

Regional Capacity Building on PSM Implementation and Way Forward

To support the implementation of PSM in Southeast Asia, many international organizations such as FAO, RFMO, NOAA, SEAFDEC and so on, had organized capacity building programs on PSM implementation for the AMSs at regional and national level. On the part of SEAFDEC, its Japanese Thrust Fund supported project also organized capacity building activities for the AMSs through regional training courses and workshops. For example, the Regional Training on Port State Measures Implementation in Southeast Asia organized in February 2018 in Bangkok, Thailand in collaboration with FAO and NOAA focused on the: 1) preparation of national legal aspects, policies and institutional implementation of PSM, 2) PSMA inspection of vessels, and 3) lessons learned on PSM implementation in Thailand. The training had created a better understanding of the implementation of Port State Measures in the AMSs, enhanced the knowledge of the stakeholders on Port State Measures and relevant activities as tool to combat IUU Fishing, the situation and preparation on PSM implementation in the region, the way to practical improvement of Port State Measures, and the regional cooperation necessary to support the implementation of PSM in the region.

In July 2019 and October 2021, the Regional Training on Port State Measures (PSM) implementation for Inspectors in Southeast Asia” was organized in collaboration with partners such as the Department of Fisheries (DOF) Thailand, Australian Fisheries Management Authority (AFMA), FAO, NOAA, and the United States Agency for International Development (USAID), which focused on updating the current situation on inspection activities for port control and PSM in the AMSs through sharing of information on implementation on PSM inspection with partners. The training also provided the participants an opportunity to observe PSM inspection at port activities for tuna carrier vessels. This led to their better understanding of the implementation of PSM, and enhanced knowledge, skills and experience in inspection to support PSM and port control implementation.

Moreover, the Teleworkshop on Development and Improvement of Regional Tools for Combating IUU Fishing in Southeast Asia organized by SEAFDEC in August 2020 in cooperation with the AMSs, came up with the updated status, actions and needs for PSM implementation in Southeast Asia (except for Lao PDR that has no fishing port) (**Table 71**). Specifically, the priority needs to implement PSM in the AMSs could include: 1) capacity building to support the implementation of PSM, and 2) sharing and exchange of information in support of the PSM implementation.

6.1.1.5 MCS Systems and Regional Cooperation for Combating IUU Fishing

Monitoring, Control and Surveillance (MCS) is an important mechanism for effective fisheries management. As described by FAO (1981), the definition of M, C and S comprises: **Monitoring** - the continuous requirement for the measurement of fishing effort characteristics and resource yields; **Control** - the regulatory conditions under which the exploitation of the resource may be conducted; and **Surveillance** - the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities. Several key international fisheries-related instruments highlight the need for effective implementation of MCS activities to combat IUU fishing, such as the 1982 UN Convention on the Law of the Sea; the 1993 FAO Compliance Agreement; the 1995 UN Fish Stocks Agreement; the 1995 FAO Code of Conduct, and the International Plans of Action elaborated under the Code of Conduct; and the 2009 FAO Agreement on Port State Measures, as well as regional policy frameworks of the RFMOs, and also as to serve as means of enhancing efforts for the conservation and management of the fishery resources.

For countries in the Southeast Asian region, various government agencies such as fisheries, natural resources and environment, navy, marine police, coast guard, and customs among others, are involved in the implementation of their respective national laws in preventing illegal fishing activities under their national jurisdictions. Nonetheless, interagency cooperation is important to attain successful and effective implementation of national MCS operations. Countries in the region have therefore established their respective national inter-agency integration and cooperation units. Such as for example, the following:

- Cambodia: National Committee for Maritime Security (NCMS)
- Indonesia: Special Task Force 115
- Malaysia: JBOM Committee (maritime task force Malaysia)
- Myanmar: One Stop Service
- Thailand: Thai–Maritime Enforcement Coordination Committee (Thai-MECC)
- Viet Nam: Working Group 689

The implementation of MCS is necessary not only at the national level, but also at the regional and international levels. 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 (Yleña and Velasco, 2012).

Table 71. Recommendations and actions/needs of AMSs for PSM implementation (as of Teleworkshop 2020)

