societies develop their abilities – both individually and collectively – to set and achieve objectives, perform functions, solve problems and to develop the means and conditions required to enable this process'⁸.

The project to develop this Framework was endorsed by the 2nd Meeting of the Coordination Committee of the RPOA.

Geographic scope

The geographic scope of this Framework covers the 11 countries that are signatories to the *Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region*. The RPOA participating countries are the Republic of Indonesia, Australia, Brunei Darussalam, Cambodia, Malaysia, Papua New Guinea, The Philippines, Singapore, Thailand, Timor-Leste and Vietnam.

A focus on marine capture fisheries

The Framework focuses on building capacity for the management of marine capture fisheries, rather than inland fisheries or aquaculture. This reflects the scope of the RPOA and recognises the continuing importance of marine capture fisheries in meeting national and regional aspirations on economic development and food security. Notwithstanding that, some cross-over occurs (e.g. looking at sustainable aquaculture as a means of alternative livelihood support to help take pressure off marine capture fisheries) and many of the initiatives included here (e.g. strengthened administrative, legal and policy support) will also strengthen RPOA participating countries' capacity to support the aquaculture and inland fisheries sectors.

A focus on national and provincial fisheries agencies

The *FAO Strategic Framework on Human Capacity Development in Fisheries* suggests that capacity development should occur at four levels: the individual level, the organisational level, the sector/network level and the enabling environment (Figure 2)⁹. Under this approach, the **enabling environment** is the broad context in which fisheries development processes take place (e.g. governance, legal, policy and socio-economic environment) ; the **sector/network level** includes all parties involved in fisheries including other government departments, fishers and civil society organisations (and is included to highlight the need for coordination and coherent cross-sectoral policies); the **organisational level** focuses on organisational structures, process, resources and management issues; and the **individual level** refers to individuals operating within the other three levels¹⁰. The arrows between the levels in Figure 2 indicate that each level interacts with the others and it is important to understand and acknowledge the relationships between them.

⁸ FAO (2009). Strategic Framework on Human Capacity Development in Fisheries. FAO, Rome. 63p.

⁹ Ibid, FAO (2009)

¹⁰ Bolger, J. (2000). Capacity Development: Why, what and how? CIDA. Occasional Series Vol. 1 No.1.

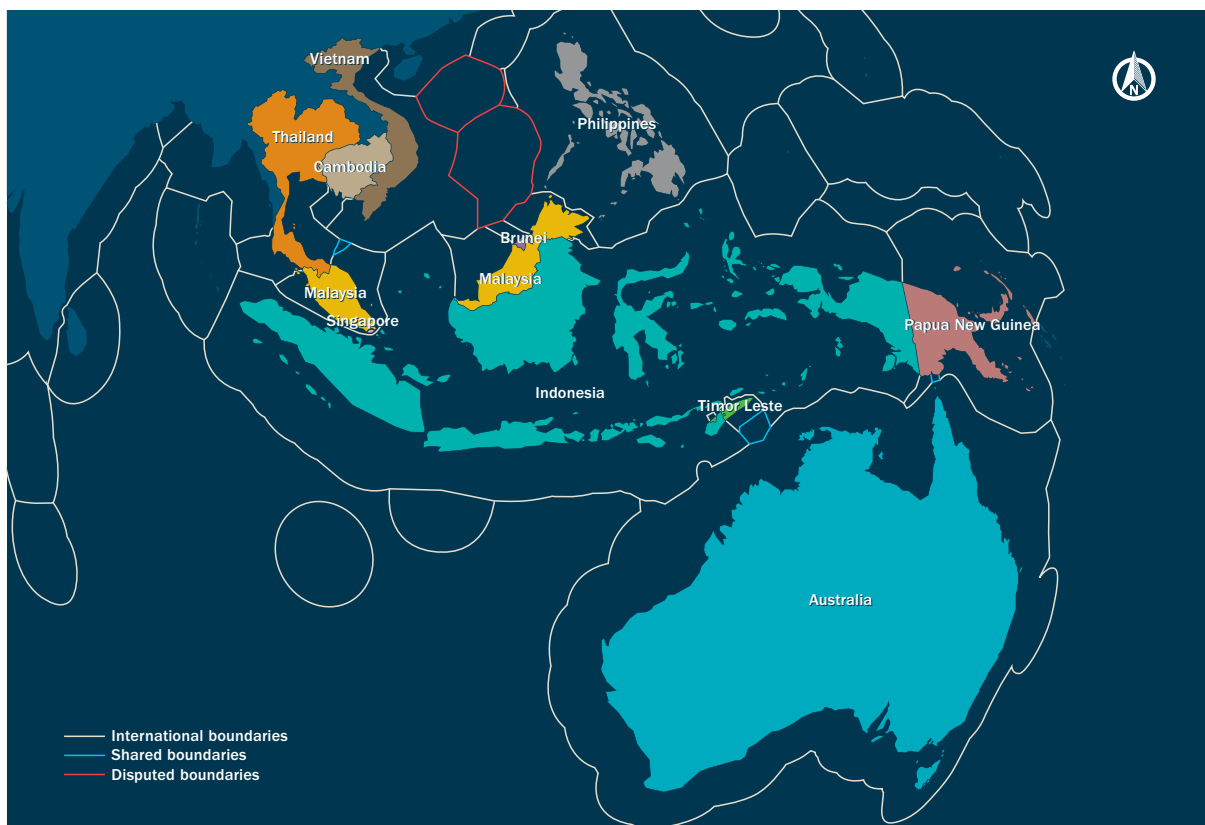


Figure 1: General area covered by the RPOA, showing international boundaries (yellow lines), shared sea territories (blue lines) and disputed boundaries (red lines).

This Framework largely focuses on developing capacity at the bottom two levels – the organisation and the individual – although consideration has been given in a range of areas to targeted initiatives at the other two levels (e.g. reforming the fisheries related legal aspects of the enabling environment; strengthening participatory engagement at the sector level). This is not to say that the other levels are less important – indeed, there is a strong recognition among RPOA participating countries that effective marine capture fisheries management requires adequate capacity across all levels. For example, an organisation will not be able to achieve its objectives efficiently if the enabling environment is not supportive, and likewise strong intra-sectoral cooperation and coordination is required to support a modern, integrated approach to marine resource management and enforcement. For practical purposes the Framework focuses on building capacity among the national and provincial fisheries agencies as they are the institutions with direct responsibility for marine capture fisheries management in RPOA participating countries.

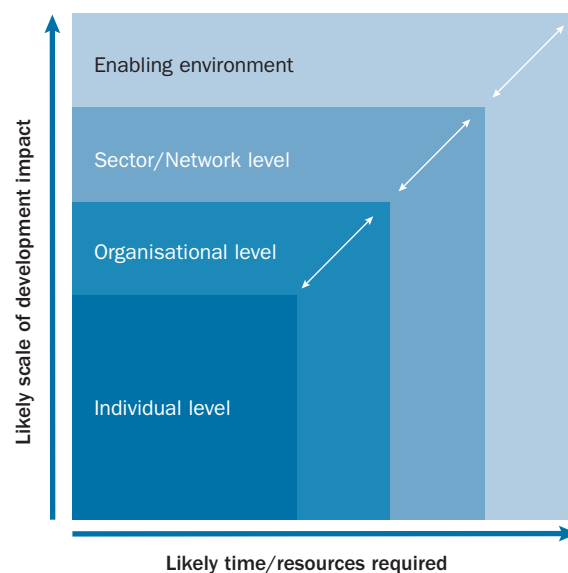


Figure 2: The four levels of capacity development (adapted from FAO, 2009¹¹)

11 Ibid, FAO (2009)

Development of the Framework

The development of this Framework involved consultation with representatives from RPOA country national and provincial government agencies, regional and national technical institutions, donor organisations, NGOs and fisher organisations (see Appendix 1 for a list of organisations and agencies who participated).

In-country visits were undertaken by the project team to the majority of RPOA participating countries. Based on discussions during these visits, and on the outcomes of previous project reports, reviews and analyses, national assessments of current capacity and capacity development needs were prepared for each of the RPOA participating countries.

Building on the national assessments, common regional priority themes for capacity development and specific capacity development needs were agreed at a regional workshop of RPOA participating country representatives, technical institutions and donor organisations held in Da Nang, Vietnam in November, 2010 (see Appendix 2 for a list of participants). The workshop also agreed an overarching vision, goal and objectives for the Framework, as well as a set of principles to guide future implementation of capacity development initiatives based on previous experience. These were largely a regionalised version of those in the FAO's *Strategic Framework on Human Capacity Development in Fisheries*¹².

1.2 Structure of Framework

Following this introduction, the Framework is structured into four main sections. Section 2 describes the context for the Framework, providing a brief overview of marine capture fisheries operating in the RPOA region as well as the main external and internal drivers and challenges facing these fisheries.

Section 3 outlines the vision, goal and objectives of the Framework.

Section 4 outlines the regional priorities for marine capture fisheries capacity building across the RPOA region. The regional priorities are those that are common across all, or most, of the RPOA participating countries and are structured around the eight main areas of capacity development need highlighted during in-country consultations and the Regional Workshop. Within each of these areas, the main capacity development priorities agreed by RPOA participating countries to address each one are described.

Section 5 discusses the implementation of measures in the Framework, including capturing lessons learned from previous capacity building exercises, principles

to guide future capacity development, possible delivery mechanisms, resourcing and techniques to monitor and measure success. Finally, section 6 outlines a proposed process to address priority needs identified in the Framework.

In the preparation of this Framework, assessments of the current human and institutional capacity challenges and opportunities for each of the RPOA participating countries were undertaken. These country assessments were structured according to five categories, namely: governance and legislation; fisheries management; fisheries science and economics; MCS and international engagement. The assessments are available from the Australian Government Department of Agriculture, Fisheries and Forestry.

Box 2: Linkages to broader initiatives

While this Framework has been developed under the auspices of the RPOA, implementation of the measures outlined here will also assist participating countries satisfy obligations under a range of other national and international fisheries and marine resource management instruments. These include:

- + The FAO Code of Conduct for Responsible Fisheries (CCRF)
- + The UN Convention on the Law of the Sea (UNCLOS)
- + The UN Fish Stocks Agreement (UNFSA)
- + The FAO Compliance Agreement (CA)
- + The Port State Measures Agreement (PSMA)
- + International Plans of Action on Fishing Capacity, IUU Fishing, Seabirds and Sharks
- + Regional Fisheries Management Organisation (RFMO) membership obligations
- + The Convention on Biological Diversity (CBD)
- + The APEC Bali Plan of Action

¹² Ibid, FAO (2009).



Context for Framework

The fisheries management capacity development Framework for RPOA member countries arises within the context of the region’s main fisheries, their external and internal drivers and challenges, and the current state of human and institutional capacity.

A brief overview of the region’s fisheries context is given here, and a full discussion, with references, is presented in Appendix 3.

2.1 RPOA region’s fisheries

Marine capture fisheries are an important contributor to food security and wealth in the RPOA participating countries. Annually, over 14 million metric tonnes of seafood is harvested, worth more than US\$10 billion at the first point of sale. Fisheries account for up to

3% of national gross domestic products (GDPs) and provide employment for 7.3 million fishers as well as many millions more allied fish workers, traders and upstream suppliers.

The RPOA region’s fisheries are globally significant, representing 17% of world marine capture fisheries. Several countries rank in the top 20 of the world’s marine fish producers, namely Indonesia (4th), Thailand (9th), Philippines (11th), Vietnam (12th) and Malaysia (16th).

RPOA region fisheries are the most species diverse fisheries in the world and are supported by the most globally biodiverse marine ecosystems. Fisheries usually use many different gears, target multiple species and increasingly take nearly all fish caught, including many small fish species and undersized

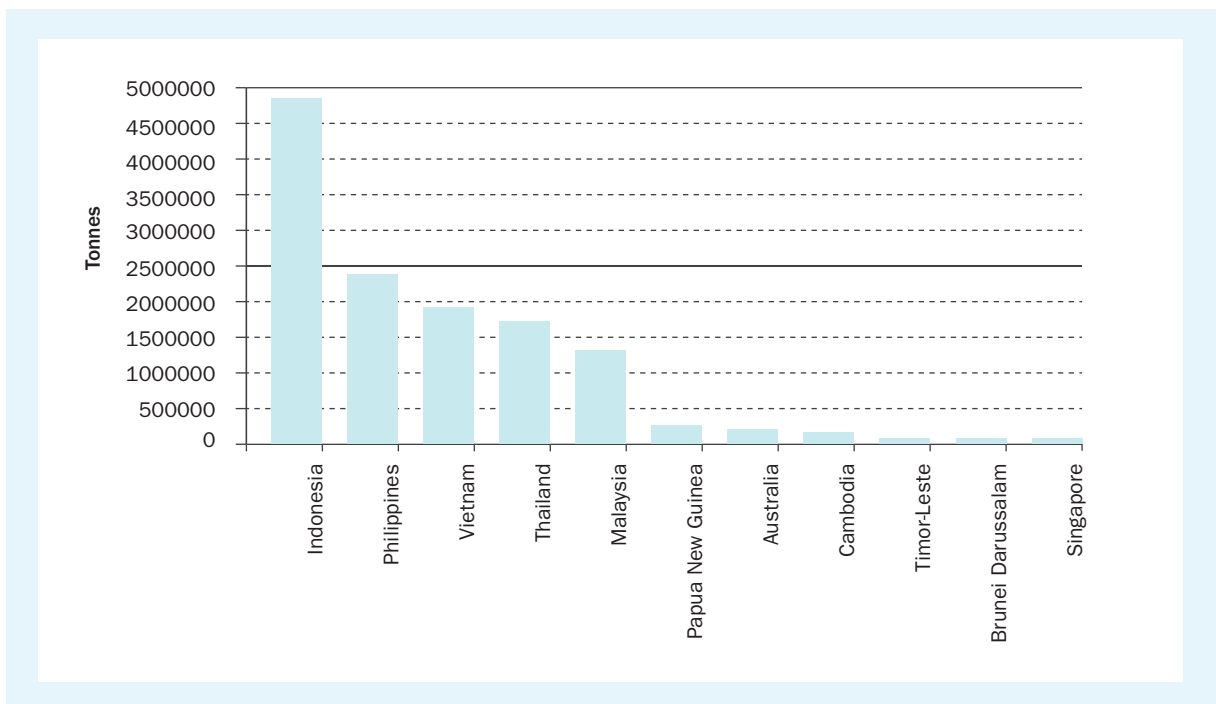


Figure 3: Marine capture fisheries production among RPOA participating countries in 2008. (Source: FAO FIGIS, 2011)

fish of larger species for use in farmed fish feeds and fishmeal. The main gear types are trawl, purse seine nets, various forms of gill-nets and line fishing such as longline, pole and line and trolls, and traps. Hand collection by diving and littoral gleaning are also practiced. Around 1.3 million marine capture fishing vessels are active in the region, with more than 60% being small scale (i.e. less than five gross tonnes).

Fisheries and aquaculture production, including marine capture fisheries, contributes a small but significant share to countries' GDP, for example, 2.8% of for Papua New Guinea and more than 1% for Cambodia, Indonesia, Philippines and Vietnam. However, given the trade importance of fish product and the high levels of fisheries employment in rural and coastal areas, fisheries have a much greater social and political importance than bare production statistics indicate. For example, the archipelagic countries of Indonesia and Philippines have more than 4 million and 1 million people respectively directly employed in marine fisheries and several times that number employed in the value chains. In addition, the RPOA participating countries, with the exception of Timor-Leste, consume above the world average per capita in seafood (Appendix 3).

While overall catches have steadily increased across the region, catch per unit of effort has declined, in some cases significantly. The historical focus on production has occurred due to substantial increases in fishing capacity, both in numbers of vessels and in fishing power (for example through greater mechanisation, wide scale adoption of gear innovations such as fish aggregation devices and light fishing). This increase in fishing capacity has outstripped the productive capacity of stocks and has resulted in declining catches, overexploited stocks and dissipated resource rents.

2.2 The main internal and external drivers

Drivers internal to the fisheries sector

Poverty of fishers and the need for food security.

For many RPOA participating countries, most people working in marine capture fisheries are poor and marginalised, having few rights of tenure over resources of their livelihoods and few other livelihood options. Employers and larger vessel owners may be wealthier but even these people and enterprises are in the small and medium-size enterprise category. For many millions of people, coastal fishing is the only available source of income and animal protein, and the constraints associated with this – particularly in the context of already depleted coastal fish stocks – represents a significant policy and development challenge for the RPOA region. Most people cannot be readily re-deployed into other economic activities.

Increasing global and local demand for seafood.

Global and local demand for seafood continues to increase, driven by factors such as growing populations, the emergence of an affluent Asian middle-class, an increasing recognition of the health benefits of seafood and growing Asian demand for feed for aquaculture. RPOA participating countries stand to benefit from the increased demand but the opportunities must be balanced against the need to ensure the health and productivity of fish stocks and ecosystems. The skills necessary to take advantage of favourable global markets appear to be being built more rapidly, and at the expense of supporting healthy domestic fisheries and fishing communities. This is a critical medium term challenge for RPOA participating countries and one that demands increased human and institutional capacity in fisheries management.

Historical focus on production. The RPOA participating countries' marine capture fisheries, their institutional structures and the skill base of fisheries agencies have been heavily influenced by a historical focus on production, driven by the need to produce benchmark quantities of fish and to exceed previous tonnages. RPOA participating countries have only recently begun the process of re-orienting national fisheries objectives around sustainability and responsible marine stewardship. The push still continues to expand catches through the development of offshore fisheries. New sectoral, institutional and individual skill sets are necessary to support the new approaches. Ensuring institutional structures and skill sets are linked to, and capable of supporting, the new management objectives is critical to their success and is a key aim of this Framework.

Limited fisheries management resources.

In participating countries, the resources devoted to marine capture fisheries management and science are more limited than the challenges demand. National and provincial fisheries departments' budgets are constrained by overall national budgets, and by the higher priority afforded to budgets for other departments. Budgetary limitations are not likely to ease in the foreseeable future. Thus, RPOA participating countries have a strategic need to maximise the effectiveness of limited resources at each of the provincial, national and regional levels – that is, 'work smarter, not harder'. Capacity development interventions must be ranked in priority order and sequence to make better use of existing resources, and promote cost-effectiveness.

Increasing emphasis on market-based solutions.

In response to the shortcomings of centralised 'top-down, command-and-control' fisheries management systems in such large and dispersed fisheries, there has been an increasing trend towards decentralized (see below) and market-based solutions to support sustainable marine capture fisheries management. Interventions have both been by distant market

regulations, for example through the European Union, and non-regulatory, for example, certification. Building the capacity of RPOA participating countries to better position their fisheries to take advantage of the opportunities afforded by new market-based approaches, while minimising any negative consequences, has been an important consideration in the development of this Framework.

Inter-connectedness of the region's fisheries.

The RPOA participating countries' marine capture fisheries are characterised by a high degree of resource, geographic, investment and market inter-connectedness. This high degree of inter-connectedness requires a high degree of regional cooperation and coordination of management of shared assets to achieve common goals of sustainability, food security and economic development. The existing national fisheries management capacities and levels of international cooperation are not yet sufficient to meet the needs. Fishing violations thus cause frequent diplomatic and defence friction among countries.

