

# Strengthening Sub-regional Cooperation to Enhance the Implementation of MCS in Southeast Asia

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Following the UN Fish Stocks Agreement entered into force in December 2001 ensuring the long-term conservation and sustainable use of straddling and highly migratory fish stocks within the framework of the United Nations Convention on the Law of the Sea (UNCLOS), the Southeast Asian countries through the regional cooperation promoted by SEAFDEC, have intensified their efforts in establishing a common measure through sub-regional based fisheries management. In view of the depleting trend of the stocks in many fishing areas in the Southeast Asian waters, especially the straddling stocks or migratory species, the Southeast Asian countries had deemed it necessary to adopt proper management actions to ensure the sustainable utilization of transboundary fish stocks. SEAFDEC therefore, with support from the SEAFDEC-Sweden Project has established the RPOA-Capacity for regional implementation under the framework of the IPOA-Capacity, and encouraged the Southeast Asian countries to also develop their respective NPOA-Capacity. One of the specific objectives of the RPOA-Capacity is to enhance regional cooperation on fisheries management and in managing fishing capacity by strengthening the aspect of monitoring, control, and surveillance (MCS) at the sub-regional level. Through the SEAFDEC-Sweden Project, four sub-regional areas in Southeast Asia have been defined, *i.e.* Gulf of Thailand, Andaman Sea, Sulu-Sulawesi Seas, and Lower Mekong River Basin. However, the focus for the regional MCS centers is on the Andaman Sea and the Gulf of Thailand. These sub-regions cover several bordering Southeast Asian countries that encounter common management issues as far as migratory species such as anchovies, neritic tunas, blue swimming crabs, and mackerels among others, are concerned. From the series of consultations among the bordering countries, multilateral cooperation was identified as a platform to promote fishing capacity management through the sub-regional cooperation in MCS.



Figure 1. Map of Southeast Asia showing four sub-regions that are given emphasis in the SEAFDEC-Sweden Project  
(Adapted from Wanchana et al., 2016)

Supported by the SEAFDEC-Sweden Project, SEAFDEC organized several bilateral and sub-regional dialogues among the concerned Southeast Asian countries for the sustainable management of the region's biodiversity and fisheries habitats that play a major role in enhancing the socio-economies and governance of the Southeast Asian region. In this regard, four sub-regions have been given more emphasis by the Project, *i.e.* Gulf of Thailand, Andaman Sea, Sulu-Sulawesi Seas, and Lower Mekong River Basin (Figure 1). The approach adopted by the Project is to establish collaborative arrangements in fisheries and habitat management for the Gulf of Thailand and the Andaman Sea, while making efforts also to support the processes of cooperation among the countries bordering Sulu-Sulawesi Seas and the Lower Mekong River Basin (Wanchana et al., 2016).

From the series of bilateral and sub-regional dialogues among the countries concerned, several common areas were identified to ensure the sustainable management of fisheries and combat illegal and destructive fishing activities in the Southeast Asian region. These concerns include among others, the adoption of efficient Monitoring Control and Surveillance (MCS<sup>1</sup>) system for effective control of fishing capacity and combat illegal, unreported and unregulated (IUU) fishing, destructive fishing, and encroachment by larger fishing vessels in coastal waters (Wanchana et al., 2016).

The review made by Yleaña and Velasco (2012) indicated that the establishment of a regional MCS network in Southeast Asia is important to strengthen the capabilities of the countries for combating IUU fishing and destructive fishing activities that impact on the sustainability of the region's fishery resources. At the outset, SEAFDEC with support from the SEAFDEC-Sweden Project convened several national consultations in the concerned countries to identify the priorities for cooperation with neighboring countries. These were followed

<sup>1</sup> Based on definition provided by FAO, the meaning of MCS is as follows (more details are provided in Box 3): Monitoring – the continuous requirement for the measurement of fishing effort characteristics and resource yield; Control – the regulatory conditions under which the exploitation of the resources may be conducted; and Surveillance – the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities (Davis, 2000)

by sub-regional meetings among the concerned countries to assess the national priorities and develop a workplan for the establishment of the MCS coordination body. Finally, MCS coordination body was established based on the modalities agreed during the sub-regional meetings.