Drivers external to the fisheries sector

Population growth and the demand on coastal fisheries.

Most RPOA participating countries have high population growth rates, concentrated in coastal areas. Sustaining the demand of an increasing population for fish protein, while at the same time recovering stressed stocks and ecosystems, requires new approaches to management and different supporting skill sets from those of the past.

Decentralisation. Many participating countries have devolved government authority from central to provincial/local levels. In fisheries, decentralisation has meant that provincial and local authorities have taken responsibility for key functions such as preparation of local laws, licensing, data collection and enforcement. While devolution of management responsibility to the lowest appropriate level is consistent with the ecosystem approach to natural resource management, local level staff often do not have the necessary skills, resources and institutional support structures to achieve management objectives. In parallel with decentralisation, community-based management has also been developed, with some significant local successes, but not yet on a wide scale. National and sub-national managers are also learning how best to complement and support these promising local efforts.

International obligations. The United Nations Convention on the Law of the Sea (UNCLOS), the United Nations Fish Stocks Agreement and other international fisheries and maritime instruments have brought great opportunity to RPOA participating countries through the declaration of 200nm Exclusive Economic Zones (EEZs) and their associated privileges. However, RPOA participating countries have yet to embrace



Swimming crabs, Vung Tau Vietnam, Richard Banks

more completely the attendant responsibilities such as ensuring that living resources are not over-exploited, cooperating in the management of transboundary stocks and sharing information. Fisheries management agencies need greater capacity to meet their obligations.

Climate change. RPOA participating countries are among the most vulnerable to climate change impacts on fisheries. SE Asian marine fisheries and small scale fishers are among the world's most sensitive to climate change and the fishers have only a low to moderate capacity to adapt. Managers need to understand how to build resilience in fish stocks and supporting ecosystems, and the fisheries sector needs to build the capacity to minimise the harmful impacts of climate change. This will require forging alliances outside the fisheries sector with scientific and climate services.

2.3 Main Challenges

Excess fishing capacity. Overcapacity within the harvesting sector is the central challenge for RPOA participating countries. Most countries are faced with fleets that are 50% or more above that required to harvest the available resources sustainably. Overcapacity has led to depletion of stocks, degradation of marine and coastal environments, increased conflicts among sectors, dissipated resource rents, reduced rural incomes and heightened incentives for non-compliance and IUU fishing. Fisheries managers need socially acceptable and effective strategies to reduce fishing capacity.

Depleted marine capture fisheries. Many important stocks and fishing grounds within the RPOA region are depleted, some severely. Evidence of depletion comes not only from lower catches of long-fished species but also from smaller fish, changes in fish community composition, evidence of fishing down and through food webs and an increasing reliance on ‘trash’ fish to make up the catch volume.

Weak management of ecosystems effects.

Fisheries development has focused on maximising harvests and improving fishing efficiency, with less attention paid to monitoring and managing the impacts of fishing on the environment. With increasing community and market attention focused on ensuring sustainable fisheries, strengthening management of non-target species impacts, including meeting obligations under instruments such as UNCLOS and the CCRF, is an important challenge for the RPOA region.

Intra-sectoral conflict. Segments of the fishing sector compete and often come into conflict, for example, between commercial and artisanal sectors over fishing areas. Conflicts are exacerbated by too much fishing capacity and weak enforcement, and can only intensify. RPOA participating countries are seeking better ways to address overcapacity and resolve fishing conflicts.

Weak information collection and analysis systems.

The information base of the RPOA region’s fisheries is inadequate for effective management. Catch and landings information needs strengthening; logbooks and other fishery dependent information are absent or partial and inadequate. Robust fishery-independent monitoring programs such as fishery observers, vessel monitoring systems and port sampling are rare. Stock assessments are infrequent, often out of date and not readily accessible to managers and the public. RPOA participating countries need better information on the status and trends in fisheries to strengthen management performance.

Low catches/incomes and dissipated resource rents.

Overexploitation and overcapacity have reduced fishers’ incomes and dissipated resource rents. In the artisanal sector, where fishing is the main source of income and an important food source, falling catches provide incentive to fish harder whereas in commercial fisheries, overcapacity means resources are harvested inefficiently and at higher cost. Recent estimates put the loss of resource rent associated with overcapacity in one sector in Thailand at approximately US\$74 million.

IUU fishing, weaknesses in law enforcement and control of fishing intensity.

High levels of IUU fishing and weak law enforcement lead to large losses in catch and value and weak control of nationals in national and neighbouring country waters. Significant IUU fishing is undertaken by foreign vessels illegally accessing another State’s EEZ, and by domestic vessels fishing

outside of established management arrangements, for example, to take advantage of higher catch rates in closed areas or under-report catches to avoid taxes. Many of the drivers of IUU fishing are intensified by overcapacity and overfished stocks. RPOA participating countries need greater capacity to individually and collectively police their waters. The capacity to control fishing is linked with the ability to prevent overfishing and to restore stocks.

Misalignment of political and management objectives.

The requirement to exercise long-term restraint in the harvest of marine fisheries often runs counter to short-term political imperatives to provide employment and food and to achieve continued increases in production. Promoting awareness of responsible stewardship to politicians and other fisheries decision makers, as well as the public, is critical to sustaining marine capture fisheries.

Making decentralisation work. With the increasing emphasis on decentralisation, making decentralised fisheries management ‘work’ is a priority. Progress has been made in introducing a legal basis for decentralisation but less attention has been paid to designing and clarifying the respective roles and responsibilities of national and local agencies.

2.4 Overview of current capacity

In the preparation of this Framework, an assessment of the current capacity for marine capture fisheries management was undertaken of each of the RPOA participating countries. Assessments were undertaken in conjunction with staff from national fisheries agencies, as well as other related institutions (for example provincial fisheries agencies, fisheries research and MCS agencies).

Current capacity was assessed in five core areas: (1) governance and legislation, (2) fisheries management planning, (3) fisheries science and economics, (4) monitoring, control and surveillance, and (5) international engagement (Table 6, Appendix 1).

The key opportunities identified were to: strengthen regional cooperation and fisheries management capacity to meet the current and future challenges of responsible and sustainable fisheries; improve information and science for management; improve national monitoring, control and surveillance; and engage in stronger and more effective regional and international fisheries cooperation.



Vision, Goal and Objectives

This section outlines the overarching vision, goals and objectives for the capacity development Framework. These were adapted for regional needs from those outlined in the FAO's *Strategic Framework for Human Capacity Development in Fisheries*¹³ and agreed by RPOA participating countries at the RPOA Capacity Development Workshop held in Da Nang, Vietnam, 2010.

3.1 Vision Statement

“RPOA participating countries that have the ability, means and conditions to achieve the sustainable development of marine capture fisheries, at local to regional levels, for the benefit of all”.

3.2 Overall Goal

The overall goal of this Framework is to increase the capacity of people and institutions involved in marine capture fisheries within RPOA participating countries to develop their abilities, individually and collectively, to ensure the sustainable development of the region's marine capture fisheries based on current and emerging trends, challenges and needs.

3.3 Objectives

A number of related objectives underpin this overarching goal. These are to:

1. strengthen the ability of RPOA participating countries to implement the RPOA and the FAO “Code of Conduct for Responsible Fisheries” and to develop fisheries management regimes through precautionary and ecosystem approaches to fisheries management
2. provide a framework that facilitates the prioritisation and strengthening of sustainable capacity development initiatives through regional and national strategies that address local issues
3. broaden the scope of capacity development initiatives for people and institutions to include the wider enabling environment that encourages good governance, including effective participatory processes and the integration of the environmental, economic and social aspects of sustainable development
4. develop and facilitate partnerships at a number of appropriate levels and scales to develop capacity, including regional partnerships that take strength from the existing regional fishery bodies and arrangements, as well as wider global coordination and cooperation between different donors and other development partners
5. facilitate collaboration and cooperation within and between States, in line with relevant national and international law to strengthen the capacity for the sustainable development of marine capture fisheries
6. develop a network of effective delivery mechanisms for capacity development through appropriate partnerships including acknowledged centres of excellence.

¹³ Ibid, FAO (2009).

4

Regional capacity development priorities

This section provides an overview of the main cross-cutting capacity building priorities for RPOA participating countries. It highlights those areas of capacity development that, if implemented, would make the greatest contribution to the sustainable development of marine capture fisheries management across the region. This approach acknowledges that resources for capacity development are limited, and that investments should be targeted towards initiatives that offer the greatest potential to assist RPOA participating countries meet national and international fisheries objectives.

Eight common, priority ‘themes’ for capacity building were highlighted during national consultations and endorsed by the RPOA Regional Workshop. Within each one of these themes, between three to six more specific capacity building priorities have been identified to help address the need. In all themes except ‘strengthening information systems’, ‘effective decentralisation’ and

‘strengthening regional and international cooperation’ specific capacity building opportunities are presented in order of regional priority. That is, within each theme, those opportunities that were rated highest by RPOA participating countries as a collective group are presented first.

In ‘strengthening information systems’, ‘effective decentralisation’ and ‘strengthening regional and international cooperation’, RPOA participating countries agreed that national priorities will vary according to the individual circumstances of each country and therefore regional priorities are not meaningful.

In structuring priorities, RPOA participating countries have given consideration to existing capacity building initiatives occurring within the region.

In addition to the overview provided here, a full discussion of each of the eight themes and priorities is provided in Appendix 4.



Shrimp trawlers, Arafura Sea, Indonesia, Richard Banks

Table 1: Summary of regional capacity building priorities agreed by RPOA participating countries. Priorities are colour coded according to the level of agreement among RPOA participating countries about the need for capacity development. Those priorities shaded in the darkest blue represent the areas for which the highest level of agreement existed among RPOA participating countries. Priorities highlighted in beige are those that RPOA participating countries agreed would be dependent on the individual circumstances of the participating country; for example, ‘strengthening fishery independent monitoring systems’ may be a high priority in some countries without existing systems, but a lower priority in others that already have robust systems in place.

<p>FISHERIES MANAGEMENT PLANNING. Fisheries management planning draws together the main components of fisheries management – harvest strategies and tools, fishing capacity management, mitigation of ecosystem effects, fisheries science and economics, and MCS arrangements – into a framework structured around agreed goals and objectives. Agreed goals and objectives can help better focus information collection and MCS resources on priority areas, as well as provide a structure for performance assessment and reporting and adaptive management. RPOA participating countries have identified the need to strengthen management frameworks surrounding the main fisheries as an important regional need.</p>	
Developing fishery specific management plans	RPOA participating countries recognise the value in developing fishery-specific management plans for the main fisheries in the region and have identified capacity building in fishery specific management planning techniques as an important priority. Particular interest was expressed in capacity building to support the development of management plans suited to the region’s needs and fisheries, such as for tropical multi-species and multi-gear fisheries with a range of different scales of fishing operations.
Ecosystem Approach to Fisheries Management (EAFM)	The Ecosystem Approach to Fisheries Management (EAFM) is a way of managing fisheries that balances the different objectives of society (for example environmental/economic/social). EAFM encourages a focus not just on the target species, but on the wider impacts of the fishery on the environment, as well as the social, economic, institutional and governance systems supporting the fishery. RPOA participating countries requested additional capacity building to help operationalise EAFM.
Participatory planning techniques	Experience has shown that active participation of all interested stakeholders is critical to effective management planning. Many countries noted the need to establish new, or strengthen existing, institutional structures to support participatory planning and noted considerable opportunity for RPOA participating countries to learn off one another by highlighting successful examples within the region.
<p>FISHING CAPACITY MANAGEMENT. Overcapacity is central to many of the region’s fisheries problems. Many fisheries remain open access and capacity assessments suggest that for many of the main stocks, current capacity is significantly above the level required to harvest the stock efficiently. Overcapacity in turn can result in overharvesting, dissipation of resource rents, conflict between different fishing sectors and increases in incentives for IUU fishing among other unwanted outcomes. Virtually all of the RPOA participating countries have identified the better management of fishing capacity as a national priority.</p>	
Vessel licensing and/or registration	Capacity building to strengthen vessel registration and licensing schemes was rated as the highest priority across the RPOA region to support better management of fishing capacity. Effective vessel licensing and registration is central to managing and monitoring fishing capacity, as well as underpinning a range of critical management tools and functions such as logbook programs and effective MCS regimes.
Rights-based fisheries management	Rights-based fisheries management (RBFM) is a means of managing fisheries by assigning rights to a share of the stock. The Master Plans of several RPOA participating countries advocate the use of RBFM approaches as a means of capping and controlling fishing capacity, particularly among commercial/industrial fisheries, but also to a lesser extent among artisanal/coastal fisheries. Particular interest was shown in RBFM systems that might be effectively applied in tropical multi-species and multi-gear fisheries, including those with large numbers of participants.

Key: High Priority Lower Priority

Developing alternative livelihoods	The creation of alternative livelihoods, or livelihood support options, for displaced fishers is central to achieving enduring capacity reduction in marine capture fisheries at the least possible socio-economic cost. Given the widespread need for capacity reduction in the region, RPOA participating countries considered capacity development was required in the planning and implementation of alternative livelihoods programs to support capacity reduction.
<p>STRENGTHENING INFORMATION SYSTEMS. Access to timely and accurate information on catch, effort, fishing capacity and other important parameters is central to effective marine capture fisheries management. Information is required to monitor the effectiveness of management arrangements, undertake stock assessments, monitor production and trade for the purposes of national taxes and duties and meet obligations as a party to international fisheries instruments, among other purposes. While robust information systems exist in some parts of the RPOA region, significant strengthening is required in others. Most RPOA participating countries identified the need to strengthen information collection and management as an important national priority.</p>	
Strengthening fishery independent monitoring systems	Fishery-independent monitoring systems, such as fishery observers, port sampling and trawl and other fishing surveys, offer a means to independently verify information collected from fishers, as well as collect valuable information independent of targeting and other biases inherent in fishery-dependent information. While some RPOA participating countries have strong fishery-independent monitoring systems in place, many have few systems or operate only sporadic surveys (for example project-funded trawl surveys). Many countries requested capacity building in the design and implementation of fishery-independent monitoring programs, most notably the use of fishery observers, VMS and port samplers.
Strengthening Information management	Effective information management systems to collect, store, process and exchange information are critical to a range of fisheries management functions including licensing, science, compliance and the like. Capacity building is required to strengthen infrastructure (for example databases, software), improve coordination among national agencies and between national and provincial levels, and build skills among officers responsible for information management (for example inability to interrogate information systems, cross-verify data, etc).
Design of information collection systems	Given the limited resources available for information collection in many parts of the RPOA region, adequate planning is essential to ensure available resources are targeted at priority areas (for example linked to fishery specific objectives). A number of countries requested assistance to review and strengthen their existing information collection arrangements, as well as strengthening the capacity of officers in the design of information collection and management systems.
Strengthening monitoring of fisheries trade	Several RPOA participating countries are key players in international seafood trade, with both Thailand and Vietnam ranked in the world's top five exporters. A number of countries identified a need strengthen trade monitoring and market intelligence to best capitalise on new developments in international trade. This included ensuring the price competitiveness of domestic processors, supporting efficient tax and duty arrangements and staying abreast of emerging products and consumer demands.
Strengthening fishery dependent monitoring systems	Several countries currently collect little or no information on catch, effort and/or capacity from large parts of their marine capture fleets. This is particularly the case for the coastal or artisanal sector, but is also true for some important parts of the commercial, industrial sector. Capacity building is required in many parts of the region to strengthen commercial logbook and other fishery-dependent systems. This may include the design of effective logbooks, extension of logbooks to those parts of the fleet not currently reporting, establishment of arrangements for the collection, processing, verification and storage of logbook data and capacity building to train fishers in logbook reporting.



Offshore trawler returning home, Kuantan, Pahang state, Meryl Williams

STRENGTHENING THE SCIENTIFIC AND ECONOMIC BASIS FOR FISHERIES MANAGEMENT. Quality analysis of the main biological, ecological and socio-economic status and trends in marine capture fisheries are critical to support effective management. Analytical products can include stock assessments of main species, environmental impact assessments of particular fishing gear and economic impact assessments of alternative policy options to name a few. While some RPOA participating countries reported access to strong analytical capacity, many highlighted a need to further develop domestic scientific and economic capability.

Strengthening scientific analytical capability and capacity to gather information

The need to strengthen scientific analytical capacity was rated by RPOA participating countries as the highest priority within this theme. Robust assessments of the status of main stocks are critical to fishery specific management and monitoring as well as informing broader policy priorities. Many countries reported little domestic training capacity in fisheries science and stock assessment, with most internal technical institutions focused either on aquaculture or fisheries operations (for example gear technology) training. Particular capacity development needs identified by RPOA participating countries included stock assessment and risk assessment in data poor situations, as well as stock assessment in tropical, multi-species and multi-gear fisheries.

Integrating scientific advice into management planning

The effectiveness of scientific outputs depends not only on their relevance and accuracy, but also on their effective uptake into the management decision making process. Several RPOA participating countries noted that scientific advice and outputs were not always effectively integrated into management planning. Assistance is required in the development of structures and processes to ensure scientific outputs are considered and integrated into the management planning process.

Economic impact analysis

Economic impact analysis allows for the economic, employment, trade and other consequences of management actions to be assessed, and measures to mitigate impacts designed. Many RPOA participating countries have identified a need to strengthen their capacity for economic impact assessment, including strengthening skills among relevant economic agencies as well as increasing the level of resources available for assessment purposes.

Strengthening capacity for assessment of climate change adaptation /mitigation in fisheries, inc. fishing vessel emissions

Recent research suggests that the economies of some RPOA participating countries are among the most vulnerable to the impacts of climate change on fisheries, with impacts likely to be disproportionately felt by the poor. Capacity building is required to strengthen the ability of RPOA participating countries to monitor the impacts of climate change on marine capture fisheries and to develop strategies to adapt to the impacts that are relevant to local circumstances.

Research planning

Few countries have formal research plans either at the national level or for the main fisheries. Given the limited resources available for scientific and economic research available in many countries, ensuring research investments are targeted at the highest priority issues is an important consideration.

EFFECTIVE DECENTRALISATION. The marine capture fisheries management system in most RPOA participating countries now includes some form of decentralisation. As part of these arrangements, agencies at the provincial or local levels have taken on increasing responsibility for a range of essential functions such as preparation of local fisheries plans, licensing, data collection and enforcement. Most RPOA participating countries identified the need to strengthen the effectiveness of decentralised management arrangements as a key capacity building need. The needs of RPOA participating countries will differ based on the nature of their decentralisation arrangements and local circumstances.

Strengthening coordination and accountability between national/local levels	Many RPOA participating countries pointed to weaknesses in coordination between and among levels important in decentralised management arrangements and requested support in developing effective mechanisms to strengthen coordination. Weak coordination can result in ineffective implementation of management arrangements, cost inefficiencies and increased scope for IUU fishing among other negative outcomes. The need for coordination will depend on the demarcation of management responsibilities between levels.
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Strengthening implementation at local level	Many countries reported weaknesses in the implementation of fisheries management arrangements at the local level. This was driven by limits on available resources, an incomplete understanding of the roles of responsibilities and insufficient training and skills to implement. The specific capacity building needs of each local agency will be dependent upon its roles and responsibilities (for example data enumeration, compliance).
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Community-based management of fisheries	Community based fisheries management (CBFM) is an approach that cedes to local users groups, either formally or informally, the rights and responsibilities for managing their own resources, typically using a mix of traditional or more formalised mechanisms to define access, exploitation methods and intensity. CBFM provides a means of enlisting the local community in fisheries management, and can be particularly effective where government capacity and resources to management fisheries at the local level are limited.
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STRENGTHENING MCS. Robust monitoring, control and surveillance systems are essential for effective marine capture fisheries management. IUU and other fishing activity that occurs outside of agreed frameworks undermine the economic benefits of fisheries, can increase pressure on already stressed stocks, undermines the accuracy of stock assessments and can lead to increased poverty among coastal communities dependent on fishing. Most RPOA participating countries identified strengthening MCS systems as a high priority capacity development need.

Strengthening MCS information systems	The highest priority need for MCS capacity building identified by RPOA participating countries is to strengthen electronic systems to collect, store, process and exchange MCS-related information. Effective information management systems can deliver direct improvements in MCS effectiveness by supporting efficient cross-verification of MCS data to identify areas of non-compliance, as well as indirect improvements by providing the information to support more effective compliance risk assessment and targeting of operational resources (for example through the development of 'compliance indices' for individual vessels).
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Strengthening MCS Co-ordination	Most RPOA participating countries have a number of agencies that play a role in fisheries MCS. Effective coordination among the various agencies is critical to the overall effectiveness of national MCS arrangements. While some RPOA participating countries have pre-existing arrangements to facilitate coordination among national MCS agencies, several have no arrangements and others have measures that are not yet working effectively. Capacity building to assist with the creation of institutional (for example National MCS Coordination Committees) and operational (for example Memorandums of Understanding on data sharing between fisheries agencies and surveillance providers) arrangements to facilitate strengthened national MCS coordination was identified by RPOA participating countries as an important priority.
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<p>Building entry/mid level MCS skills</p>	<p>Middle and entry level officers often form the ‘front line’ of MCS operations at both the national and provincial level. Despite this, few dedicated MCS training courses exist for staff at this level within the region. The need for a uniform, entry level MCS curriculum has previously been agreed by RPOA participating countries and a model course was developed under the RPOA framework in 2009. Assistance is now required to strengthen the ability of relevant institutions within the region to deliver the course (i.e. training the trainers), as well as to provide financial support to implement.</p>
<p>Port State Measures</p>	<p>The legally-binding FAO Port State Measures Agreement¹⁴ (PSMA) was agreed in 2009 as an important initiative to strengthen the monitoring of international fisheries trade, and thereby to prevent, deter and eliminate IUU fishing around the globe. A number of the RPOA participating countries are key players in global fisheries trade (for example Singapore, Thailand, Philippines, Malaysia and Indonesia) and are well positioned to play an important role in supporting the aims of the PSMA. Many of these countries will require capacity building to ensure effective implementation and alignment of existing programs to the terms of the PSMA.</p>
<p>Risk assessment/ compliance planning</p>	<p>Efficient MCS systems require available assets to be targeted towards areas of highest risk to the achievement of provincial, national and regional fisheries goals. Risk assessment and compliance planning offers a structured means of identifying areas of highest risk and prioritising the use of available resources. Capacity building is needed in the use of formal compliance risk assessment techniques and in the formulation of operational compliance plans to mitigate high risks.</p>
<p>Encouraging voluntary compliance</p>	<p>Cost effectiveness of MCS will be greatest when levels of voluntary compliance are highest. A number of techniques are available to encourage voluntary compliance including promoting understanding of fisheries management measures through education campaigns and participatory planning, as well as providing incentives for compliance through eco-labelling and the like. While RPOA participating countries considered the promotion of voluntary compliance an important aim, on balance, other initiatives within this category were given higher priority.</p>
<p>STRENGTHENING REGIONAL AND INTERNATIONAL COOPERATION. The marine capture fisheries of the RPOA region are characterised by a high degree of inter-connectedness. This has led to recognition among RPOA participating countries that effective management of the region’s marine capture fisheries requires new levels of cooperation. At the same time, RPOA participating countries occupy an important position in international fisheries as custodians of globally-significant fisheries resources, as flag States operating vessels extra-territorially and as a key hub for global fisheries trade. Accordingly, RPOA participating countries are keen to play their part in multi-lateral and global efforts to conserve and manage marine capture fisheries.</p>	
<p>Strengthening capacity for complementary management of transboundary stocks</p>	<p>The RPOA region is home to a number of transboundary marine fish stocks, yet there are few formal arrangements currently in place to ensure complementarity of management between jurisdictions. All RPOA participating countries recognise the benefits of taking a ‘whole of stock’ approach to fisheries management, and support the development of new approaches to strengthen complementary management. This will require the establishment of new administrative and other structures to support complementary management, as well as training of relevant managers.</p>
<p>Strengthening capacity for joint (and common) stock assessment (RPOA stock assessment platform; defining stock structure)</p>	<p>Considerable benefits exist for RPOA participating countries in strengthening regional capacity for stock assessments of common or shared stocks. Joint assessments allow for leading edge stock assessments to be performed in a cost effective way, and may lead to improved accuracy by incorporating widespread coverage of data. Strengthening the capacity for joint assessment of shared stocks will require the development of new cooperative arrangements, including ideally the development of a new regional stock assessment platform. Joint assessments may also require a number of supporting measures such as harmonisation of data collection terminology and formats and information exchange.</p>

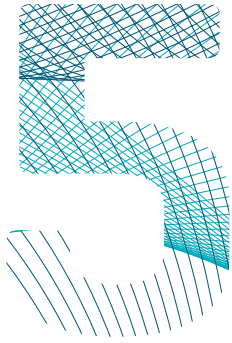
14 Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

<p>Strengthening capacity for cooperative MCS</p>	<p>Additional scope exists for strengthened MCS through improved cooperation. At a workshop in Bali in March 2008, and at the Coordination Committee meeting in Manila in April 2008, RPOA participating countries agreed on the need for a regional network of MCS officials at a minimum, while a number of additional initiatives also require consideration – for example, data sharing on licence lists; cooperative port State enforcement between flag and port States; data sharing on prosecution results; the development of regional risk assessments; the development of a regional pool of observers; the establishment of a regional VMS system; harmonised logbook and data collection arrangements; harmonised information collection, storage and exchange arrangements. New institutional arrangements and capacity development will be required to support the implementation of any new measures.</p>
<p>Strengthen capacity for international engagement</p>	<p>RPOA participating countries are important players in global fisheries, yet for most their status has not always been reflected in participation in international fisheries instruments. While involvement in technical and economic cooperation bodies has been strong (for example APEC, ASEAN, SEAFDEC, APFIC), many have, historically, participated at only low levels in key international fisheries conservation and management instruments – for example the UNFSA, the FAO CA and RFMO Conventions. Capacity building is required to assist many RPOA participating countries to better engage in international fisheries instruments and play a role that appropriately reflects their significance to global fisheries.</p>
<p>STRENGTHENING LEGAL, POLICY AND ADMINISTRATIVE SUPPORT. Effective legal, policy and administrative support arrangements are central to effective marine capture fisheries management. Collectively, these components create both the enabling environment to allow for effective management as well as the executive and administrative support to allow fisheries managers and other staff to undertake necessary tasks. While most RPOA participating countries have actively sought to strengthen their support mechanisms in recent years, most identified a number of areas in which additional strengthening was required.</p>	
<p>Clarifying institutional roles/responsibilities</p>	<p>Most RPOA participating countries have a number of agencies, both at the national and provincial level, with some role in marine capture fisheries management. In many cases these agencies have mandates that are either unclear or overlapping. This, in turn, can lead to cost inefficiencies and ultimately to weak implementation or enforcement of management arrangements. RPOA participating countries identified the need to strengthen institutions by clarifying roles and responsibilities as the most important need within this theme.</p>
<p>Encourage strengthening of legal frameworks (inc. improving compatibility; capability to address emerging issues)</p>	<p>Most RPOA participating countries have the core components of an effective legal framework, however many identified that updating was required to incorporate relevant international obligations and modern management approaches (for example the precautionary principle, rights-based fisheries management systems, stock specific harvest strategies). Support is necessary to assist countries update legislation in line with contemporary management approaches, international obligations and national aspirations.</p>
<p>Strengthening capacity of senior executives to promote importance of fisheries</p>	<p>Marine capture fisheries play a critical role in providing for food security, wealth creation and coastal livelihoods among RPOA participating countries, yet their importance is not always reflected in national priorities. Budgets among marine capture fisheries agencies are frequently limited, and new funding is often invested in alternative opportunities, including aquaculture. Several countries identified a need to assist senior executives “make the case” for fisheries in public and political processes, including budget funding rounds.</p>



Traditional Vietnamese coracle, Da Nang, Vietnam, Duncan Souter

<p>Strengthening capacity for internal needs assessment</p>	<p>Knowing the skills required to undertake effective marine capture fisheries management, and being able to self diagnose areas that require strengthening, are important components of running modern fisheries management agencies. More effective needs assessments will help better target limited internal capacity development resources, as well as help maximise the effectiveness of interventions from donors and other potential investment partners.</p>
<p>Public performance reporting</p>	<p>The fisheries agencies of many RPOA participating countries already produce Annual Reports, however these are often focused largely on production and trade statistics. Few regular reports are produced, for example, on the status of main stocks or supporting ecosystems. Capacity building is required to improve the level of public performance reporting across the RPOA, and in particular in relation to the biological health of main stocks. Several countries noted the potential value of regular status reporting on the health of main stocks in influencing public debate and the broader 'enabling environment' for more effective marine capture fisheries management.</p>



Implementation

5.1 Guiding principles

The arrangements for implementation of this Framework should be based on the following guiding principles:

Prioritisation

Human and institutional capacity development should be geared towards addressing the highest priority areas of national and regional need in the sustainable development of marine capture fisheries.

Equity

The current imbalance in standards of human and institutional capacity should be reduced through focused capacity development initiatives.

Sustainable capacity development

Developmental assistance should help build robust, enduring capacities and capabilities.

Human and institutional capacity development should be considered a long-term process that requires careful planning, investment and effective implementation.

Participation and cooperation

Partnerships are essential to collectively strengthen the management and development of shared fisheries. These partnerships should cover the wide array of specialisations essential for holistic management, enhancing knowledge and capturing experience.

Self-development

It is primarily the responsibility of each RPOA country to ensure its own capacity development. This includes sourcing and providing resources for capacity development.

Scalability¹⁵

Wherever possible, capacity building activities should be designed to be suitable for use at different scales, such as at national and local scale, or regionally. This could be through scaling by replication in different places, by applying the capacity building to more or larger units such as through distance education/training or by modification and adaptation of initiatives for different contexts.

Gender equity

Capacity development initiatives should:

- + ensure gender equality is advanced in national and regional capacity building initiatives
- + promote equal participation of women in fisheries management decision making and leadership
- + promote gender quality principles and practices in the content of capacity building activities, including those for all parts of the fish supply chain including fisheries support activities, fishing, post harvest and marketing.

¹⁵ This principle is additional to those developed at the regional workshop in Da Nang.

5.2 Lessons learned

An important component in an adaptive approach to capacity development is to take account of lessons learned from previous initiatives. Table 2 highlights some of the main lessons identified by several donor assessments of projects undertaken in the RPOA region.

Table 2: Lessons learned from regional capacity building donor support programs

SELECTED LESSONS LEARNED	RESPONSES
<p>Lack of political support. A key constraint appears to be the lack of political incentives and even understanding of the need to implement the required changes to management policy. Issues such as managing fishing capacity, and implementing conservation controls, are consistently undermined by growth and export led policies both at national and regional level.</p>	<p>Better public information can help prepare the way for policy action. Clear focus needs to be on ensuring that the RPOA has the backing of the higher level international fora. In addition, Governments in the region, supported by fisheries experts, need to better understand the status of fisheries and the need for reform.</p>
<p>Weak implementation of plans of action. Despite a strong commitment from some donors to fisheries programs in the region, national fisheries management agencies have given insufficient attention to implementing long term regional action plans.</p>	<p>Ministers to national agencies should be encouraged to sign up to investments in regional fisheries capacity programs, and be active participants in international forums. Officials must be educated in the means of selling the program's benefits to policy makers at national and sub-national levels.</p>
<p>Principles needed for training. Training should focus on strengthening individual/organisational capacity, with a clear focus on generating sustainable benefits. Some core elements to be considered here would be as follows:</p> <ul style="list-style-type: none"> + Initiatives should take account of, and be tailored to, existing levels of core capacities and involve two-way knowledge transfers and acquisition + Human capacity-development initiatives need to identify the individuals and organisations that will champion the process and can adopt and lead human capacity development + Human capacity-development is a long-term process that requires continued support through national initiatives and partnerships + Funding specific posts (for example, data collectors, observers, enumerators) is explicit to the management agencies and not the human capacity development programs + Initiatives should capture and enable attitudinal changes and skills that are likely to result in a collective sense of purpose and progress. 	<p>Focus is on enhancing operational capacity of individuals and institutions, developing their commitment to achieving the goals, and promoting a strong feeling of partnership and individual/group ownership from the training provided. Much of this can be achieved through training, but also through inter institutional (national and international) partnerships and networking under the auspices of the RPOA.</p>

Training weak in fisheries agencies. Capacity weaknesses are evident in the fisheries management agencies as little priority is given to training individuals. Fisheries agency staff need training such as fisheries courses at universities, and also in in-service and work experience programs with more developed foreign institutions, including those within the region.

International and national expertise should be called in as required, but demand-driven short-term skills and knowledge training should be developed and delivered at universities or other training and research organisations in regional countries

Training and education in RPOA participating countries could be strengthened through setting up academic twinning arrangements between universities and research establishments that are recognised as centres of excellence, and those national institutions earmarked as national training centres. These do exist in the larger partner countries (Australia, Indonesia, Vietnam, Malaysia, Thailand, Philippines and PNG) and could be made more pro-active. Contractual arrangements should be entered into with individuals and institutions that create clear obligations for both the individual and the sponsoring institution.

Guarantees should be in place to ensure that foreign technical expertise is only sourced when not available at national level. Foreign experts must commit to mentoring trainees

Choose the most relevant participant for capacity building activities. Participation in study tours and exchanges as well as workshops outside the countries should only be provided to the relevant officers in each agency. This allows for relevant and precise learning and capacity building objectives for the specified target group.

Qualifying conditions must be set to ensure the most relevant beneficiaries are selected from the relevant organisations.

Develop in-region capacity building. Explore the needs gap for long-term joint international-national diploma programs to be delivered at regional centres of excellence or national universities, to enable the fisheries agencies to manage and support the fishery sector without recourse to donor supplied capacity building.

Donors should only select regional and national centres of excellence, or seek to provide their experts to these facilities.

Monitor and evaluate performance. Systematically monitor and report to what extent the outcome of training or other support activities has improved the livelihoods of this beneficiary target group.

The relevance of training provided should be assessed during and after the program, and the syllabus should be adjusted to take account of lessons learned.

Source: Extracted from various donor funded assessments into capacity building including Danida Fisheries Sector Support Program I & II (Vietnam, 2003–2011), European Union Coastal Habitats and Resource Management Program (Thailand, 2002–2007), FAO Regional Fisheries Livelihoods Program (Philippines, 2010–2014) and ADB Institutional Review (Indonesia, 2008).

5.3 Delivery mechanisms

The most effective method for delivery of capacity building assistance will vary according to the skills and abilities intended to be transferred. The development of sophisticated stock assessment skills, for example, will usually require long-term graduate and post-graduate study at an appropriate tertiary institution, often outside the region, while training in a new information management system may require only a short course, undertaken in house and on the job.

Ensuring the delivery mechanism is ‘fit for purpose’ is equally as important as ensuring the training is focused on the areas of highest need, and careful consideration is required in the design stages. Key factors influencing the practicality and appropriateness of a delivery mechanism include upfront cost, whether the training is available in country or requires placement externally, whether the training can be undertaken on the job or would require absences from work and the overall duration of the training required. The importance of involving end users in the design of capacity building programs, as well as the need for an adaptive approach to capacity building initiatives, cannot be overstated.

Table 3 provides an overview of possible capacity building delivery mechanisms against outcomes and deliverables drawn from the capacity building themes and needs identified in this Framework.

Table 3: Outcomes and proposed deliverables matrix showing possible mechanisms to deliver capacity building.

Overall objective: *To increase the capacity of people and institutions involved in marine capture fisheries within RPOA participating countries to develop their abilities, individually and collectively, to ensure the sustainable development of the region's marine capture fisheries, based on current and emerging trends, challenges and needs.*

Outcome 1: Fishery management plans designed and implemented for key regional and national fisheries		
Activities	Proposed deliverables	Delivery mechanisms
Activity 1.1: Developing fishery specific management plans, incorporating the ecosystem approach to fisheries and participation	+ Fisheries advisory committees created or strengthened	A, B, C, E, F, H, I
	+ Fishery specific management plans in place at the national levels for each main fishery, incorporating ecosystem and precautionary approaches	
	+ Management plans for tuna and highly migratory species embrace RFMO management themes	
Outcome 2: Capacity management systems designed and implemented		
Activities	Proposed deliverables	Delivery mechanisms
Activity 2.1: Strengthening vessel licensing and/or registration	+ Standardised regional (transboundary) and national registers	B, C, E, H, I, K
	+ Coastal, territorial and offshore licensing system established with automated annual review systems in place	
Activity 2.2: Strengthening/introducing rights-based fisheries management	+ Rights-based systems explored appropriate for specific fisheries (limited entry, quotas, effort controls)	B, C, E, F, H, I, J, K
	+ Technical support provided to support the establishment of rights-based systems	
	+ Systems operational for coastal, territorial and high seas fisheries; appropriate cost recovery mechanisms formulated	
Activity 2.3: Developing alternative livelihoods	+ Alternative livelihoods programs designed to support fishing capacity reduction	A, B, C, D, E, F, H, I, J, N
	+ Donor support programs initiated linked to technical training and provision of micro finance	
	+ Business modules formulated and adapted to suit country needs	

Key: High Priority Lower Priority



Department of Fisheries patrol vessels, plus B class trawler (blue – note the white stripe indicates this is a trawler and the blue color of the cabin indicates that the vessel is registered in Penang state), LKIM fish landing port, Penang, Meryl Williams

Outcome 3: Information systems strengthened

Activities	Proposed deliverables	Delivery mechanisms
Activity 3.1: Strengthening fishery independent monitoring systems	<ul style="list-style-type: none"> + Reliable sources of fishery independent information designed and implemented for main fisheries – for example independent observer programs, VMS, port sampling, surveys + Information on trends in catch rates as indices of stock abundance available to fishery managers + Enumerator and analysts trained 	B, C, H, I, K
Activity 3.2: Strengthening Information management	<ul style="list-style-type: none"> + Integrated information management systems established; capable of collecting, processing, storing and exchanging information; support cross-verification of data and analysis + Data collection (catch/effort) and compilation systems established at all spatial levels (national and provincial) 	A, B, C, E, G, H, I, K, N
Activity 3.3: Improving design of information collection systems	<ul style="list-style-type: none"> + Management and compliance needs assessed for each main fishery + Information collection systems designed and implemented to support management plan objectives 	B, C, E, H, I, K
Activity 3.4: Strengthening monitoring of fisheries trade	<ul style="list-style-type: none"> + Electronic databases established that link traceability and trade (supporting the EU catch certification system) + Trade statistics and market intelligence available to fishery policy makers and planners 	B, C, E, H, I, N
Activity 3.5: Strengthening fishery dependent monitoring systems	<ul style="list-style-type: none"> + Robust catch and effort logbook systems in place for the main fisheries 	B, C, E, H, I