## Sustainable Fisheries Production of the Southeast Asian Region by Combating IUU Fishing

In 2016, the Southeast Asian region contributes significantly to the world fish supply. In fact, most of the countries in the region belong to the world's top 10 producers of fish and fishery products. The fisheries production of Southeast Asia during that year totaled 45.3 million metric tons (MT) valued at more than US\$ 41.00 billion (SEAFDEC, 2017a), accounting for about 22 % of the world's total fisheries production in terms of volume. In order to maintain such production, SEAFDEC has been promoting several measures to combat illegal, unreported and unregulated (IUU) fishing activities in the region considering that IUU fishing has been recognized as a deterrent to the sustainable development of fisheries in the Southeast Asian region. The many forms of IUU fishing that occur in the region (Ali *et al.*, 2015) are shown in **Box 1**.

### Box 1. Forms of IUU fishing that occur in the Southeast Asian region (Ali *et al.*, 2015)

- fishing without valid license or registration document
- vessels with specifications that are different from those indicated in the fishing license
- double flagging
- fishing in waters outside the permitted or designated fishing areas
- operating prohibited fishing gears and methods
- landing of fish in unauthorized ports
- transferring of catch at sea, and unreporting or misreporting of catch
- unauthorized transshipment and landing of fish/catch across borders, *i.e.* fishing vessels operating in a country but transshipping or landing their fish/catch across borders without authorization, activities that are carried out not only by small-scale and commercial fisheries, but also double flagged fishing vessels
- poaching in the EEZs of other countries
- capturing and trading of live reef food fish, reef-based ornamental and endangered aquatic species by making use of irresponsible and illegal practices along the whole value chain, e.g. using chemicals and other unregulated practices to collect and trade live reef food fish, as well as reef-based ornamental and endangered aquatic species for consumption and for the aquarium industry
- shipping fish catch directly from fishers to importers without permission and proper documentation
- in the high seas and RFMO areas, fishing without permission or during out-of-season, using outlawed types of fishing gears, disregarding catch quotas, unreporting, and misreporting catch volumes and species

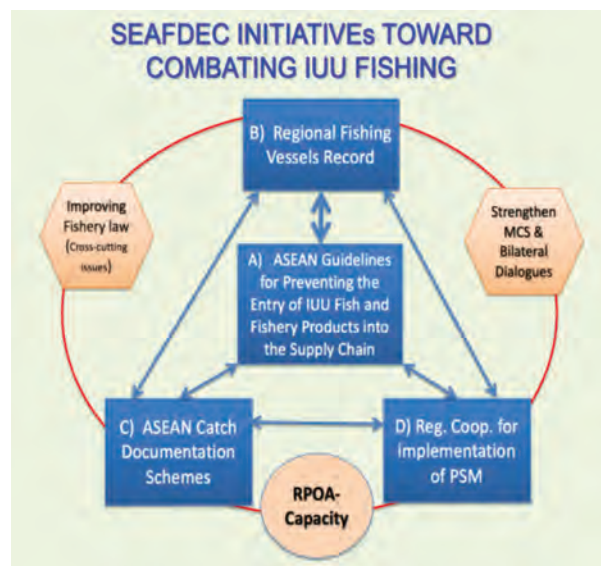


Figure 2. Initiatives of SEAFDEC and the AMSs towards combating IUU fishing in the Southeast Asian region

With the main objective of combating IUU fishing in the Southeast Asian waters, SEAFDEC has been promoting in the ASEAN Member States (AMSs) the ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain. Meanwhile, the AMSs have also made tremendous efforts in implementing several initiatives (**Figure 2**) that include the Regional Fishing Vessels Record for Vessels 24 Meters in Length and Over (RFVR-24 m), the electronic ASEAN Catch Documentation Scheme (eACDS) for Marine Capture Fisheries, and Port State Measures, as well as strengthening cooperation on transboundary issues through bilateral dialogues where the platform for harmonization has been provided by SEAFDEC with support from the SEAFDEC-Sweden Project.