Large C class purse seiner with lights steaming into port, Pulau Pangkor, Perak state, Malaysia, Meryl Williams

Outcome 4: Regional and national scientific capacity strengthened to support fisheries management planning

Activities	Proposed deliverables	Delivery mechanisms
Activity 4.1: Strengthening scientific analytical capability and capacity to gather information	<ul style="list-style-type: none"> + Analytical capacity sufficient to undertake robust assessments of main stocks/ fisheries (particularly tropical multi-species, multi gear fisheries) + Capacity for stock assessment/risk assessment in data poor environments strengthened 	A, B, C, D, E, F, G, H, I, J, K, M, N
Activity 4.2: Integrating scientific advice into management planning	<ul style="list-style-type: none"> + Institutional structures established to ensure integration of scientific outputs/ advice into management planning + Management planning performance indicators (for example limit and target reference points) monitored regularly 	E, H
Activity 4.3: Strengthening economic impact analysis capacity	<ul style="list-style-type: none"> + Capacity to assess socio-economic impacts of alternative policy options strengthened + Economic advice integrated into management performance evaluation 	A, B, C, D, E, F, G, H, I, J, K, M, N
Activity 4.4: Strengthening capacity for assessment of climate change adaptation/ mitigation in fisheries, inc. fishing vessel emissions	<ul style="list-style-type: none"> + Strengthened capacity to assess national fisheries implications arising from climate change and implement adaptation strategies 	A, B, C, D, E, F, H, I, J, K, M, N
Activity 4.5: Research planning	<ul style="list-style-type: none"> + Fishery specific research plans in place for each of the main fisheries, with research tied to explicit management planning/policy objectives 	C, E, H

Outcome 5: Implementation systems strengthened across national and sub-national levels

Activities	Proposed deliverables	Delivery mechanisms
Activity 5.1: Strengthening coordination and accountability between national/local levels	<ul style="list-style-type: none"> + Demarcated roles and responsibilities clearly defined + Institutional and reporting arrangements in place to ensure effective coordination/communication between jurisdictions 	B, C, E, H, I
Activity 5.2: Strengthening implementation at local level	<ul style="list-style-type: none"> + National mentoring and monitoring processes in place to build local capacity + Local level training programs developed, tailored to roles and responsibilities 	B, C, E, H, I, K, N
Activity 5.3: Supporting effective community-based management of fisheries	<ul style="list-style-type: none"> + Community based participatory/co-management systems established + Community based systems effectively integrated with wider provincial/national management frameworks 	B, C, E, I, J
Activity 5.4: Strengthening legal basis to support decentralisation	<ul style="list-style-type: none"> + Fisheries laws reviewed/strengthened to ensure effective basis for decentralised management responsibility/accountability 	E, H

Outcome 6: MCS systems strengthened

Activities	Proposed deliverables	Delivery mechanisms
Activity 6.1: Strengthening MCS information systems	<ul style="list-style-type: none"> + Electronic MCS information management systems designed and established; capable of collecting, storing, processing, exchanging and cross-verifying MCS-related information (for example licensing, catch and effort, observer, port sampling, boarding and inspection data, surveillance data) + MCS information systems integrated with (or part of) other information management systems (for example scientific) 	B, C, E, G, H, I, N
Activity 6.2: Strengthening MCS co-ordination	<ul style="list-style-type: none"> + Institutional structures (for example National MCS Coordination Committees) established to coordinate activities of multiple agencies involved in fisheries MCS + Institutional structures established to coordinate MCS activities between the national and sub-national levels 	C, E, I
Activity 6.3: Building entry/mid level MCS skills	<ul style="list-style-type: none"> + RPOA MCS curriculum tailored to meet national needs and delivered in national/regional training institutions + Strengthened capacity of national/regional institutions to deliver MCS courses 	B, C, E, H, J, K

Activity 6.4: Implementing Port State Measures Agreement	<ul style="list-style-type: none"> + PSMA implemented in main RPOA port states + IUU landings eliminated from RPOA member countries 	C, E, I, K
Activity 6.5: Risk assessment/compliance planning	<ul style="list-style-type: none"> + Strengthened capacity to undertake formal MCS risk assessments at national and sub-national levels + Risk assessments/compliance plans deliver improved targeting and cost effectiveness of limited MCS resources 	B, C, E, H, I, K
Activity 6.6: Encouraging voluntary compliance	<ul style="list-style-type: none"> + Participatory systems in place to ensure MCS officers and stakeholders, particularly fishers, are involved in development of management measures + Educational outreach systems in place and community enforcement systems reduce non compliance in coastal waters 	B, C, D, E, H, I, L
Outcome 7: Regional and international cooperation strengthened		
Activities	Proposed deliverables	Delivery mechanisms
Activity 7.1: Strengthening capacity for complementary management of transboundary stocks	<ul style="list-style-type: none"> + Increasing RPOA country coordination and support for collective transboundary management decisions + Formal institutional structures established to ensure complementarity of management for shared stocks (for example bilateral, multi-lateral) 	B, C, D, E, J
Activity 7.2: Strengthening capacity for joint (and common) stock assessment (RPOA stock assessment platform; defining stock structure)	<ul style="list-style-type: none"> + Regional initiatives in place that harmonise arrangements for data collection terminology, formats and exchange mechanisms + Regional stock assessment platform for joint and common stocks established 	C, D, E, I, J
Activity 7.3: Strengthening capacity for cooperative MCS	<ul style="list-style-type: none"> + Development of formal structures to enhance MCS effectiveness across the region through cooperation (for example regional register of fishing vessels, information sharing arrangements, cooperative port state enforcement, regional risk assessments; coordinated surveillance) 	C, E, G, I
Activity 7.5: Strengthen capacity for International engagement	<ul style="list-style-type: none"> + Strengthened engagement in international fisheries management arrangements + International obligations in fisheries management are met 	B, C, D, E, F, H, I, J, N

Outcome 8: Legal, policy and administrative support strengthened

Activities	Proposed deliverables	Delivery mechanisms
Activity 8.1: Clarifying institutional roles/responsibilities	+ Institutional roles and responsibilities clarified at the national and sub-national levels; decision making and implementation processes established and effective hierarchical structures in place	C, H, I
Activity 8.2: Encouraging strengthened legal frameworks	+ National legal frameworks continually updated to reflect national, regional and international obligations, inclusive of sustainable marine fisheries and EAFM.	A, B, C, D, E, H, I, J
Activity 8.3: Strengthening capacity of senior executives to promote importance of fisheries	+ Regular Ministerial/Governor briefings held to highlight emerging issues and obligations; products available to concisely convey importance of marine capture fisheries and implications of alternative policy options + Resources provided to marine capture fisheries consistent with national importance	B, E, H
Activity 8.4: Strengthening capacity for internal needs assessment	+ Training needs assessment processes in place which complement enhanced learning in fisheries management concepts	B, C, E, H, K
Activity 8.5: Public performance reporting	+ Current production and trade focused performance reports expanded to cover issues such as status of main stocks, bycatch, ecosystems, governance.	B, C, E, H, I, J

Face to face mechanisms

- A. Classroom based training/education – long courses (for example university degree)
- B. Classroom based training/education – short courses
- C. Seminars, conferences, workshops
- D. Research-based capacity development
- E. Exchange programs/study tours
- F. Sustainable partnerships and networks
- G. Demonstration trials
- H. Mentoring/On-the-job training

Remote support mechanisms

- I. Budget support
- J. Published and disseminated material
- K. Manuals/training material
- L. Radio/Television
- M. Distance-based training/education
- N. ICT-based capacity development (participation in networks, communities of practice)

Adapted from Macfadyen and Huntington, 2004¹⁶

¹⁶ Macfadyen, G. & Huntington, T. (2004) Human capacity development in fisheries. *FAO Fisheries Circular*. No. 1003. Rome, FAO. 80p.

5.4 Roles and responsibilities

The implementation of this Framework is not the responsibility of a single agency or group. Rather, implementation will require strong cooperation, coordination and investment across a range of entities, guided by the principles outlined in 5.2 above. The roles and responsibilities of each of the main actors in implementing the Framework are discussed below.

RPOA participating countries

Consistent with the guiding principle of self-development, the primary responsibility for capacity development lies with the RPOA participating countries themselves. All countries recognise the importance of ongoing human and institutional development and many have put this into practice through coordinated skills development plans and other targeted initiatives.

Notwithstanding that, considerable scope for additional investment exists. This review has highlighted a range of areas, across the full spectrum of functions required for effective marine capture fisheries management, where additional capacity development is needed. As the lead agencies for marine capture fisheries management within each of the RPOA participating countries, national fisheries agencies have an especially important role to play. These roles and responsibilities include:

- + advocating and coordinating human and institutional capacity development among national, and where relevant provincial, fisheries agency staff in support of this Framework
- + creating internal conditions in which capacity development is valued, encouraged and supported at the most senior levels of government
- + investing in capacity development to the maximum extent possible using internal funds
- + actively seeking external funds from donors and other development partners to support additional capacity building
- + ensuring that staff with newly acquired skills are given the opportunity to use their skills in a 'live' environment, and that new skills are institutionalised within the agency
- + providing incentives to ensure that staff who receive training are retained by the agency and/or pass on skills to others
- + advocating for fisheries capacity development needs to be given prominence in national whole-of-government capacity development plans and initiatives

- + identifying, in coordination with relevant institutions, areas where domestic training capacity is lacking, and develop solutions to meet the need (for example strengthen domestic training capacity; secure training from a regional centre of excellence)
- + ensuring national capacity development priorities are continually reviewed against current and emerging needs
- + reporting national progress against the Framework to the RPOA Coordination Committee.

Technical institutions

Regional and national technical institutions have an important role to play in the delivery of the measures recommended in this Framework. Regional institutions, such as SEAFDEC, APFIC and WorldFish, can act as centres of excellence and have a particularly important role in training and skills development where domestic training capacity is weak or absent. Regional institutions also have an important role in coordinating and delivering capacity building programs on region-wide needs, as well as strengthening domestic training capacity by 'training the trainers' in RPOA participating countries.

At the national level, domestic technical institutions, such as fisheries training colleges and universities, will form the front line in the delivery of many of the training needs identified in this Framework. This study suggests that, at present, the training capacity and courses offered among many domestic technical institutions are not well aligned to the marine capture fisheries priorities identified by RPOA participating countries in this Framework. Domestic university courses are frequently aquaculture-focused, while fisheries training colleges typically remain focused on fisher skills training and gear technology. Despite the continuing importance of marine capture fisheries to the economies of almost all RPOA participating countries, few institutions at the domestic level offer training in fisheries stock assessment, management planning or compliance. A key strategic need under this Framework is to strengthen the marine capture fisheries management skills training capacity in RPOA participating country domestic institutions, and to better align investments in training with the priorities highlighted in this Framework.

Donors

While primary responsibility for capacity development lies with RPOA participating countries themselves, donors have a crucial role to play both in facilitating capacity development initiatives as well as creating the institutional conditions to ensure the benefits of capacity building endure.

Resources to invest in capacity development in many RPOA participating countries are often limited and donors will have a critical role to play in funding new initiatives to strengthen capacity in priority areas highlighted in this Framework. Similarly, donors can play an important role in maximising the benefits of investments by ensuring grant and loan conditions provide incentives to retain strengthened capacity and encourage new skills to be applied.

A range of donors are already active or have interests in the RPOA participating countries. These include development lenders (for example Asian Development Bank, World Bank), state-based aid agencies (for example AusAID, Danida, USAID), philanthropic organisations and environmental NGOs. While many of the existing donor activities will be driven by pre-agreed priorities and funding frameworks, RPOA participating countries should encourage donors in the region to consider the priorities outlined in this Framework when examining country and sector priorities. A proposed process to encourage active engagement between RPOA participating countries and donor organisations to this end is proposed in the 'Next Steps' section below.

As is the case with all major donors, active participation of end users in the design, implementation and review of capacity development initiatives is critical.

RPOA Secretariat

The role and responsibilities of the RPOA Secretariat in the implementation of this Framework should be agreed by participating countries and must be commensurate with its available resources. In the current situation, where comparatively modest resources are available, the RPOA Secretariat's role may be limited to monitoring the progress of each country in the implementation of the Framework and assisting, where requested by a participating country, in the coordination of regional capacity development initiatives. In the future, if RPOA participants choose to dedicate additional resources, the Secretariat may play a more active role. Responsibilities the Secretariat might take on include:

- + actively updating the priorities in the Framework periodically (for example every two years) to ensure continuing relevance
- + assist in seeking funding support from development agencies and other potential partners to implement priorities identified in the Framework
- + assisting participating countries develop supporting national plans for action to support the implementation of, and report progress against, the Framework
- + actively identifying opportunities through which RPOA participating countries can develop capacity among one another

- + facilitating new regional initiatives to strengthen RPOA understanding of fisheries resources and capacity for management (for example the development of an RPOA country joint stock assessment mechanism).

Progress towards the implementation of the Framework should be made a standing item on the agenda of meetings of the RPOA Coordination Committee.

5.5 Measuring success

Measuring the success of capacity building programs is critical to ongoing management and monitoring, though is not always straightforward. Developing indicators of performance requires careful thought to ensure relevance to target stakeholders.

The main entities responsible for measuring progress against this Framework are the RPOA participating countries themselves. Progress will be reported through the Coordination Committee of the RPOA. We suggest monitoring be undertaken against three types of indicators, namely 'outputs', 'outcomes' and 'impacts'.

Outputs

Output indicators describe and record what has been done to build capacity. For example, the types and number of courses run, the numbers and levels of people who attended, the focus and content of the courses and so on. Measurement of outputs provides evidence of the level of action being taken to build capacity against the plan.

Outcomes

Outcomes indicators report the level of success in capacity development activities. For example, the number of people who successfully completed a training course and the new skills attained. Measuring outcomes provides an indication of the effectiveness of capacity development initiatives, including things that could have been done better or differently.

Impacts

Impact indicators measure the effect of capacity development initiatives on the performance of individuals and organisations; for example, the ability of a fisheries management institution to control fishing capacity or undertake robust stock assessments. Impact can be measured at both short and long term. Impact indicators provide a measure of the extent to which capacity building activities have been translated into 'on the ground' results, such as a change in stock abundance and changes in the numbers of registered vessels/ fishing capacity, and fishers and fishing licences.



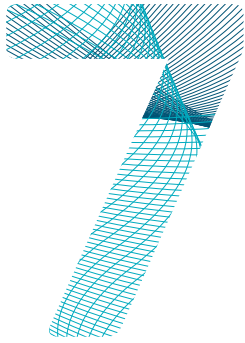
Next steps

Through a participatory process, this study has developed a clearer understanding of the capacity building needs and priorities of RPOA participating countries in relation to the management of their marine capture fisheries, and has translated this into a Framework to assist and guide future capacity building investments.

As emphasised by participants in the regional workshop in Vietnam in November 2010, progress towards the Framework goals and objectives will necessarily be limited without committed follow-up action by key stakeholders at both national and regional levels. The roles and responsibilities of the main stakeholder groups in implementing the Framework are outlined in the previous section (Section 5.4).

Accepting that the development of a capacity building framework is the first step in a longer term process, the following activities are recommended to help deliver real and lasting benefits to RPOA participating countries.

1. The RPOA should serve as the lead forum to oversee, facilitate and encourage the implementation of the Framework among its participating countries with the RPOA Secretariat tasked to provide an initial focal point, commensurate with available resources.
2. A follow-up workshop should be convened to bring together key partner entities (relevant national, regional and international institutions, and interested donor agencies) to develop a plan of action to progress the agreed priorities of the Framework. Key tasks for this meeting should be to:
 - a. establish a coalition of the key partner entities to plan and support future activities under the Framework, including consideration of the administrative and structural arrangements needed to facilitate and coordinate the required action
 - b. develop an agreed plan of action including a list of specific activities aimed at the highest priority needs, giving realistic attention to targeted funding and other support resources. Recognition should be given to relevant ongoing or recently completed related activities both inside and outside the RPOA region
 - c. review possible activities at national or sub regional levels with particular attention to opportunities for cross sharing of resources and experience between countries.
3. Taking into account the outcomes of the follow-up workshop, participating countries, with the assistance where necessary of partner entities, should begin specific projects to build capacity according to their priority needs under the Framework, and include clear performance targets and deadlines for project deliverables.
4. Participating countries should report at the annual meeting of the RPOA Coordination Committee on the action taken in support of the Framework priorities.
5. RPOA participating countries should agree a process to regularly review and update the priorities listed in this Framework. This process should be participatory in nature and designed to ensure the Framework remains responsive to emerging needs and priorities.



Definitions, Acronyms and Abbreviations

Definitions

‘Region’ or ‘regional’ in the context of this Framework means the waters of the 11 participating countries of the RPOA.

‘Capacity development’ – the process by which individuals, groups, organisations, institutions, and societies develop their abilities – both individually and collectively – to set and achieve objectives, perform functions, solve problems and to develop the means and conditions required to enable this process¹⁷.

‘Fishery’ – The marine environment, the resources harvested, and the people involved in both fishing and handling the catch.

‘Fisheries management’ – The application and monitoring of controls on fisheries activities in support of established goals and objectives. Thus, fisheries management is not in itself a goal or objective; rather, it is the means to reach defined goals and objectives. For example, if the goal is rational utilisation of snapper and grouper species stocks within certain conservation guidelines, a possible management measure might be restrictions on the levels of fishing effort.