## Stabilization of the Utilization of Global Fish Stocks

FAO (2018) reported that the portion of fish stocks (**Box 2**) that is within biologically sustainable levels had decreased from 90.0 % in 1974 to 66.9 % in 2015, while the percentage of stocks fished at biologically unsustainable levels increased from 10 % in 1974 to 33.1 % in 2015, with the largest

### Box 2. Classification of fish stock status

**Biologically sustainable levels** - stocks with abundance at or above the level associated with maximum sustainable yield (MSY)

**Biologically unsustainable levels** - stocks less abundant than the level needed to produce MSY

**Overfished** - having abundance lower than the level that can produce MSY

**Maximally sustainably fished** - having abundance at or close to the level of MSY

**Underfished** - abundance above the level corresponding to MSY

Source: FAO (2018)

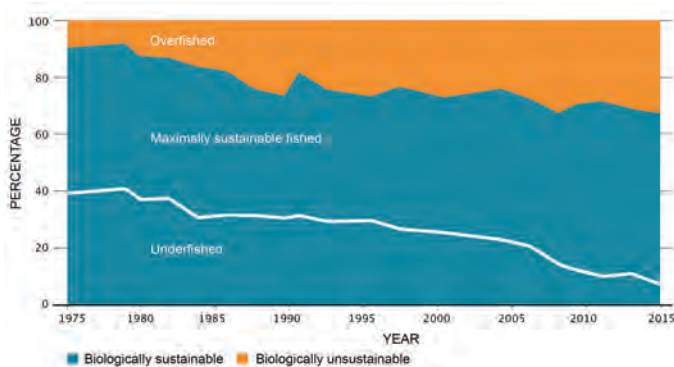


Figure 3. Global trends in the state of the world's marine fish stocks from 1974 to 2015  
(Source: FAO (2018))

increases in the late 1970s and 1980s (Figure 3). In 2015, the maximally sustainably fished stocks accounted for 59.9 % and underfished stocks for 7.0 % of the total assessed stocks (separated by the white line in Figure 3). While the proportion of underfished stocks decreased continuously from 1974 to 2015, the maximally sustainably fished stocks decreased from 1974 to 1989, and then increased to 59.9 % in 2015.

The ASEAN Member States (AMSs) recognize that there is a need to properly manage the fishery resources to sustain their contributions to the nutritional, economic, and social well-being of the world's growing population. Considering that the coastal and marine environments throughout the world have been reported to be overfished (Figure 3), especially the commercially important fish stocks while degradation of habitats continues to take place which is exacerbated by the effects of climate change, the AMSs have been conscientiously

improving the management of their respective countries' fish stocks through the promotion of monitoring, control, and surveillance (MCS).

## Promotion of Monitoring, Control, and Surveillance in the Southeast Asian Region

Recognizing the importance of the commercial fish stocks and their respective fisheries at the global scale, the FAO Member States unanimously adopted in 1995 the Code of Conduct for Responsible Fisheries (CCRF) as set of international standards of behavior for responsible practices with a view to ensuring the effective conservation, management, and development of living aquatic resources, with due respect for the ecosystem and biodiversity (FAO, 1995). These standards had been promoted at the regional, sub-regional, and national levels to ensure that the fisheries sector becomes more responsible in its behavior towards the utilization of the fishery resources. The governments and non-government organizations have considered the CCRF as the global standard for setting out the objectives of sustainable fisheries and aquaculture over the coming decades and as the basis for reviewing and revising national fisheries legislations.

In the Southeast Asian region, SEAFDEC has initiated in 1998 the Regionalization of the Code of Conduct for Responsible Fisheries to assist its Member Countries in the implementation of the CCRF at national levels. Through a series of regional consultations, the Regional Guidelines for Responsible Fisheries in Southeast Asia – Responsible Fisheries

### Box 3. The monitoring, control, and surveillance (MCS) concept

**Monitoring** involves the requirement of continuously observing, collecting, measuring, and analyzing data and information on fishing activities. In this context, monitoring includes the collection of data on all aspects of fisheries activities such as catch and landing data, VMS data, fleet structure, and profitability; monitoring of the status of fish stocks; monitoring of crew (based on lists of national and foreign citizens), and safety and health standards onboard vessels. Regional cooperation is necessary to be able to coordinate catch data collection and landing inspections, which form the basis to coordinate certification and catch data exchange leading to improved traceability of fisheries products and enhanced trade. Coordinated data collection also serves as the basis for flexible trade regulations and tax revenues to the countries. Regional MCS coordination could also build mechanisms for exchange of information on nationals working as crews on foreign vessels. Exchanging information on national measures for the management of transboundary fish stocks could lead not only to increased production of fish but also profits for fishermen and the countries in the region. The authorities involved in monitoring include the Port Authorities, Department of Fisheries, Customs and Trade, Enforcement Authorities, Immigration and Labor Departments of the countries.

**Control** refers to specifying the regulatory conditions (legal framework) under which the exploitation, utilization and disposition of the resources may be conducted. The aspect of control includes reviewing and revising national laws and regulations on management of vessels and gears, import/export laws, immigration and labor laws, and maritime safety rules. In some cases, national laws should be formulated and/or revised to ensure that these are implementable and controllable. However, for national laws on trade, immigration, maritime enforcement, and national measures referring to trans-boundary species, it is significant and potentially beneficial to strengthen coordination neighboring countries in order that relevant data and information are shared and compared (e.g. crew lists to fight trafficking and crew mistreatment, vessel licenses to stop double flagging, VMS data, suspected IUU fishing vessels, catches of transboundary stocks). Efficient cooperation among concerned countries facilitates all these aspects, improves revenues as well the efficiency of national authorities across borders.

**Surveillance** involves the degree and types of observations required to maintain compliance with regulations, such as surveillance of the activities connected to maritime enforcement and with regard to fisheries, e.g. port controls, port State measures controls, safety at sea and controls at sea of fishing gear, catch composition, crew and authorizations. Since some forms of cooperation between and among some of the countries in the region have already been established, e.g. bilateral basis, such effort would serve as starting point for a broader regional cooperation. Such regional cooperation is often restricted to enforcement authorities and could also benefit from a broader representation of authorities to increase understanding of areas that are not at the core of enforcement such a gear restrictions, species and catch compositions, crew rights.

Source: SEAFDEC (2003); Yleña and Velasco (2012); Hagberg (unpublished)



Management was developed taking into consideration the traditions and culture, fisheries structure, and ecosystems at the Southeast Asian context (SEAFDEC, 2003). In promoting the said Regional Guidelines, regional, sub-regional, and/or bilateral dialogues had been organized in the Southeast Asian countries to formulate measures that would enhance fisheries management through the adoption of MCS (**Box 3**). As one of the tools or mechanisms that could be used to keep track of the implementation of fisheries management plans, MCS is specifically aimed at maximizing the economic opportunities and benefits from State's waters within sustainable harvesting limits.

Therefore, through regional cooperation among the AMSs, exchange and sharing of information on MCS of fisheries and fisheries-related activities could be facilitated, which is a fundamental operating principle for the development of MCS networks (SEAFDEC, 2017b). Nonetheless, the responsibilities and institutional arrangements for MCS should start at the national level where national laws and regulations govern and control the fisheries sector. The scope of such a cooperation platform should then be adapted as appropriate as new issues and needs are highlighted by countries. For a sub-regional MCS cooperation, it is necessary that the actual needs of the countries are considered and the scope should be agreed in sub-regional meetings where all relevant authorities from the countries are represented. Moreover, the officers and staff from the respective countries should have the capability to exercise all the responsibilities under international laws.