Acronyms and Abbreviations

APEC	Asia-Pacific Economic Cooperation
APFIC	Asia-Pacific Fisheries Commission
ASEAN	Association of South East Asian Nations
CA	FAO Compliance Agreement
CBD	Convention on Biological Diversity
CCRF	FAO Code of Conduct for Responsible Fisheries
CPUE	Catch per unit effort

EAFM	Ecosystem Approach to Fisheries Management
EEZ	Exclusive Economic Zone
ETP	Endangered, threatened and protected species
EU	European Union
FAO	Food and Agriculture organisation of the United Nations
FFA	South Pacific Forum Fisheries Agency
GDP	Gross Domestic Product
ICT	Information and communication technology
IUU	Illegal, Unreported and Unregulated (fishing)
MCS	Monitoring, control and surveillance
MSY	Maximum sustainable yield
NGO	Non-government organisation
PSMA	FAO Port State Measures Agreement
RBFM	Rights-based Fisheries Management
RFMO	Regional Fisheries Management Organisation
RPOA	Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region
SEAFDEC	Southeast Asian Fisheries Development Center
TAC	Total allowable catch
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Fish Stocks Agreement
VMS	Vessel Monitoring System

¹⁷ Ibid, FAO (2009)

Appendix 1: Participating organisations

The following agencies and organisations participated during various stages in the preparation of this Framework:

National Fishery Administrations

- + Agri-Food and Veterinary Authority of Singapore (AVA), Singapore
- + Australian Fisheries Management Authority (AFMA), Australia
- + Bureau of Fisheries and Aquatic Resources (BFAR), Philippines
- + Department of Agriculture, Fisheries and Forestry (DAFF), Australia
- + Directorate of Fisheries, Vietnam
- + Department of Capture Fisheries & Resource Exploitation and Protection (DECAFIREP), Vietnam
- + Department of Fisheries Malaysia (DoFM)
- + Department of Fisheries (DoF), Thailand
- + Fisheries Department, Ministry of Industry and Primary Resources (MIPR), Brunei Darussalam
- + Fisheries Offices at Provincial and District level (Kalimantan and Manado, DKP), Indonesia
- + Ministry of Agriculture, Forestry and Fisheries, Cambodia
- + Ministry of Marine Affairs and Fisheries (MMAF), Indonesia
- + National Directorate of Fisheries and Aquaculture (NDFA), East Timor
- + National Fisheries Authority, Papua New Guinea (NFA)

National Research Institutions

- + Fisheries Research Institute Malaysia (FRIM)
- + The Institute for Aquatic Resource Economics and Planning (IAREP)
- + Marine Fisheries Research and Development Bureau (MFRDB), Thailand

- + Marine Fisheries Research Institute (RIMF), Vietnam
- + National Fisheries Research and Development Institute (NFRDI), Philippines
- + Research Centre for Fishery Management and Conservation of Fishery Resources (P4KSI), Indonesia

Other national organisations

- + Indonesian Navy
- + Indonesian Marine Police
- + Malaysian Maritime Enforcement Agency, Malaysia
- + Marine Border Police, Vietnam
- + Marine Department, Thailand
- + Marine Police, Thailand
- + Surveillance and Marine Fishery Resources (PSDKP), Indonesia

International Agencies

- + Food and Agriculture Organisation, Regional Office of the Asia Pacific (FAO RAP)
- + Asian Development Bank
- + European Commission, Delegation of Thailand
- + World Bank

National Donor organisations

- + AusAID
- + Danish International Development Agency (Danida)
- + Swedish International Development Corporation
- + US Aid

Non Governmental Organisations

- + World Wide Fund for Nature
- + Southeast Asian Fisheries Development Center (SEAFDEC)
- + WorldFish Centre

Appendix 2:

Regional workshop participants

The following people participated at the RPOA Regional Workshop held in Da Nang in November 2010 to assist in the development of this Framework.

RPOA Participating Countries

Australia

- + Mr Simon Veitch, Department of Agriculture, Fisheries and Forestry (DAFF)
- + Dr John Ackerman, Australian Embassy (Jakarta)
- + Mr Bruce Wallner, Australian Embassy (Jakarta)
- + Mr Murray Johns, Department of Agriculture, Fisheries and Forestry
- + Ms Kerry Smith, Australian Fisheries Management Authority

Cambodia

- + Mr Heng Sotharith, Department of Fisheries Affairs, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries
- + Mr Em Puthy, Department of Planning, Finance and International Cooperation, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries
- + Mr Poum Sotha, Marine Fisheries Administration Inspectorate, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries

Indonesia

- + Mr Ansori Zawawi, Surveillance on Marine Resource and Fisheries, MMAF
- + Mr Happy Simanjuntak, Directorate General of Marine and Fisheries Resources Surveillance
- + Mr Agus Apun Budiman, Directorate General of Capture Fisheries, Ministry of Marine Affairs and Fisheries

- + Ms Ida Kusuma Wardhaningsih, Monitoring for Marine and Fisheries Resources
- + Mr Andi Soesmono, Ministry of Marine Affairs and Fisheries
- + Dr Syahrowi R Nusir, Directorate General of Community Empowerment of Coastal Area, Ministry of Marine Affairs and Fisheries
- + Ms Renny Meirina, Directorate of Treaties on Political, Security and Territorial Affairs, Ministry of Foreign Affairs
- + Mr Budi Halomoan, Directorate of General Surveillance of Marine and Fisheries Resources, Ministry of Marine Affairs and Fisheries
- + Mr Ardiansyah, Directorate of General Surveillance of Marine and Fisheries Resources, Ministry of Marine Affairs and Fisheries
- + Mr Edwin Suharyadie, RPOA Secretariat

Malaysia

- + Mr Datuk Hj. Suhaili Bin Hj. Lee, Department of Fisheries Malaysia, Ministry of Agriculture and Agro-Based Industry

Philippines

- + Mr Atty. Benjamin Tabios, Department of Agriculture, Bureau of Fisheries and Aquatic Resources

Singapore

- + Mr Adrian Lim, Fisheries Ports Division, Food Supply Resilience Department, Agri-Food & Veterinary Authority of Singapore
- + Mr The Kihua, Fishery Ports Division, Food Supply Resilience Department, Agri-Food & Veterinary Authority of Singapore



Artisinal estuary fisher, Da Nang, Vietnam, Duncan Souter

Thailand

- + Dr Smith Thummachua, Overseas Fisheries Management & Economic Cooperation Group, Fisheries Foreign Affairs Division
- + Mr Pirochana Saikliang, Deep Sea Fishery Technology Research and Development Institute

Vietnam

- + Mr Le Tran Nguyen Hung, Department of Capture Fisheries and Resources Protection, Directorate of Fisheries, Ministry of Agriculture and Rural Development
- + Mr Trong Yen Pham, Department of Capture Fisheries and Resources Protection
- + Mr Nguyen Viet Manh, Department of Science, Technology and Directorate of Fisheries
- + Mr Chu Tien Vinh, Directorate of Fisheries, Ministry of Agriculture and Rural Development
- + Ms Nguyet Anh Dang, Division of Capture Fisheries, Department of Capture Fisheries and Resources Protection

Other Representatives/Organisations

- + Mr Duncan Souter, MRAG Asia Pacific
- + Dr Meryl Williams, Asiapacific – FishWatch
- + Mr Richard Banks, Poseidon ARM (Pty) Ltd
- + Mr Maurice Knight, Coral Triangle Support Partnership (USAID)
- + Mr Mike Akester, DANIDA
- + Keith Symmington, World Wildlife Fund
- + Mr Cao Thang Binh, Rural Development & Natural Resources, World Bank
- + Mr Jose Parajua, FAO Regional Fisheries Livelihoods Program Asia for South and Southeast (RFLP)
- + Mr Nguyen Song Ha, Regional Fisheries Livelihoods Program
- + Mr Baku Takahashi, Food and Agriculture Organization, Vietnam

Appendix 3: Context for Framework

This Appendix contains a full discussion of the Framework context first presented in Section 2.

A3.1 Overview of the RPOA region's fisheries

Marine capture fisheries are an important contributor to food security and wealth creation among the RPOA participating countries. Over 14 million metric tonnes of seafood is harvested annually, generating over US\$10 billion at the point of first sale.

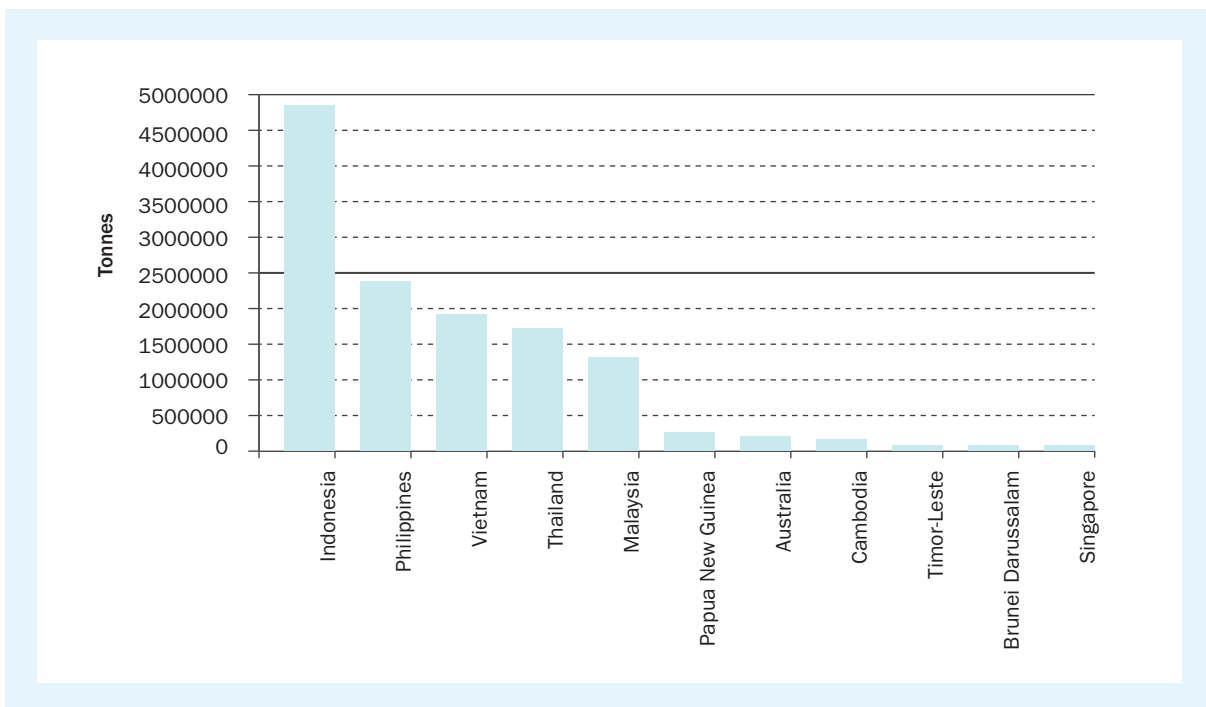


Figure 4: Marine capture fisheries production among RPOA participating countries in 2008. (Source: FAO FIGIS, 2011)

Collectively the region's fisheries account for up to 3% of national GDP and provide employment for 7.3 million fishers as well as many millions more allied fish workers, traders and upstream suppliers.

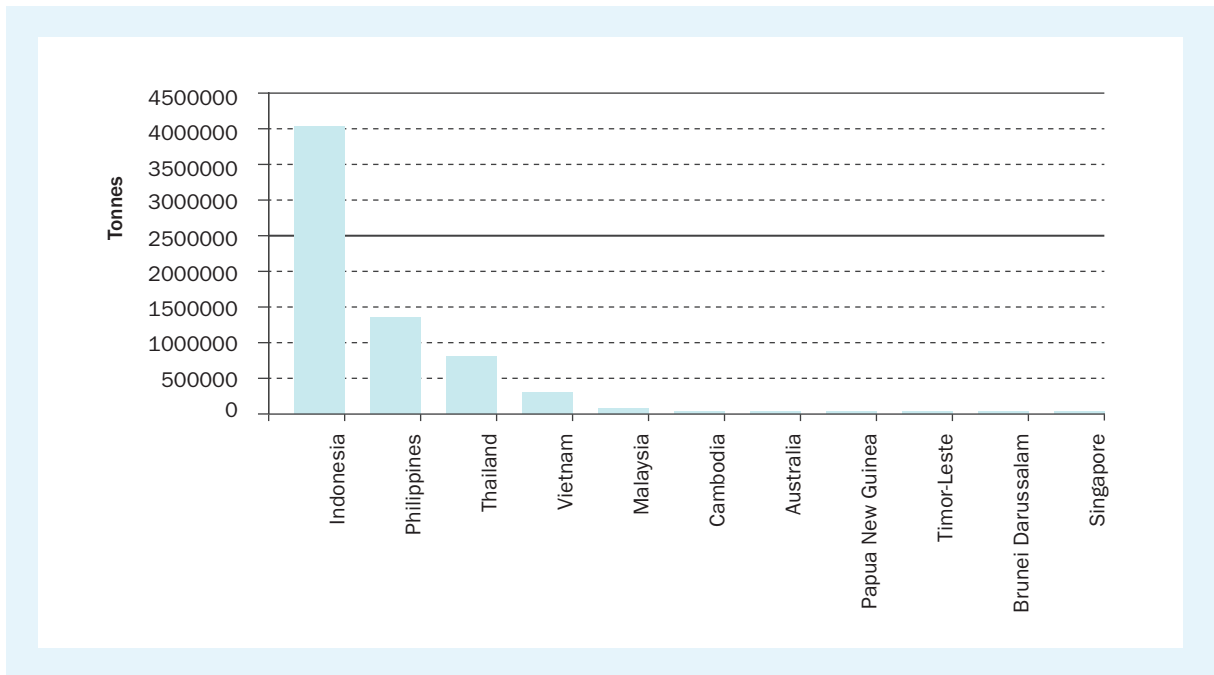


Figure 5: Estimated number of marine capture fishers in each of the RPOA participating countries. (Source: Estimates provided during country consultations)

The RPOA region's fisheries are also globally significant, representing 17% of world marine capture fisheries. Several countries rank in the top 20 marine fish producers, namely Indonesia (4th), Thailand (9th), Philippines (11th), Vietnam (12th) and Malaysia (16th)¹⁸.

Table 4: Contribution of fisheries to the economies of RPOA participating countries.

Country	GDP (US\$m)	EEZ (million km ²)	Total fisheries value (US\$m)	Fisheries contribution to GDP	Per capita fish consumption (kg)
Indonesia	423,817	2,700,000	5,069	1.2%	30.2
Philippines	144,129	1,700,000	2,162	1.5%	32.4
Thailand	245,531	319,750	1,570	0.6%	30.9
Malaysia	186,720	418,000	1,438	0.8%	50.1
Vietnam	71,174	700,000	702	1.0%	26.1
Papua New Guinea	6,032	3,120,000	166	2.8%	21.6
Cambodia	8,639	55,600	148	1.7%	25.0
Timor-Leste	453	61,500	4	0.9%	2.5
Brunei Darussalam	12,388	5,614	43	0.3%	34.4
Singapore	161,349	744	0.01	0.0%	17.4
Australia	945,674	8,940,000	1,403	0.2%	24.2

(Sources: Wikipedia.org; 2008 UN Statistical Bulletin; APFIC (2008) *Status and potential of fisheries and aquaculture in Asia and the Pacific 2008*; FAO Fish Stat; estimates provided during country consultations; capture fisheries value figures may include inland fisheries catches)

18 Meryl Williams and Derek Staples 2010. Southeast Asian Fisheries. In: Grafton, R. Quentin, Ray, Hilborn, Dale Squires, Maree Tait and Meryl Williams (Eds) 2010. *Handbook of Marine Fisheries Conservation and Management*. Oxford University Press, New York, p. 243-257.

RPOA region fisheries are the most species diverse fisheries in the world and are supported by the most globally biodiverse marine ecosystems¹⁹. Fisheries often target multiple species using different types of gear, with many increasingly relying on a collection of small fish species, now usually referred to as ‘trash fish’. The main target species groupings, gear used and areas harvested are outlined in Table 5. Around 1.3 million marine capture fishing vessels are active in the region, with more than 60% being small scale (i.e. less than five gross tonnes).

Table 5: Main fisheries in the RPOA region by species targeted, gear used and area.

Species	Gear	Country
Mixed demersal fish	Trawl	Vietnam, Thailand, Malaysia, Cambodia, Indonesia
Large tunas	Purse seine, longline, troll, pole and line	Indonesia, Philippines, Vietnam, Papua New Guinea, Australia
Small tunas and mackerels	Purse seine	Indonesia, Philippines, Malaysia, Thailand
Sardines and anchovies	Purse seine	Indonesia, Philippines, Vietnam, Malaysia, Brunei
Prawns	Trawl, trammel net	Australia, Indonesia, Malaysia, Vietnam, Papua New Guinea, Brunei, Philippines
Tropical reef fish	Hand line, demersal longline, traps	Indonesia, Philippines, Malaysia, Papua New Guinea, Australia, Brunei and Timor-Leste
Blue swimming crab	Trap, tangle net	Thailand, Vietnam, Cambodia and Indonesia
Mixed coastal	Static and drifting gill net, fixed net, push net and trap	All
Beche-de-mer, lobster	Hand collection	Papua New Guinea, Brunei, Malaysia, Australia, Indonesia
Shark	Longline, gillnets	Indonesia, Malaysia, Philippines, Vietnam, Papua New Guinea

While overall catches in the region have steadily increased, catch per unit of effort has generally declined, in some cases significantly. The historical focus on production in most countries has brought with it substantial increases in fishing capacity, both in numbers of vessels and in fishing power (for example through greater mechanisation, wide scale adoption of gear innovations such as fish aggregation devices and light fishing). In many areas, this increase in fishing capacity has outstripped the productive capacity of stocks and has resulted in declining catches, overexploited stocks and dissipated resource rents.

19 Census of Marine Life 2011. A Summary of the Census of Marine Life for Policy Makers. 14pp.

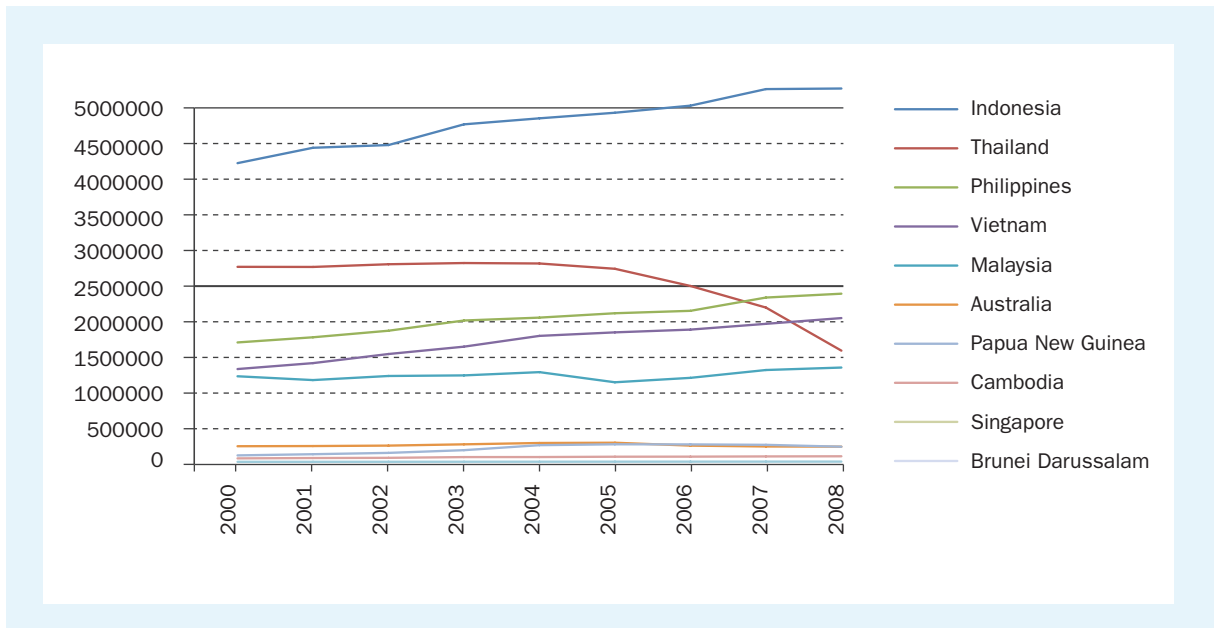


Figure 6: Trends in total marine capture fisheries production among the RPOA participating countries between 2000 and 2008. Overall increases in production can mask declines in individual species, as fleets switch targeting behaviour to new, less exploited species – a phenomenon known as ‘fishing down the food chain’. (Source: FAO FIGIS 2011)

A3.2 Main drivers

Population growth and the demand on coastal fisheries

Most RPOA participating countries continue to maintain population growth rates above the world average, much of which is concentrated in coastal areas²⁰. Indeed, the archipelagic countries (Indonesia, Philippines, Timor-Leste) are essentially coastal countries. This, coupled with a heavy reliance on fish for animal protein, has led to significant pressure on, and in many cases overexploitation of, coastal marine capture fisheries throughout South East Asia²¹. Sustaining demand by an increasing population for fish protein, while at the same time recovering stressed stocks and ecosystems, requires new approaches to management and different supporting skill sets from those of the past.