### Establishment of MCS Networks in Southeast Asia

One of the required urgent measures for regional fisheries management in implementing the ASEAN Regional Plan of Action for Management of Fishing Capacity (RPOA-Capacity) is strengthening regional and sub-regional MCS networks among the AMSs (SEAFDEC, 2017b). The RPOA-Capacity supports the need to enhance regional cooperation on fisheries management and/or management of fishing

capacity in sub-regional areas such as the Andaman Sea, Gulf of Thailand, South China Sea, and Sulu-Sulawesi Seas. The RPOA-Capacity has been developed through dialogues, regional technical consultations, and expert meetings among the AMSs, organized by SEAFDEC with the funding support from the Japanese Trust Fund and the SEAFDEC-Sweden Project.

A special project implemented by SEAFDEC in cooperation with the ASEAN (under the ASEAN-SEAFDEC Strategic Partnership) and the AMSs, the SEAFDEC-Sweden Project had been implementing regional collaborative programs to clarify the relevant regional policies and priorities as well as support the national efforts in addressing habitat and fisheries management and the management of fishing capacity. Specifically, SEAFDEC and the SEAFDEC-Sweden Project had been promoting the importance of strengthening the MCS of fisheries-related activities through improved cooperation within and among the AMSs with focus on establishment of MCS networks in the sub-regions of Southeast Asia (**Figure 4**), namely: the Gulf of Thailand (involving Cambodia, Malaysia, Thailand, and Viet Nam), the Northern Andaman Sea (Myanmar and Thailand), and the Southern Andaman Sea (Malaysia, Indonesia, and Thailand).

### MCS Network in the Gulf of Thailand Sub-region

The Gulf of Thailand (**Figure 4**) is an inlet of the South China Sea surrounded by Cambodia, Malaysia, Thailand, and Viet Nam (SEAFDEC, 2018a). The Gulf is around 560 km wide and 725 km long covering an area of roughly 320,000 km<sup>2</sup>. It is relatively shallow where the average depth is 45 m and the maximum depth is 80 m. The Gulf is an important resource to the economies of the surrounding countries that benefit from fishing and aquaculture, tourism and recreation, agriculture, lumber, ports and shipping, oil rigs, among others. However, the coastal and marine environments in the Gulf of Thailand are now threatened because of overexploitation of the fishery resources, loss of habitats, and pollution as result of natural calamities as well as human activities.