20 United Nations, Department of Economic and Social Affairs, Population Division (2007). World Population Prospects: The 2006 Revision, Highlights, Working Paper No. ESA/P/WP.202.

21 Silvestre, G.T., L.R. Garces, I. Stobutzki, M. Ahmed, R.A.V. Santos, C.Z. Luna and W. Zhou. 2003. South and South-East Asian coastal fisheries: Their status and directions for improved management: conference synopsis and recommendations, p. 1 - 40. In G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly (eds.) Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. WorldFish Center Conference Proceedings 67, 1 120 p.

Poverty and the need for food security

For many RPOA participating countries, artisanal marine capture fishers are among the ‘poorest of the poor’ (for example ^{22, 23, 24, 25}). Many traditional fishers do not have the skills necessary to access more lucrative sectors of the economy, while the largely open access nature of coastal fisheries means that fishing serves as an ‘option of last resort’ for many workers displaced

22 Janetkitkosol, W., H. Somchanakij, M. Eiamsa-ard and M. Supongpan. 2003. Strategic review of the fishery situation in Thailand, p. 915 - 956. In G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly (eds.) Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. WorldFish Center Conference Proceedings 67, 1 120 p.

23 Purwanto, 2003. Status and management of the Java Sea fisheries, p. 793 - 832. In G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly (eds.) Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. WorldFish Center Conference Proceeding 67, 1 120 p.

24 Barut, N.C., M.D. Santos, L.L. Mijares, R. Subade, N.B. Armada and L.R. Garces. 2003. Philippine coastal fisheries situation, p. 885 - 914. In G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly (eds.) Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. WorldFish Center Conference Proceedings 67, 1 120 p.

25 Son, D.M. and P. Thuoc 2003. Management of Coastal Fisheries in Vietnam, p. 957 - 986. In G. Silvestre, L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly (eds.) Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. WorldFish Center Conference Proceedings 67, 1 120 p.

from other sectors. Coastal fishing represents the only available source of income and animal protein for many millions of people, and the constraints associated with this – particularly in the context of already depleted coastal fish stocks –represents a significant policy and development challenge for the RPOA region.

Increasing global and local demand for seafood

Global demand for seafood has continued to increase in recent decades, driven in part by factors such as a growing population, the continuing emergence of an affluent Asian middle-class and an increasing recognition of the health benefits of seafood among developed world consumers. Similarly, local demand for fisheries products has also increased to supply cheap feed for the rapidly expanding aquaculture sector as well as post-harvest processing facilities. As a globally-significant region for the production of fisheries products, RPOA participating countries stand to benefit from increased demand. However, these opportunities must be balanced against the need to ensure the health and productivity of fish stocks and the ecosystems on which fisheries depend. Continuing to build the skills necessary to take advantage of favourable global markets, while at the same time supporting healthy domestic fisheries and fishing communities, is an important medium term challenge for RPOA participating countries.

Decentralisation

A common trend in the RPOA region in recent decades has been the devolution of authority from central to provincial/local levels²⁶. In the fisheries sector, decentralisation has meant that provincial and local authorities have taken responsibility for key functions such as preparation of local laws, licensing, data collection and enforcement. While devolution of management responsibility to the lowest appropriate level is consistent with the ecosystem approach to natural resource management²⁷, ensuring local level staff have the necessary skills, resources and institutional support structures to achieve their objectives is central to ensuring decentralised fisheries governance arrangements are effective. Some countries have taken decentralisation slightly further through

setting up community groups²⁸, which represent an opportunity for participatory local area management.

International obligations

The advent of the United Nations Convention on the Law of the Sea (UNCLOS) and other international fisheries and maritime instruments have brought great opportunity to RPOA participating countries through the declaration of 200nm EEZs and their associated privileges. However, with these significant rights also come significant responsibilities. In relation to living marine resources, UNCLOS requires coastal States to ensure, among other things, that living resources in their EEZ are not endangered by over-exploitation, to maintain harvested species at levels that can produce the maximum sustainable yield (MSY), to cooperate in the management of transboundary stocks and to share information with other States as appropriate²⁹. Ensuring the RPOA region as a whole meets international obligations arising from UNCLOS, as well as other instruments to which they are a party, is important in building future human and institutional capacity.

Increasing emphasis on market-based solutions

In response to growing evidence of the shortcomings of traditional 'top-down, command-and-control' fisheries management systems, there has been an increasing trend towards market-based solutions to support sustainable marine capture fisheries management. Interventions have both been regulatory by distant markets (for example EC Regulation 1005/2008-IUU) and non-regulatory (for example Marine Stewardship Council certification). Building the capacity of RPOA participating countries to best position their fisheries to take advantage of the opportunities afforded by new market-based approaches, while minimising any negative consequences, has been an important consideration in the development of this Framework.

26 Williams, M.J. (2007). Enmeshed! Australia and Southeast Asia's fisheries. Lowy Institute Paper 20: 147.

27 Secretariat of the Convention on Biological Diversity (2004) *The Ecosystem Approach*, (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 50 p.

28 The European Union and the Kingdom of Thailand supported the Coastal Habitats and resource Management Program, led to the creation of up 50 coastal fishery Tambon Groups (Sanchai Tandavanits, pers com, June 2010). Indonesia is in the process of setting up *Kelompok Masyarakat Pengawas* Dr Hartanta Tarigan, pers com, 1 July 2010, across a range of fisheries. The Regional Fisheries Livelihoods Program, coordinated by FAO and Spanish Government is supporting the development of community co-management groups across selected sites in Mindanao, Philippines, Timor-Leste and NTT, Indonesia (Don Griffiths, pers com August, 2010).

29 UNCLOS, Part V, Art. 61

Climate change

Recent research suggests that the economies of some RPOA participating countries are among the most vulnerable to the impacts of climate change on fisheries^{30, 31}. Marine fisheries within the SE Asian region are among the world's most sensitive – measured as a function of number and proportion of fishers, fisheries landings, relative value of fisheries-derived exports, and per capita fish protein as a proportion of total animal protein consumed – and have only a low to moderate capacity to adapt. Any impacts from climate change will disproportionately affect the poor. The need to build resilience in stocks and supporting ecosystems, as well as adaptive capacity among the fisheries sector to minimise the harmful impacts of climate change, is an important consideration in structuring future capacity development programs in the region.

Historical focus on production

The current position of RPOA country marine capture fisheries, together with the institutional structures and skill base of fisheries agencies, has been heavily influenced in many cases by a historical focus on production. National fisheries policies were often driven by the need to produce benchmark quantities of fish and considerable prestige was given to exceeding previous tonnages. In recent years however, in response to increasing evidence of marine capture fisheries decline and growing global trends towards more precautionary fisheries management, RPOA participating countries have begun the process of re-orienting national fisheries objectives around sustainability and responsible marine stewardship. While in some cases the push continues to expand marine fisheries catches through the development (for example) of offshore fisheries, many countries are focusing increasingly on approaches such as minimising post-harvest losses, value-adding through improved processing and new market and product development to underpin food security and economic growth. Notwithstanding that, while the philosophical basis of marine capture fisheries management has shifted, in many cases the sectoral, institutional and individual skill sets necessary to support the new approaches have not. Ensuring institutional structures and skill sets are linked to, and capable of supporting, the new management objectives is critical to their success and is a key aim of this Framework.

30 Allison, E, Perry, A, Badjeck, M, Adger, W. N., Brown, K., Conway, D., Halls, A., Pilling, G., Reynolds, J., Andrew, N., Dulvy, N. (2009). Vulnerability of national economies to the impacts of climate change on fisheries. *Fish and Fisheries*. 24pp.

31 Allison, E, Adger, W. N, Badjeck, M., Brown, K., Conway, D., Dulvy, N., Halls, A., Perry, A., Reynolds, J., (2005). Effects of climate change on the sustainability of capture and enhancement fisheries important to the poor: analysis of the vulnerability and adaptability of fisherfolk living in poverty. Final Technical Report. Project No. R4778J. Fisheries Management Science Program, UK Department for International Development. 60pp.

Inter-connectedness of the region's fisheries

The marine capture fisheries of the RPOA region are characterised by a high degree of inter-connectedness³². Many of the most socially and economically important stocks range across country borders and are dependent on ecosystems that are managed by multiple States; some fleets flagged by RPOA participating countries fish in other countries' waters (both legally and illegally); a high level of private sector intra-regional investment occurs in both the catching sector and land-based support infrastructure; and considerable intra-regional trade and marketing in fisheries products occurs. Moreover, RPOA participating countries face common internal pressures in relation to food security and coastal population growth, and external pressures such as climate change and trade and tariff obstacles. This high degree of inter-connectedness argues for a high degree of regional cooperation and coordination in the management of shared assets to achieve common goals of sustainability, food security and economic development.

Limited management resources

With very few exceptions, the resources available to undertake marine capture fisheries management, science and enforcement in the RPOA participating countries are very limited. Budgets available to national and provincial fisheries departments are constrained by limitations in overall national budgets, and by the need to compete for available resources with other departments which are often afforded higher priority. Budgetary limitations are not new, nor are they likely to ease in the foreseeable future. As a result, RPOA participating countries recognise the strategic need to maximise the effectiveness of limited resources at each of the provincial, national and regional levels – in short, there is a need to “work smarter, not harder”. Capacity development interventions should be conscious of prioritising initiatives that seek to better use existing resources, and promote increasingly cost-efficient ways of achieving RPOA fisheries objectives and obligations.

A3.3 Main Challenges

Overcapacity

Overcapacity within the harvesting sector is perhaps the central challenge facing marine capture fisheries in the RPOA region. While some countries have deliberately maintained capacity at precautionary levels, others are now faced with fleets that are in some cases up to 50%

32 Williams, M.J. (2007). Enmeshed! Australia and Southeast Asia's fisheries. *Lowy Institute Paper* 20: 147.

above that required to harvest the available resources efficiently (for example ^{33, 34, 35, 36, 37}). Overcapacity in turn has led to depletion of stocks, degradation of marine and coastal environments, increased conflicts among sectors, dissipated resource rents, reduced rural incomes and heightened incentives for non-compliance and IUU fishing. Reducing fishing capacity to sustainable levels while continuing to provide food security and sustainable livelihoods, particularly for poor fishers, is a central challenge for the RPOA region.

Depleted marine capture fisheries

While stocks of some important species remain in relatively good health, many important stocks and fishing grounds within the RPOA region are depleted, some severely. Evidence of depletion comes not only from lower catches but from changes in the community composition of fished ecosystems, evidence of fishing down and through food webs, and an increasing reliance on 'trash' fish.

Weak management of ecosystems effects

The historical focus of many RPOA participating countries has been on maximising fisheries production both for food security and for wealth and employment generation. Efforts have been focused on maximising harvests and improving fishing efficiency, with less attention paid to monitoring and managing the impacts of fishing on the environment. With increasing community and market attention focused on ensuring sustainable fisheries, strengthening management of non-target species impacts, including meeting obligations under instruments such as UNCLOS and the CCRF, is an important challenge for the RPOA region.

33 Squires, D., I. H. Omar, Y. Jeon, J. Kirkley, K. Kuperan, and I. Susilowati. 2003. Excess capacity and sustainable development in Java sea fisheries. *Environment and Development Economics* 8:105-127 (Indonesia)

34 Luna, C.Z., G.T. Silvestre, M.F. Carreon III, A.T. White and S.J. Green (2004) Sustaining Philippine marine fisheries beyond "turbulent seas": A synopsis of key management issues and opportunities. Pages 345-358 in Silvestre, G. and Luna, C. (eds) *In turbulent seas: the status of Philippine marine fisheries*. Coastal Resource Management Project, Department of Environment and Natural Resources, Cebu City, Philippines, 378 pp (Philippines)

35 Schmidt U. W. & Marconi M. Assessment of Fishing Capacity in Thua Thien Hué Province. *Integrated Management of Lagoon Activities (IMOLA)*, DARD/FAO, 2010 Schmidt U. W. & Marconi M. Assessment of Fishing Capacity in Thua Thien Hué Province. *Integrated Management of Lagoon Activities (IMOLA)*, DARD/FAO, 2010 (Vietnam)

36 Global Partnership for responsible fisheries, National Seminar on the Reduction and Management of Commercial Fishing Capacity in Thailand, Cha-Am, Thailand, 11-14 May 2004, FAO, 2005 (Thailand)

37 Taupek, M. and Nasir, M. (2003) Monitoring, measurement and assessment of fishing capacity – the Malaysian experience. Pages 127–142 in Pascoe, S. and Gréboval, D. (eds) *Measuring capacity in fisheries*. FAO Fisheries Technical Paper 445: 314pp (Malaysia)

Sectoral conflict

Conflict among fishing sectors is a feature of the marine capture fisheries in many RPOA participating countries³⁸. Conflicts occur both between sectors – for example, between commercial and artisanal sectors over gear and the distribution of fisheries benefits – as well as among sectors – for example, over different types of gear within the artisanal sector. Conflicts are driven in large part by systemic problems of overcapacity and weak enforcement and will intensify as fisheries resources become scarcer. Addressing issues of overcapacity and creating conditions for the effective prevention and resolution of conflict is a key challenge for RPOA participating countries.

Weak information collection and analysis systems

The information base upon which much of the RPOA region's fisheries are managed is inadequate to support effective implementation of the FAO Code of Conduct for Responsible Fisheries and other contemporary management approaches³⁹. Logbooks and other fishery dependent information tools are absent from large parts of both commercial and artisanal sectors and, where they exist, catches are frequently only reported in general terms⁴⁰. Few robust fishery-independent monitoring programs (for example fishery observers, VMS, port sampling) exist. Similarly, good estimates of MSY and other analyses have not been performed at either the national or stock-wide level for many important species. Strengthening the capacity among RPOA participating countries to provide managers, politicians and other decision makers with good information on the status and trends of important commercial species is central to strengthening management performance.

Low catches/incomes and dissipated resource rents

Overexploitation and overcapacity in marine capture fisheries has led to reduced incomes for artisanal fishers and the dissipation of resource rents in commercial fisheries across much of the RPOA region. In the artisanal sector, where fishing is the main source of income and animal-based protein, falling catches provide an incentive to fish harder, reinforcing overexploitation. In the commercial sector, severe overcapacity means resources are harvested

38 Ibid, Silvestre et al (2003)

39 Meryl Williams and Derek Staples 2010. Southeast Asian Fisheries. In: Grafton, R. Quentin, Ray, Hilborn, Dale Squires, Maree Tait and Meryl Williams (Eds) 2010. *Handbook of Marine Fisheries Conservation and Management*. Oxford University Press, New York, p. 243-257.

40 Lymer, D., Funge-Smith, S., Clausen, J & Miao, W (2008). *Status and Potential of Fisheries and Aquaculture in Asia and the Pacific 2008*. FAO-RAP, Bangkok. 90p.

inefficiently (for example total vessel operating costs are higher than they should be; juveniles of higher value fish are taken while harvesting lower value trash fish) and the potential value of the sector to the broader economy is diminished. Recent estimates put the loss of resource rent associated with overcapacity in one sector of one RPOA country alone at approximately US\$74 million⁴¹.

IUU fishing and weaknesses in law enforcement

High levels of IUU fishing and weaknesses in law enforcement capacity are a concern in many parts of the RPOA region. Agnew et al (2009) estimated the average annual IUU catch in the western and central Pacific Ocean at between 786,000t and 1,730,000t and US\$707million and US\$1557 million during the 2000-2003 period⁴². IUU fishing can be undertaken by foreign vessels illegally accessing another State's EEZ, or by domestic vessels fishing outside of established management arrangements. In both cases, significant incentives exist for IUU fishing within the region. These include taking advantage of higher catch rates in closed areas or under-report catches to avoid local taxes. Many of the drivers of IUU fishing are intensified by the effects of overcapacity and overfishing. Strengthening the capacity of RPOA participating countries individually and collectively to police their waters (including ensuring effective control of nationals) will be critical to supporting the implementation of new measures to reduce capacity and to recover overfished stocks.

Misalignment of political and management objectives

The needs of responsible stewardship of marine resources and the needs of political decision making process do not always align well. The requirement to exercise long-term restraint in the harvest of marine fisheries, for example, often runs counter to short-term political imperatives to provide employment and food to constituents and to demonstrate continued increases in production. Promoting awareness of the need for responsible stewardship among all parts of the fisheries decision making chain, as well as the societal conditions in which good governance and responsible environmental stewardship are supported, will be critical to achieving RPOA participating countries' objectives for marine capture fisheries.

Making decentralisation work

41 FAO (2005). Report of the National Seminar on the Reduction and Management of Commercial Fishing Capacity in Thailand, Cha-Am, Thailand, 11-14 May 2004 . FAO/FishCode Review No. 13. 59pp.

42 Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, et al. (2009) Estimating the Worldwide Extent of Illegal Fishing. PLoS ONE 4(2): e4570. doi:10.1371/journal.pone.0004570



Tonngol tuna, Songkla, Thailand, Richard Banks

A central challenge in the context of the increasing emphasis towards decentralisation of management within RPOA participating countries is to make decentralised arrangements “work”. While considerable progress has been made in introducing a legal basis for decentralisation, less attention has been paid to ensuring that roles and responsibilities between national and local agencies are clear, that adequate systems are in place to support and coordinate activities within and between levels, and to ensure staff and institutions with management responsibility at the local level have the necessary skills and structures to discharge their responsibilities effectively. Ensuring each of these needs is adequately addressed will be critical to ensuring the success of national aspirations for decentralised management.

A3.4 Overview of current capacity

In the preparation of this Framework, assessments of the current capacity for marine capture fisheries management were undertaken of each RPOA participating country. Assessments were undertaken in conjunction with staff from national fisheries agencies, as well as other related institutions (for example provincial fisheries agencies, fisheries research and MCS agencies).

Current capacity was assessed against five core areas:

1. governance and legislation
2. fisheries management planning
3. fisheries science and economics
4. monitoring, control and surveillance
5. international engagement.

While each of the participating countries had its own mix of capacity strengths and weaknesses, some overall trends were evident across the region. These are summarised in Table 6.

Table 6: Current capacity strengths, weaknesses and capacity development opportunities among the RPOA participating countries.