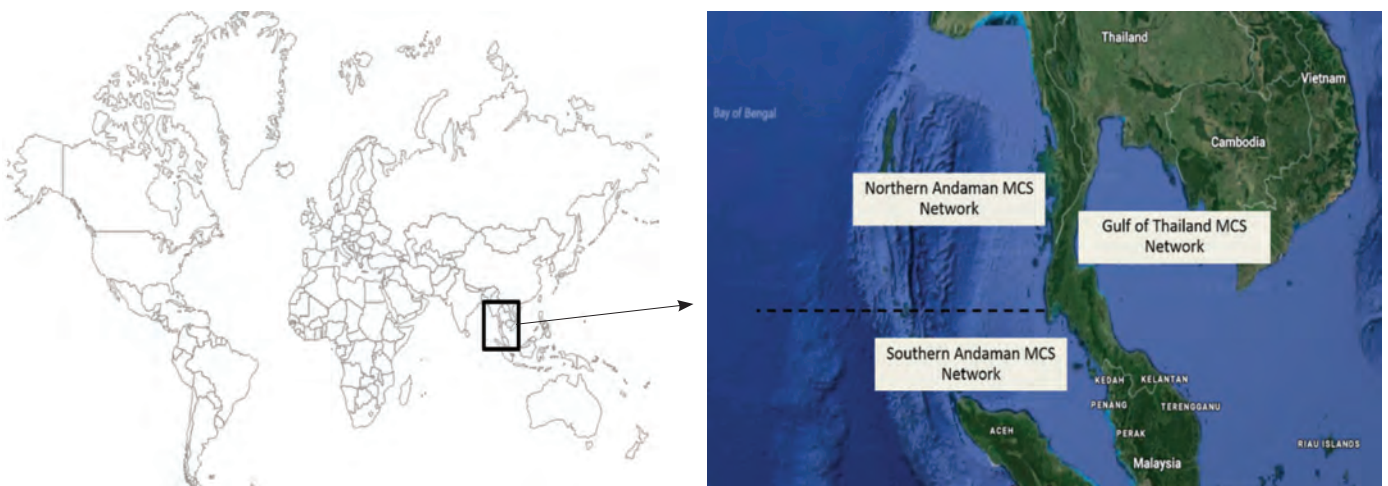


Figure 4. The Gulf of Thailand and the Andaman Sea sub-regions where regional MCS networks are being established

Since 2008, the SEAFDEC-Sweden Project had been organizing series of regional meetings and consultations among AMSs to address the environmental concerns in the Gulf of Thailand in order to protect, conserve, and rehabilitate important habitats and to maintain and improve the status of commercially important fish stocks by reducing fishing pressures in and around mangroves, sea grass beds, and corals reefs. The Project facilitated the management of fishing capacity as well as the promotion of cooperation on priority transboundary stocks through the integration of fisheries and habitat management.

Dialogues have been convened between Cambodia and Thailand, Cambodia and Viet Nam, Malaysia and Thailand, Malaysia and Viet Nam, Cambodia and Malaysia, and Thailand and Viet Nam. Special meetings with experts from the four Gulf of Thailand countries were also organized to assess the stock status and geographical distribution of anchovy, Indo-Pacific mackerel, and blue swimming crab, also known as AIB species in the Gulf of Thailand. From the results of such consultations and dialogues, the MCS network in the Gulf of Thailand Sub-region had been developed. This is meant to serve as platform for the concerned countries to enhance collaboration for the effective management of fishing capacity through exchange of information on fishing operations, fish stock status, as well as on catch and landing (SEAFDEC, 2018a). The potential benefits from the implementation of MCS network among the concerned countries are described in **Table 1**.

**Table 1. Potential benefits of MCS Network in the Gulf of Thailand Sub-region**

Issues	Cambodia	Malaysia	Thailand	Viet Nam
Improved control of IUU fishing and reduce IUU fishing	✓	✓	✓	✓
Facilitate import of raw materials		✓	✓	
Improved fishers welfare, well-being, and safety at sea	✓	✓	✓	✓
Improved control over the catches and income/taxes	✓	✓	✓	✓

Source: SEAFDEC (2018a)

### MCS Network in the Andaman Sea Sub-region

The Andaman Sea is a marginal sea of the northeastern Indian Ocean. It is 1,200 km long and 645 km wide with an area of 798,000 km<sup>2</sup>. About 5 % of the sea is deeper than 3,000 m and its northern and eastern part is less than 180 m deep because vast quantities of silt have been deposited by the Irrawaddy River at its delta, while the western and central half is 900-3,000 m deep. The Andaman Sea is well-recognized for its important habitats, rich biodiversity, and abundant aquatic resources that provide a wide variety of fishery products in

addition to employment opportunities for the peoples of the surrounding countries. However, the fishery resources are being threatened by overfishing and degradation of habitats. Among the Andaman Sea countries (Indonesia, Malaysia, Myanmar, and Thailand), there is an understanding on the need to cooperate on the management and utilization of transboundary stocks, conservation and protection of important habitats, and resilience and capacity building for climate change adaptation. Furthermore, the importance to improve the management of fishing capacity, including the initiation of sub-regional MCS networks together with development of port monitoring capacity and coordinated efforts to combat IUU fishing is well recognized. Under the SEAFDEC-Sweden Project, the Andaman Sea Sub-region had been divided into the Northern Andaman Sea and Southern Andaman Sea Sub-regions (**Figure 4**).