Assessment category	Strengths	Weaknesses	Opportunities
Governance and legislation	<ul style="list-style-type: none"> + Many countries have strong core legislation in place + Strong interest in upgrading legislation to take account of CCRF and other international obligations + Consultation processes exist (though often informal) + Sufficient human resource capacity in many participating countries + Many national policies increasingly being realigned from a singular focus on economic growth to sustainable development 	<ul style="list-style-type: none"> + Some countries have not upgraded legislation to account for CCRF, UNCLOS and EAFM + National objectives often remain focussed on near-term economic growth at the expense of sustainability + Decentralisation has led to challenges in implementing management measures + Disjoint between management decisions and policy objectives 	<ul style="list-style-type: none"> + Upgrading legislation to support international obligations as well as making provision for new concepts (for example RBFM) + Improving recognition of the importance of sustainable marine fisheries to influence enabling environment + Improved coordination across national, provincial and local areas + Strengthened consultation through formalised structures + Ensuring clarity in institutional roles and responsibilities + Stronger public performance reporting obligations (for example stock status, institutional performance) + Strengthening capacity for internal training needs analysis
Fisheries Management	<ul style="list-style-type: none"> + National policies advocate balancing harvesting capacity against productive capacity of stocks + Core processes in place to allow for implementation of harvest control tools: decrees, administration orders and regulatory structures + Most countries have in place 'national red lists' covering protection of ETPs + Some participatory planning through Advisory Committees + Human resources available to implement management planning with adequate training 	<ul style="list-style-type: none"> + Historic lack of progress in managing access to resources, and containing growth in fishing capacity + Limited understanding of precautionary and ecosystem based approaches to fisheries management + Limited management of ecosystem effects of fishing + Little training in fisheries management planning available through domestic institutions + Severe budget constraints in many countries and little support for cost recovery + Little available information upon which to develop management plans 	<ul style="list-style-type: none"> + Development of fishery specific management plans including fisheries specific goals, objectives, harvest control strategies and means to monitor performance + Incorporate precautionary and ecosystem based approaches to management + Address overcapacity and open-access nature of many fisheries + Implement alternative livelihood strategies as a core tool in a package of measures to control capacity and effort + Establish clear links between fishery specific management plans and national goals and objectives + Ensure roles and responsibilities clearly defined and supported in fisheries legislation

Assessment category	Strengths	Weaknesses	Opportunities
Fisheries science and economics	<ul style="list-style-type: none"> + Government and academic research establishments are in place covering stock assessment, economics and gear technology + Commitment exists to strengthen data collection systems + Strong desire to strengthen scientific analytical capability + Human research capacity is available in many countries 	<ul style="list-style-type: none"> + Few formal structures to feed the results of scientific research into management planning + Weaknesses in information collection + Limited domestic training available in fisheries science, particularly in techniques relevant to SE Asian fisheries (for example multi-species, multi-gear stock assessment) + Weaknesses in formal institutional linkages and coordination between fisheries managers, scientists and economists + Budget constraints + Insufficient research on economic and social impacts 	<ul style="list-style-type: none"> + Strengthen formal process to integrate scientific advice into management decision making + Strengthen fishery dependent and independent data collection systems; strengthen electronic information management systems + Improve participation of stakeholders in scientific and economic research + Need for budgetary commitments to strengthen research capacity to support fisheries management planning + Strengthen research planning to ensure limited resources are targeted at highest priorities + Strengthen capacity of domestic institutions to deliver relevant technical training + Promote regional centres of excellence
Monitoring Control and Surveillance (MCS)	<ul style="list-style-type: none"> + Most countries have implemented, or are in the process of reviewing penalties to act as effective deterrents + Some exporting States have Competent Authority status for the EC Regulation 1005/2008 - IUU + Resources available from multiple agencies in most countries + Adequate human resources available in many countries + Commitment to strengthening MCS software and hardware + Strong commitment among senior managers and fishery officers 	<ul style="list-style-type: none"> + Budget constraints + Little recognition of the risks of non-compliance, particularly domestic (as opposed to cross border) non-compliance + Dispersed nature of fishing activity can result in compliance problems in remote regions + Weaknesses in coordination between various national agencies involved in MCS + Limited training in MCS techniques available domestically + Few MCS systems currently in place in many countries (for example VMS, fishery observers, dockside inspections) + Weak compliance information management and analysis systems 	<ul style="list-style-type: none"> + Improved national resourcing commitments to MCS + Strengthened coordination among national agencies involved in MCS (for example through National MCS Coordination Committees) + Improved use of techniques to encourage voluntary compliance among fishers + Greater application of formal risk assessment and compliance planning techniques to ensure limited resources are targeted most effectively + Strengthened MCS information management systems, to collect, store, exchange and cross-verify information + Strengthened application of community monitoring systems based on best practice + Improved rollout of the RPOA MCS curriculum

Assessment category	Strengths	Weaknesses	Opportunities
International engagement	<ul style="list-style-type: none"> + Strong engagement in regional technical and trade fora (for example APEC, ASEAN, APFIC, SEAFDEC) + Increasing participation in RFMOs + Increasing international MCS cooperation 	<ul style="list-style-type: none"> + Limited history of involvement and participation in international fisheries management arrangements (for example RFMOs, UNFSA) + Limited awareness of obligations of RFMO membership; data systems in many countries inadequate to support effective participation + Few complementary management arrangements in place for shared and common stocks + Little data sharing and joint scientific assessment of shared and common stocks + Limited coordination between countries within the region on MCS + Funding constraints prevents attendance at key meetings 	<ul style="list-style-type: none"> + Strengthened participation in international fisheries forums and agreements, consistent with RPOA participating countries' key role in global fisheries and fisheries trade + Training to support improved participation in RFMOs for the management of shared stocks + Strengthened regional support for complementary management arrangements on transboundary stocks + Establishment of a platform for scientific data sharing and joint assessments of shared and common stocks + Greater levels of regional cooperation in MCS

Appendix 4: Regional capacity development priorities

This Appendix contains a full discussion of the regional capacity development priorities first presented in Section 4.

A4.1 Fisheries management planning

Fisheries management planning offers a means of drawing together the main components of fisheries management – harvest strategies and control rules, fishing capacity management, mitigation of ecosystem effects, fisheries science and economics, and MCS arrangements – into a framework structured around agreed goals and objectives. The existence of agreed goals and objectives can in turn help better focus limited information collection and MCS resources on priority areas, as well as provide a structure for performance assessment and reporting (i.e. are we meeting our objectives or not?) and adaptive management. Fisheries management plans also better position RPOA participating countries to take advantage of global trends towards independent certification, and provide a framework to apply many of the initiatives agreed in the CCRF such as precautionary and ecosystem approaches, reference point-based approaches and adaptive management.

Despite the relatively widespread adoption of fishery specific management plans in many parts of the world, few dedicated plans exist within the RPOA region. Many fisheries remain influenced by broad national production-based objectives, and are often managed at a level too coarse to be effective (for example, by a single TAC set across all species in an EEZ). RPOA participating country representatives at the regional workshop in Vietnam in November 2010 identified the need to strengthen management frameworks surrounding the main fisheries as an important regional need (see Appendix 2 for a list of workshop participants). Capacity building to support improved fisheries management planning has been requested

across a range of complementary areas including the development of fishery specific management plans, the ecosystem approach to fisheries management and the use of participatory planning techniques.

Main capacity building needs: Development of fishery specific management plans

(Level of priority: Regional–Highest)

RPOA participating countries recognise the value in developing fishery-specific management plans for the main fisheries in the region and have identified capacity building in fishery specific management planning techniques as an important priority. Important elements in this training will be the setting of fishery-specific management objectives, the use of reference points and harvest control rules and the process of adaptive monitoring and review. Given the nature of the region's fisheries, particular interest was expressed in capacity building to support the development of management plans suited to the region's needs and fisheries, such as for multi-species and multi-gear fisheries with a range of different scales of fishing operations.

Ecosystem Approach to Fisheries Management

(Level of priority: Regional–Highest)

The Ecosystem Approach to Fisheries Management (EAFM) is a way of managing fisheries that balances the different objectives of society (for example environmental/economic/social). EAFM encourages a planning focus not just on the target species, but on the wider impacts of the fishery on the environment, as well as the social, economic, institutional and governance systems supporting the fishery. RPOA participating countries noted that early efforts had been made by APFIC and other groups to promote understanding and use of EAFM in recent years, and requested additional capacity building to help operationalise EAFM across the region.

In particular, participants noted the capacity for EAFM approaches to assist in the management of the bycatch and ecosystem effects of fishing which have received little attention across the region until recent years.

RPOA participating countries noted that EAFM was both compatible and complementary to the use of fishery-specific management planning described above.

Participatory planning techniques

(Level of priority: Regional–Highest)

Experience has shown that the active participation of all interested stakeholders is critical to effective management planning. Participatory planning techniques serve to capture local and traditional knowledge on fisheries resources and ecosystems, promote understanding of management arrangements and the need for management, as well as encouraging voluntary compliance with management measures among other things. While some countries have longstanding mechanisms to involve stakeholders in the management planning process (for example Fisheries and Resource Management Councils in the Philippines, Management Advisory Committees in Australia), others remain dominated by the fisheries management agency or agencies. All RPOA participating countries recognise the benefits of participatory planning and have agreed that capacity building in participatory planning approaches is an important priority. In particular, many countries noted the need to establish new, or strengthen existing, institutional structures to support participatory planning and noted considerable opportunity for RPOA participating countries to learn off one-another by highlighting successful examples within the region.

A4.2 Fishing capacity management

Overcapacity is central to many of the region's fisheries problems. Many fisheries remain open access and capacity assessments suggest that for many of the main stocks, current fishing capacity is significantly above the level required to harvest the stock efficiently. Overcapacity in turn can result in overharvesting, dissipation of resource rents, conflict between different fishing sectors and increases in incentives for IUU fishing among other unwanted outcomes.

Virtually all of the RPOA participating countries have identified the better management of fishing capacity as a national priority. Many have identified specific strategies to address overcapacity – for example, the introduction of rights-based fisheries management (RBFM) approaches – however, some have requested additional capacity building support to assist with implementation. Others have identified capacity building in more fundamental areas such as vessel licensing and registration systems.

Main capacity building needs:

Vessel licensing and registration

(Level of priority: Regional–Highest)

Capacity building to strengthen vessel registration and licensing schemes was rated as the highest priority across the RPOA region to support better management of fishing capacity. Effective vessel licensing and registration is central to managing and monitoring fishing capacity, as well as underpinning a range of critical management tools and functions such as logbook programs and effective MCS regimes. Very few of the participating countries have robust systems in place; with the exceptions of Australia and Malaysia, RPOA participating countries identified a need to strengthen their licensing and registration systems across all, or parts, of their fleet. In some cases, problems in licensing system design are also compounded by weak or ineffective information management systems and a lack of coordination between decentralised authorities involved in registration.

Rights-based fisheries management

(Level of priority: Regional–Moderate)

Rights-based fisheries management (RBFM) is a means of managing fisheries by assigning rights to a share of the stock. A number of approaches can be taken ranging from simple limited-entry arrangements, where the number of participants in a fishery is capped, to more sophisticated community-based territorial rights or individual transferable effort or quota systems. The Master Plans of several RPOA participating countries advocate the use of RBFM approaches as a means of capping and controlling fishing capacity, particularly among commercial/ industrial fisheries, but also to a lesser extent among artisanal/coastal fisheries. In support of these policies, many participating countries identified the need for additional training in the effective implementation of RBFM systems. As with a range of other priorities identified here, particular interest was shown in RBFM systems that might be effectively applied in tropical multi-species and multi-gear fisheries, including those with large numbers of participants. Particular interest was also shown in study tours or similar initiatives, where participants could be exposed to examples of RBFM systems that have been effectively implemented in similar situations elsewhere.

Alternative livelihoods and livelihood support

(Level of priority: Regional–Low)

The creation of alternative livelihoods, or livelihood support options, for displaced fishers is central to achieving enduring capacity reduction in marine capture fisheries at the least possible socio-economic cost. This is particularly the case in coastal fisheries given the heavy reliance on these fisheries for livelihoods

and animal-based protein in many RPOA participating countries. Alternative livelihoods can take many forms – most attention to date has focused encouraging displaced fishers to move to coastal aquaculture – however, the more successful schemes tend to meet a number of consistent criteria: they allow the displaced fisher to remain in the local area, they provide an equivalent (or better) form of income, they are culturally appropriate, they build on the pre-existing skills of the fisher and assistance is provided with upfront investment costs.

Given the widespread need for capacity reduction in the region, RPOA participating countries considered capacity development was required in the planning and implementation of alternative livelihoods programs to support capacity reduction. Particular emphasis was placed on building capacity by providing exposure to successful alternative livelihoods programs in the region.

Commercial capacity reduction schemes

(Level of priority: Regional–Lowest)

A number of participants in interviews undertaken in the development of the Framework also requested training in the design and implementation of commercial capacity reduction schemes, such as vessel or license buybacks. After discussion at the Regional Workshop however, RPOA participants considered this a much lower regional priority in this theme than those highlighted above. A primary reason for this reluctance was because of alternative budgetary priorities and the overall financial burden of schemes.

A4.3 Strengthening information systems

Access to timely and accurate information on catch, effort, fishing capacity and other important parameters is central to effective marine capture fisheries management. Information is required to monitor the effectiveness of management arrangements, undertake stock assessments, monitor production and trade for the purposes of national taxes and duties and meet obligations as a party to international fisheries instruments, among other purposes. While robust information systems exist in some parts of the RPOA region, significant strengthening is required in others. Fishery-dependent information (for example catch and effort logbooks) is currently collected from only a small portion of the region's fleets, and fishery-independent information systems (for example fishery observers, port monitors, VMS) are not yet widely applied. As a result, the information available to fisheries managers is often insufficient to support effective management.

Most RPOA participating countries identified the need to strengthen information collection and management as an important national priority. Capacity building

is required across a range of complementary areas including fisheries-dependent and independent monitoring systems, information management and the monitoring of fisheries trade. At the regional workshop, participating countries recognised the order of priority within this theme will depend on the unique circumstances of each country. Countries that have strong fishery-dependent systems may require assistance with the establishment of independent observer or port monitoring programs to help verify fishery-dependent information. Countries with little or no data collection at present may require assistance to build an effective information system from 'the ground up'. Accordingly, investments within this theme should be informed by the unique circumstances of each country and developed with the participation of relevant stakeholders.

Main capacity building needs:

Design of information collection systems

(Level of priority: Country specific)

Given the limited resources available for information collection in many parts of the RPOA region, adequate planning is essential to ensure available resources are targeted at priority areas (for example linked to fishery specific objectives). A number of countries requested assistance to review and strengthen their existing information collection arrangements, as well as strengthening the capacity of officers in the design of information collection and management systems. This was particularly the case in countries, such as Timor-Leste, that had little history in information collection and management.

Strengthening fishery-dependent information systems

(Level of priority: Country specific)

Several countries currently collect little or no information on catch, effort and/or capacity from large parts of their marine capture fleets. This is particularly the case for the coastal or artisanal sector, but is also true for some important parts of the commercial, industrial sector. Moreover, where catch and effort information is required, some of it is reported in a form that is of limited value to management. For example, in 2008, 14.3 million tonnes or 30% of capture fisheries production in Asia and the Pacific was not reported to species, genus or family level⁴³. Reporting catch in this way can mask underlying serial depletion of individual stocks as well as overfishing of juveniles of commercially important species.

43 Lymer, D., Funge-Smith, S. & Miao, W. 2010. Status and potential of fisheries and aquaculture in Asia and the Pacific 2010. FAO Regional Office for Asia and the Pacific. RAP Publication 2010/17. 85 pp.

Capacity building is required in many parts of the region to strengthen commercial logbook and other fishery-dependent systems. This may include the design of effective logbooks, extension of logbooks to those parts of the fleet not currently reporting, establishment of arrangements for the collection, processing, verification and storage of logbook data and capacity building to train fishers in logbook reporting.

Strengthening fishery-independent information systems

(Level of priority: Country specific)

Fishery-independent monitoring systems, such as fishery observers, port sampling and trawl and other fishing surveys, offer a means to independently verify information collected from fishers, as well as collect valuable information independent of targeting and other biases inherent in fishery-dependent information. Well-designed fishery-independent information collection systems can also offer a cost effective alternative to fishery-dependent systems where the costs or practical difficulties of individual fisher logbooks are prohibitive, as well as provide valuable information on individual fish weight and length and fishery discards. While some RPOA participating countries have strong fishery-independent monitoring systems in place, many have few systems or operate only sporadic surveys (for example project-funded trawl surveys). Many countries requested capacity building in the design and implementation of fishery-independent monitoring programs, most notably the use of fishery observers, VMS and port samplers.

Strengthening information management

(Level of priority: Country specific)

Effective information management systems to collect, store, process and exchange information are critical to a range of fisheries management functions including licensing, science, compliance and the like. Many RPOA participating countries identified weaknesses in their information management arrangements, ranging from the absence of effective infrastructure (for example databases, software), to weaknesses in coordination among national agencies and between national and provincial levels, weaknesses in relevant skills for officers responsible for information management (for example inability to interrogate information systems, cross-verify data, etc), and insufficient resources to allow for necessary data input and quality control. Assistance is required to strengthen information management arrangements based on the individual needs of each RPOA country. Particular consideration should be given to any regional initiatives to harmonise arrangements for data collection terminology, formats and exchange mechanisms.

Strengthening monitoring of fisheries trade

(Level of priority: Country specific)

Seafood is one of the world's most widely traded commodities, with global exports valued at a record US\$102 billion in 2008⁴⁴. Several RPOA participating countries are key players in international seafood trade, with both Thailand and Vietnam ranked in the world's top five exporters. In addition, other RPOA participating countries such as Papua New Guinea, have longstanding ambitions to increase the percentage of fish taken in their waters that is processed domestically. A number of countries identified a need to strengthen trade monitoring and market intelligence to best capitalise on new developments in international trade. This included ensuring the price competitiveness of domestic processors, supporting efficient tax and duty arrangements and staying abreast of emerging products and consumer demands.

A4.4 Strengthening the scientific/economic basis for fisheries management

Quality analysis of the main biological, ecological and socio-economic status and trends in marine capture fisheries is critical to support effective management. Analytical products can include stock assessments of main species, environmental impact assessments of particular fishing gear and economic impact assessments of alternative policy options to name a few.

While some RPOA participating countries reported access to strong analytical capacity, many highlighted a need to further develop domestic scientific and economic capability. For example, several reported little internal capacity to perform stock assessments of the main species. In other cases, analytical capability exists; however, a lack of resources prevents application. In still other cases, participating countries highlighted a need to strengthen arrangements to effectively integrate analytical outputs, such as stock assessments, into management decisions making.

Main capacity building needs:

Strengthening scientific analytical capacity

(Level of priority: Regional–Highest)

The need to strengthen scientific analytical capacity was rated by RPOA participating countries as the highest priority within this theme. Robust assessments of the status of main stocks are critical to fishery

⁴⁴ FAO (2010). The State of World Fisheries and Aquaculture. FAO Fisheries and Aquaculture Department. FAO, Rome, 2010.

specific management and monitoring as well as informing broader policy priorities. Many countries reported little domestic training capacity in fisheries science and stock assessment, with most internal technical institutions focused either on aquaculture or fisheries operations (for example gear technology) training. Many also noted that stock assessment courses which are run are typically based on models of temperate, not tropical, fisheries. Particular capacity development needs identified by RPOA participating countries included stock assessment and risk assessment in data poor situations, as well as stock assessment in multi-species and multi-gear fisheries.

Integrating scientific advice into management planning

(Level of priority: Regional–High)

The effectiveness of scientific outputs depends not only on their relevance and accuracy, but also on their effective uptake into the management decision making process. Several RPOA participating countries noted that scientific advice and outputs were not always effectively integrated into management planning. In many cases, the net impact of this has been that catches have been allowed to continue above sustainable levels.