Since 2009, with cooperation with the Bay of Bengal Large Marine Ecosystem (BOBLME) Project, the SEAFDEC-Sweden Project organized series of Andaman Sea sub-regional meetings and consultations to develop mechanisms for regional cooperation among the Andaman Sea countries. Then, bilateral meetings for Northern Andaman Sea (Myanmar and Thailand) and trilateral meetings for Southern Andaman Sea (Indonesia, Malaysia, and Thailand) were convened. Several ongoing activities and working groups (mackerels and MPAs, genetic studies on mackerels, and promotion of EAFM) of the BOBLME Project and the ASEAN-SEAFDEC programs (RPOA-Neritic Tuna, RPOA-Fishing Capacity, and promotion of EAFM) are linked with the active involvement of all Andaman Sea countries including India through the BOBLME Project (SEAFDEC, 2017c).

The roadmap of the MCS network in the Northern Andaman Sea covers: management of transboundary stocks, migration patterns and spawning seasons/area; and fishing capacity and MCS. The target priority species are kawakawa and long-tail tuna, as well as Indo-Pacific mackerel and anchovies.

**Table 2. Institutions and agencies in Myanmar and Thailand involved in MCS networking in the Northern Andaman Sea Sub-region**

Myanmar	Thailand
<ul style="list-style-type: none"> <li>• Department of Fisheries</li> <li>• Navy</li> <li>• Marine Police</li> <li>• Customs</li> <li>• Immigration</li> <li>• Forestry Department</li> <li>• Kaw Thaung Provincial Department</li> <li>• Ministry of Environment as coordinating body for Myanmar</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries</li> <li>• Navy</li> <li>• Marine Department</li> <li>• Marine Police</li> <li>• Port Authority</li> <li>• Thai Maritime Enforcement</li> <li>• Customs Department</li> <li>• Labor Department</li> <li>• Department for Marine and Coastal Resources (DMCR)</li> <li>• Ranong Provincial Authority</li> <li>• Thailand Maritime Enforcement Coordinating Center (Thai-MECC) as coordinating body for Thailand</li> </ul>

Source: SEAFDEC (2018b)

**Table 3.** Institutions and agencies in Indonesia, Malaysia, and Thailand involved in MCS networking in the Southern Andaman Sea Sub-region

Indonesia	Malaysia	Thailand
<ul style="list-style-type: none"> <li>• Ministry of Marine Affairs and Fisheries                             <ul style="list-style-type: none"> <li>- Directorate General (DG) Capture Fisheries</li> <li>- DG Marine Fisheries Surveillance</li> <li>- Belawan Fishing Port</li> <li>- Sibolga Fishing Port</li> </ul> </li> <li>• Provincial Office of North Sumatra</li> <li>• Provincial Office of Banda Aceh</li> <li>• Special Task Force 115 as coordinating body for Indonesia</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries</li> <li>• Navy</li> <li>• Malaysian Maritime Enforcement Agency (MMEA) Marine Police</li> <li>• Fisheries Development Authority (FDAM)</li> <li>• Jawatankuasa Bertindak Operasi Marin (Marine Operation Action Committee) or JBOM Committee (maritime task force Malaysia) as coordinating body for Malaysia</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries</li> <li>• Navy</li> <li>• Marine Department</li> <li>• Marine Police</li> <li>• Port Authority</li> <li>• Customs Department</li> <li>• Labor Department</li> <li>• Department for Marine and Coastal Resources (DMCR)</li> <li>• Thai Maritime Enforcement Coordinating Center (Thai-MECC)</li> </ul>

Source: SEAFDEC (2018c)

The members of the MCS National Technical Group (NTP) were designated based on existing national MCS networks (SEAFDEC, 2018b). Institutions and agencies in Myanmar and Thailand involved in MCS networking in the Northern Andaman Sea sub-region are shown in **Table 2**.