Assistance is required in the development of structures and processes to ensure scientific outputs are considered and integrated into the management planning process. A number of models exist in the region – for example, Australia’s Commonwealth Resource Assessment Group/Management Advisory Committee structure – and opportunity exists for RPOA participating countries to mentor each other.

Economic impact analysis

(Level of priority: Regional–Moderate)

The capacity to accurately assess the consequences of alternative policy and management approaches is an important component of informed planning. Economic impact analysis allows for the economic, employment, trade and other consequences of management actions to be assessed, and measures to mitigate impacts designed. Such techniques will become increasingly important as strengthened management measures are applied across the region (for example measures to reduce fishing capacity). Many RPOA participating countries have identified a need to strengthen their capacity for economic impact assessment. This includes strengthening skills among relevant economic agencies as well as increasing the level of resources available for assessment purposes.

Strengthening capacity to monitor and manage the impacts of climate change

(Level of priority: Regional–Low)

Recent research suggests that the economies of some RPOA participating countries are among the most vulnerable to the impacts of climate change on fisheries. Marine fisheries within the SE Asian region are among the world’s most sensitive – measured as a function of number and proportion of fishers, fisheries landings, relative value of fisheries-derived exports and per capita fish protein as a proportion of total animal protein consumed – and have only a low to moderate capacity to adapt. Any impacts from climate change will disproportionately affect the poor. Capacity building is required to strengthen the ability of RPOA participating countries to monitor the impacts of climate change on marine capture fisheries and to develop strategies to adapt to the impacts that are relevant to local circumstances.

Research planning

(Level of priority: Regional–Lowest)

In addition to the priorities above, some participating countries identified a need to strengthen research planning. Few countries have formal research plans either at the national level or for their main fisheries. Given the limited resources available for scientific and economic research available in many countries, ensuring research investments are targeted at the highest priority issues is an important consideration. On balance however, research planning was rated as a lower priority than others within this theme.

A4.5 Effective decentralisation

The marine capture fisheries management system in most RPOA participating countries now includes some form of decentralisation. As part of these arrangements, agencies at the provincial or local levels have taken on increasing responsibility for a range of essential management functions such as preparation of local fisheries plans, licensing, data collection and enforcement. The devolution of management authority to local levels is consistent with the ecosystem approach to natural resource management, however ensuring local level staff have the necessary skills, resources and institutional support structures to achieve their objectives is central to ensuring decentralised fisheries governance arrangements are effective. It is also essential in decentralised arrangements that strong systems for coordination exist between national and local structures.

Most RPOA participating countries identified the need to strengthen the effectiveness of decentralised management arrangements as a key capacity building need. Similar to the ‘strengthening information systems’ theme above, the precise needs of each RPOA participating country will differ based on the nature of their decentralisation arrangements and local circumstances.

Main capacity building needs:

Strengthened coordination between national/provincial levels

(Level of priority: Country specific)

Many RPOA participating countries pointed to weaknesses in coordination between and among levels important in decentralised management arrangements and requested support in developing effective mechanisms to strengthen coordination. Weak coordination can result in ineffective implementation of management arrangements, cost inefficiencies and increased scope for IUU fishing among other negative outcomes. The need for coordination will depend on the demarcation of management responsibilities between levels. For example, where a number of provinces have management responsibility for different parts of the same inshore stock, strong coordination is required to ensure complementarity of arrangements. Where vessel registration and licensing is demarcated between national and provincial authorities, coordination is required to ensure the accuracy of vessel records for purposes of compliance and determining overall levels of fishing capacity.

Strengthening capacity for implementation at provincial level

(Level of priority: Country specific)

Many countries reported weaknesses in the implementation of fisheries management arrangements at the local level. This was driven by limits on available resources, an incomplete understanding of the relevant responsibilities, and insufficient training and implementation skills. The specific capacity building needs of each local agency will be dependent upon its respective roles and responsibilities. Local agencies responsible for data collection may require training for enumerators. Those responsible for compliance may require training in fisheries law, voluntary compliance techniques, evidence collection and case development.

Community-based fisheries management/co-management

(Level of priority: Country specific)

Community based fisheries management (CBFM) is an approach that cedes to local users groups, either formally or informally, the rights and responsibilities for managing their own resources, typically using a mix of traditional and more formalised mechanisms to define access, exploitation methods and intensity. CBFM provides a means of enlisting the local community in fisheries management, and can be particularly effective where government capacity and resources to manage fisheries at the local level are limited. A number of successful examples of CBFM exist among the RPOA participating countries (for example Phang Nga Bay in Thailand). Several RPOA participating countries requested additional training in CBFM techniques and in particular exposure to successful case studies elsewhere in the region.

A4.6 Strengthening MCS

Robust monitoring, control and surveillance systems are essential for effective marine capture fisheries management. IUU fishing and other fishing activity that occurs outside of agreed frameworks undermines the economic benefits associated with fisheries, can increase pressure on already stressed stocks, undermines the accuracy of stock assessments and can lead to increased poverty among coastal communities dependent on fishing.

Most RPOA participating countries identified strengthening MCS systems as a high priority capacity development need. Unlicensed fishing by both foreign and domestic vessels, under-reporting of catch, non-compliance with licence conditions and weak information systems were all reported as key challenges in a 2008 survey of RPOA participating countries. While some countries have strong MCS systems in place (for example vessel registration, VMS, observers, dockside inspection), others require significant strengthening to provide effective support to fisheries management measures. Given the limits on available resources in the region, and the high cost of many MCS measures, an important driver is the need to make the most effective use of limited resources – in short, to ‘work smarter, not harder’.

Main capacity building needs:

Strengthening MCS information management systems

(Level of priority: Regional–Highest)

The highest priority need for MCS capacity building identified by RPOA participating countries is to strengthen electronic systems to collect, store, process and exchange MCS-related information. Effective information management systems can deliver direct improvements in MCS effectiveness by supporting efficient cross-verification of MCS data to identify areas of non-compliance, as well as indirect improvements by providing the information to support more effective compliance risk assessment and targeting of operational resources (for example through the development of ‘compliance indices’ for individual vessels). Effective MCS information systems are also critical to support the sharing of information both among the various agencies involved in MCS within a country, as well as with regional and international partners. Regional cooperation through the development and use of the existing RPOA regional and sub-regional MCS networks is a significant need. Capacity development assistance was requested by RPOA participating countries to establish and strengthen national MCS information management systems, as well as mentoring to ensure most effective use was made of the systems in the longer term.

National MCS Coordination

(Level of priority: Regional–High)

Most RPOA participating countries have a number of agencies that play a role in fisheries MCS. These can include the national fisheries agency, maritime police, navy, customs, port authority, attorney general’s department, foreign affairs department and provincial MCS agencies among others. Effective coordination among the various agencies is critical to the overall effectiveness of national MCS arrangements. For example, the navy and maritime police may require accurate, up to date licence lists to undertake effective at sea boarding and inspection. Customs or port authorities may require information on vessel registration and licensing, as well as technical advice on potential fisheries breaches, where they are responsible for monitoring fish landings and transshipments.

While some RPOA participating countries have pre-existing arrangements to facilitate coordination among national MCS agencies, several have no arrangements and others have measures that are not yet working effectively. Capacity building to assist with the creation of institutional (for example National MCS Coordination Committees) and operational (for example

Memorandums of Understanding on data sharing between fisheries agencies and surveillance providers) arrangements to facilitate strengthened national MCS coordination was identified by RPOA participating countries as an important priority. RPOA participating countries also noted an opportunity here to learn through exposure to successful structures operating in the region (for example Australia’s Border Protection Command).

Building entry/mid level MCS officer skills

(Level of priority: Regional–Moderate)

Middle and entry level officers often form the front line of MCS operations at the both national and provincial levels. Despite this, few dedicated MCS training courses exist for staff at this level within the region. Many countries highlighted the need to strengthen basic training of MCS staff as an important national priority and noted that weaknesses in the skills of lower level officers can undermine prosecutions as well as require large amounts of senior staff members’ time to provide backstopping support. The need for a uniform, entry level MCS curriculum has previously been agreed by RPOA participating countries and a model course under the RPOA framework was developed in 2009. Assistance is now required to strengthen the ability of relevant institutions within the region to deliver the course (i.e. training the trainers), as well as to provide financial support to implement.

Port state measures

(Level of priority: Regional–Low)

The legally-binding FAO Port State Measures Agreement⁴⁵ (PSMA) was agreed in 2009 as an important initiative to strengthen the monitoring of international fisheries trade, and thereby to prevent, deter and eliminate IUU fishing around the globe. Among other things, the PSMA requires foreign vessels to provide advance notice and request permission for port entry, obliges port States to conduct regular inspections in accordance with universal minimum standards, provides for offending vessels to be denied use of a port, or certain port services, and requires information to be shared between parties.

A number of the RPOA participating countries are key players in global fisheries trade (for example Singapore, Thailand, Philippines and Indonesia) and are well positioned to play an important role in supporting the aims of the PSMA. Many of these countries have long-established port control measures in place, however for those RPOA participating countries that choose to sign the PSMA, most will require capacity building to ensure effective implementation and alignment of existing programs to the terms of the PSMA.

⁴⁵ Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

Risk assessment/compliance planning

(Level of priority: Regional–Lowest)

Given the context of frequently limited resources available for MCS among the RPOA region, it is critical that available assets are targeted towards areas of highest risk to the achievement of provincial, national and regional fisheries goals. Risk assessment and compliance planning offers a structured means of identifying areas of highest risk and prioritising the use of available resources. Formal risk assessment techniques are widely and effectively used in fisheries compliance programs elsewhere in the world, though have received little application to date in the RPOA region. Capacity building is needed in the use of formal compliance risk assessment techniques and in the formulation of operational compliance plans to mitigate high risks.

Encouraging voluntary compliance

(Level of priority: Regional–Lowest)

In addition to the priorities highlighted above, a further need identified during in-country consultations was to strengthen measures to improve voluntary compliance with fisheries frameworks. Importantly in the context of the limited resources available for MCS in the region, cost effectiveness of MCS will be greatest when levels of voluntary compliance are highest. A number of techniques are available to encourage voluntary compliance including promoting understanding of fisheries management measures through education campaigns and participatory planning, as well as providing incentives for compliance through eco-labelling and the like. While RPOA participating countries considered the promotion of voluntary compliance an important aim, on balance, other initiatives within this category were given higher priority.

A4.7 Strengthening regional/international cooperation

The marine capture fisheries of the RPOA region are characterised by a high degree of inter-connectedness. Fish stocks and ecosystems are shared across national borders, the region's fleets share common supply chains and markets, and there is a high degree of intra-regional investment in fishing and post-harvest infrastructure, among other linkages. The high degree of inter-connectedness has led to recognition among RPOA participating countries that effective management of the region's marine capture fisheries requires new levels of cooperation. This recognition was an important stimulus for the development of the RPOA.

At the same time, RPOA participating countries occupy an important position in international fisheries as

custodians of globally-significant fisheries resources, as flag States operating vessels extra-territorially and as a key hub for global fisheries trade. Accordingly, RPOA participating countries are keen to play their part in multi-lateral and global efforts to conserve and manage marine capture fisheries.

Significant opportunities exist to strengthen the effectiveness of national and regional fisheries management through improved cooperation within the region and internationally. These opportunities exist at all levels – international, regional, sub-regional and bi-lateral – and across each of the main components of fisheries management (for example management, science, MCS). Capacity development is required to assist RPOA participating countries realise these opportunities.

Four specific areas for capacity development are identified below. Each was rated an equally important priority by RPOA participating countries.

Main capacity building needs:

Strengthening capacity for complementary management of transboundary stocks

(Level of priority: Regional–Moderate)

The RPOA region is home to a number of transboundary marine fish stocks, yet there are few formal arrangements currently in place to ensure complementarity of management between jurisdictions. Both UNCLOS and the CCRF encourage States to cooperate in the management of shared stocks, including through the development of new arrangements at the bilateral, sub-regional or regional level⁴⁶. All RPOA participating countries recognise the benefits of taking a 'whole of stock' approach to fisheries management, and support the development of new approaches to strengthen complementary management. This will require the establishment of new administrative and other structures to support complementary management, as well as training of relevant managers. Capacity building would likely benefit from exposure to successful examples of complementary management in other jurisdictions.

Strengthening capacity for joint stock assessment of shared stocks

(Level of priority: Regional–Moderate)

As well as opportunities in complementary management, considerable benefits exist for RPOA participating countries in strengthening regional capacity for stock assessments of common or shared stocks. A number of other regions already benefit from single assessment of shared stocks (for example,

⁴⁶ UNCLOS, Article 63; CCRF, Article 7.1

joint assessments of Pacific tuna stocks by the Secretariat of the Pacific Community). Among other benefits, joint assessments allow for leading edge stock assessments to be performed in a cost effective way, and may lead to improved accuracy by incorporating widespread coverage of data. At the national level, single assessments allow for each nation to focus on interpreting the results for implications in their own waters, rather than developing their own in-house stock assessment capacity. Strengthening the capacity for joint assessment of shared stocks will require the development of new cooperative arrangements, ideally including the development of a new regional stock assessment platform. Joint assessments may also require a number of supporting measures such as harmonisation of data collection terminology and formats, and procedures for information exchange.

Strengthening capacity for cooperative MCS

(Level of priority: Regional–Moderate)

Similar to joint regional stocks assessments, other regions have benefited significantly from cooperative approaches to MCS. For example, MCS arrangements among the 17 member countries of the South Pacific Forum Fisheries Agency (FFA) have benefited significantly from the establishment of a Regional Register of Fishing Vessels, a Regional VMS system, a Regional Observer Program, joint surveillance operations, Harmonised Minimum Terms and Conditions for foreign vessel access and harmonised catch and effort logbooks. Many of the same benefits are available to RPOA participating countries through improved cooperation, and some steps have already been taken at the bilateral level towards coordinated patrols and surveillance data sharing. Notwithstanding that, considerable additional scope exists for strengthened MCS through improved cooperation. RPOA participating countries have already agreed on the need for a Regional Network of MCS officials at a minimum, while a number of additional initiatives also require consideration – for example: data sharing on licence lists; cooperative port State enforcement between flag and port States; data sharing on prosecution results; development of regional risk assessments; development of a regional pool of observers; establishment of a regional VMS system; harmonised logbook and data collection arrangements; and harmonised information collection, storage and exchange arrangements. New institutional arrangements and capacity development will be required to support the implementation of any new measures.

Strengthening capacity for engagement in international instruments

(Level of priority: Regional–Moderate)

RPOA participating countries are important players in global fisheries yet, for most, their status has not

always been reflected in participation in international fisheries instruments. While involvement in technical and economic cooperation bodies has been strong (for example APEC, ASEAN, SEAFDEC, APFIC), many have, historically, participated at only low levels in key international fisheries conservation and management instruments – for example the UNFSA, the FAO CA and RFMO Conventions. This situation has changed somewhat in recent years with several RPOA participating countries, for example, joining relevant RFMOs, either as a full member or as a cooperating non-member. Nevertheless, additional capacity building is required to assist many RPOA participating countries to better engage in international fisheries instruments and play a role that appropriately reflects their significance to global fisheries.

A4.8 Strengthening administrative, legal and policy support

Effective legal, policy and administrative support arrangements are central to effective marine capture fisheries management. Collectively, these components create both the enabling environment to allow for effective management as well as the executive and administrative support to allow fisheries managers and other staff to undertake necessary tasks. While most RPOA participating countries have actively sought to strengthen their support mechanisms in recent years, most identified a number of areas in which additional strengthening was required.

Main capacity building needs:

Clarifying institutional roles and responsibilities

(Level of priority: Regional–High)

Most RPOA participating countries have a number of agencies, both at the national and provincial level, with some role in marine capture fisheries management. Most have a dedicated national fisheries agency with primary responsibility for fisheries, but other agencies can include provincial fisheries agencies, national and provincial environment agencies, various agencies involved in fisheries MCS, as well as those responsible for economic development and coastal planning. In many cases these agencies have mandates that are either unclear or overlapping. This, in turn, can lead to cost inefficiencies and ultimately to weak implementation or enforcement of management arrangements. RPOA participating countries identified the need to strengthen institutions by clarifying roles and responsibilities as the most important need within this theme.

Strengthening legal frameworks

(Level of priority: Regional–High)

An effective legal framework which provides the power to perform fisheries management functions, as well as meet national and international obligations, is an essential pre-condition to the sustainable development of marine capture fisheries. Most RPOA participating countries have the core components of an effective legal framework, however many identified that updating was required to incorporate relevant international obligations and modern management approaches (for example the precautionary principle, rights-based fisheries management systems, stock specific harvest strategies). A parallel analysis which benchmarked RPOA participating country legal frameworks against a 'model' set of obligations derived from UNCLOS, the CCRF and other relevant instruments, has identified a range of areas for each RPOA country that require strengthening⁴⁷. Support is necessary to assist countries update legislation in line with contemporary management approaches, international obligations and national aspirations.

Strengthening capacity of senior executives to promote importance of fisheries; influence political/resourcing decisions

(Level of priority: Regional–Low)

Marine capture fisheries play a critical role in providing for food security, wealth creation and coastal livelihoods among RPOA participating countries, yet their importance is not always reflected in national priorities. Budgets among marine capture fisheries agencies are frequently limited, and new funding is often invested in alternative opportunities, including aquaculture. As a result, even where technical capacity exists to perform many marine capture fisheries functions, a shortage of resources often limits the ability of fisheries agencies to perform them. A need identified by several countries was to help senior executives 'make the case' for fisheries in public and political processes, including budget funding rounds. Assistance could be provided in a number of ways including by producing new promotional and explanatory material highlighting the importance of sustainable fisheries, or through training in the preparation of more persuasive submissions.

Strengthened capacity for internal needs assessment

(Level of priority: Regional–Low)

Knowing the skills required to undertake effective marine capture fisheries management, and being able to self diagnose areas that require strengthening, are important components of running modern fisheries management agencies. While training and institutional needs assessments were regularly undertaken by some fisheries agencies, others identified a need to strengthen internal capacity in these areas. More effective needs assessments will help better target limited internal capacity development resources, as well as help maximise the effectiveness of interventions from donors and other potential investment partners.

Public Performance Reporting

(Level of priority: Regional–Lowest)

Public performance reporting on progress towards achieving provincial, national and regional goals is an essential component of good governance. The fisheries agencies of many RPOA participating countries already produce Annual Reports; however these are often focused largely on production and trade statistics. Few regular reports are produced, for example, on the status of main stocks or supporting ecosystems. One effect of this is that statistical reports showing ongoing increases in marine capture fisheries production – often driven by an increasing reliance on trash fish and fishing down, and through, the food chain - can mask underlying declines in the state of individual stocks. As a result, senior decision makers, who have legitimate aspirations to create more jobs and generate more revenue, can form the misplaced view that stocks are relatively healthy and can sustain more pressure. Capacity building is required to improve the level of public performance reporting across the RPOA, and in particular in relation to the biological health of main stocks. Several countries noted the potential value of regular status reporting on the health of main stocks in influencing public debate and the broader 'enabling environment' for more effective marine capture fisheries management. This need goes hand in hand with the need to strengthen scientific analytical capacity at both the national and regional levels.

⁴⁷ ANCORS (Unpub.) Framework Study for Model Fisheries Legislation in South East Asia, November 2010



Thai tuna purse seine, Songkla, Richard Banks