The MCS requirements of the Southern Andaman Sea sub-region cover not only fisheries management issues but also maritime security concerns (e.g. piracy, shipping lanes, and smuggling). The roadmap for MCS network in the Southern Andaman Sea comprises: management of transboundary fish stocks, migration patterns and spawning seasons/area; and fishing capacity and MCS. The target priority species are anchovies, mackerels (*Rastrelliger brachysoma* and *R. kanagurta*), and neritic tunas (kawakawa and tonggol). Members of the National Technical Group (NTP) were designated based on existing national MCS Networks (SEAFDEC, 2018c). **Table 3** shows the institutions and agencies in Indonesia, Malaysia, and Thailand involved in MCS networking in the Southern Andaman Sea Sub-region.

## Conclusion and Way Forward

In the establishment and promotion of MCS networks, coordination among the countries concerned is essential for sharing and exchange of information, especially with respect to the countries' efforts in implementing the UNCLOS/UN Fish Stock Agreement. Moreover, the countries could also gain several benefits from such coordination, e.g. improved product traceability and certification, improved data for stock assessment, enhanced knowledge on national implementation of RPOA-Capacity by neighboring countries, improved management of shared stocks resulting in higher catch and increased profits, enhanced knowledge on the relevant regulations of neighboring countries gained by fishers and control agencies, and reduced costs for surveillance activities. However, the countries have their respective legal systems and mandates for fisheries management in national waters, which should be considered in establishing and promoting the MCS networks. For such reason, the sub-regional agreements established through the SEAFDEC-Sweden Project may not be considered legally-binding but had been built on mutual

trust and recognition of the shared benefits that could be gained by the concerned countries. In addition, prior to the establishment of such sub-regional agreements, sharing of data that are mutually useful and those that would simplify national fisheries management works had been facilitated through the Project.

The SEAFDEC-Sweden Project also ensured that there is harmony among the concerned AMSs in the establishment of the MCS networks in the Gulf of Thailand, as well as in the Northern Andaman Sea and Southern Andaman Sea. Series of consultations and dialogues had therefore been organized by the Project for the development of the MCS networks, and meant to enhance the sub-regional cooperation and identify the priorities for the establishment of the MCS networks for improving transboundary fisheries management in the Gulf of Thailand and the Andaman Sea sub-regions. During the consultations, the concerned countries unanimously raised several concerns that need immediate action, such as overfishing, degraded coastal and marine environments, increasing demand for land and coastal areas, and negative impacts of climate change.

More particularly, the Gulf of Thailand countries agreed on the following aspects: enforcement of MCS practices and combat illegal (IUU) fishing through coordination of existing national mechanisms; development of sub-regional MCS network is a major force to keep track of the implementation of fisheries management plans as this would positively reduce long term damages on fish stocks and the marine ecosystems; and collaboration with responsible agencies to secure the mandate and approach for the establishment of the sub-regional MCS network which should be linked with the existing national networks and put into motion as early as possible. Meanwhile, countries in the Andaman Sea Sub-region confirmed that the efficiency and effectiveness of fisheries-related MCS activities could be sustained through enhanced cooperation, coordination, information collection and exchange among national organizations and institutions. The initial steps for framing out MCS network for the Northern Andaman Sea toward sustainability of fisheries had been undertaken while the common concerns and requirements of each M, C and



S had been addressed with the collaboration of respective responsible agencies of the concerned countries.

In conclusion, in establishing the MCS networks for sub-regional fisheries management coordination, the following considerations should be taken into account: common understanding among designated national agencies; enhanced cooperation among neighboring countries, clarification of national priorities, and the scope of cooperation which should be agreed upon by the countries concerned. The concerted efforts among the Gulf of Thailand and the Andaman Sea countries to cooperate in fisheries management had facilitated the successful establishment of the MCS networks. These countries have moved towards sustainability in their fisheries, facilitating fish trade and improving revenues and incomes. The key for such a cooperation to be successful is the active involvement of relevant authorities in the cooperation, nationally and regionally.

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