Recommendations	Actions/needs	Concerned AMSs
1) Encourage AMS to identify designated ports for foreign fishing vessels and not allowing foreign fishing vessels to unload fish and fishery products in non-designated ports	<ul style="list-style-type: none"> • Sharing of information among AMSs with regard to PSM 	Brunei Darussalam
2) Come up with the list of designated ports that include information on the name of the port, address of the location, contact person, and corresponding designation as well as official website in English	<ul style="list-style-type: none"> • List of designated ports are clarified and shared among AMSs 	Brunei Darussalam, Cambodia
3) Provide, as a minimum standard, the information requested or relevant document to be provided by any AMS to vessels before granting them entry to its port	<ul style="list-style-type: none"> • Closely work with AMSs with assistance from SEAFDEC or FAO to prepare the minimum standards 	Brunei Darussalam, Cambodia
4) Exchange of information on country's laws and regulations to be shared among the AMSs, and consider that any AMS should not allow its fishing vessels excluding carriers to unload catch at other country's ports	<ul style="list-style-type: none"> • Sharing of the most updated information on laws and regulation 	
5) Encourage AMS to require foreign fishing vessels and carriers to submit pre-arrival information (such as approval to land their catch, the origin of catch or certificate of catch) so that the port State can decide whether to authorize or deny entry of such vessel into their ports, while decision to deny shall be communicated with the flag State	<ul style="list-style-type: none"> • Implementation of PSM 	Brunei Darussalam
6) Provide awareness building to relevant stakeholders (e.g. fishing boat owners, importers, port authorities, etc.) at national level to enhance their understanding of the country's laws and regulations, and other procedures on inspections	<ul style="list-style-type: none"> • Provide capacity building for fisheries officers and inspectors on implementation of PSM 	Brunei Darussalam
7) Adopt the Standard Operating Procedures (SOPs) on the risk assessment and inspection of vessels	<ul style="list-style-type: none"> • Using SOP on the risk assessment and inspection of vessels • Expertise to support the risk assessment 	Brunei Darussalam, Myanmar
8) Consider the minimum requirements for inspection of vessels as agreed among all AMSs		Brunei Darussalam, Cambodia, Myanmar, Singapore, and Thailand
9) Support the inspection of vessels, which requires the historical data/information of the vessels	<ul style="list-style-type: none"> • AMS should be able to share the historical data/information of their own vessels upon the request 	Brunei Darussalam, Cambodia
10) Transmit the results of each inspection to the flag State of the inspected vessels	<ul style="list-style-type: none"> • Sharing of relevant information to support inspection activities 	Brunei Darussalam, Cambodia, and Myanmar
11) Facilitate the implementation of this Regional Cooperation, and where possible, each AMS establishes a national communication mechanism that allows for the direct electronic exchange of information; with due regard to appropriate confidentiality requirements	<ul style="list-style-type: none"> • Mechanism to exchange relevant information among AMSs 	Brunei Darussalam, Cambodia, Myanmar, and Thailand
12) Request FAO, RFMOs, ASEAN, SEAFDEC, and relevant agencies for training of trainers for port inspections including legal and operational aspects with emphasis on the practical hands-on components	<ul style="list-style-type: none"> • Request FAO, RFMOs, ASEAN, SEAFDEC and relevant agencies for training of trainers on port inspection including the legal and operational aspects with emphasis on the practical aspects 	Brunei Darussalam
13) Develop a network/team among AMSs on the training of trainers for port inspections (Note: Consider utilizing the existing training module developed by RPOA-IUU in collaboration with the other agencies on port inspections to support the TOT programs)	<ul style="list-style-type: none"> • Participation in meetings and consider the use of existing training module developed by RPOA-IUU in collaboration with the other agencies on port inspections to support the TOT program • Training for trainers on port inspections 	Brunei Darussalam, Myanmar, and Thailand

In support to the efforts of the AMSs, several common concerns were identified through the series of bilateral and sub-regional dialogues facilitated by SEAFDEC, aimed at ensuring 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 an efficient MCS system

for effective control of fishing capacity and combat IUU fishing, destructive fishing, and encroachment by larger fishing vessels in coastal waters (Wanchana *et al.*, 2016). Through sub-regional fora facilitated by SEAFDEC, the establishment in several sub-regions of sub-regional MCS mechanism was discussed among the concerned countries, namely:

- Gulf of Thailand: among Cambodia, Malaysia, Thailand, and Viet Nam
- Northern Andaman Sea: between Myanmar and Thailand
- Southern Andaman Sea: among Indonesia, Malaysia, and Thailand

The countries made strong efforts for the networking and improvement of their relationships and communication, although engagement in non-legally binding transboundary and sub-regional cooperation was preferred. In establishing the MCS networks for sub-regional fisheries management coordination, the key for such a cooperation to be successful is the active involvement of relevant authorities in the cooperation, nationally and regionally (Jaya *et al.*, 2019), taking into account the following considerations: common understanding among designated national agencies; enhanced cooperation among neighboring countries; clarification of national priorities; and agreement by the countries concerned of the scope of cooperation. The potential collaboration and coordination of the Networking came in the forms of joint control of transshipments at sea, application of various tools to monitor the fishing activities including tractability system, *e.g.* eACDS, VMS, CCTV, AIS, ERS; and information sharing through sub-regional database on fishing gear and vessel marking systems, catch and landing, analysis of information for fishing effort and stock status, and so on.

As for areas beyond the EEZs and the high seas, the effective implementation and coordination of MCS are essential to strengthen transboundary fisheries management, control fishing efforts, and surveillance across countries for sustainable utilization of the fishery resources. One of the very important platforms for combating IUU fishing is the regional fisheries management organizations (RFMOs) as the international organizations regulating regional fishing activities in the high seas. There are approximately 17 RFMOs covering various geographical areas worldwide, some of which overlap. Of these, only three RFMOs are located near the Southeast Asian region, *i.e.* Commission for the Conservation of Southern Bluefin Tuna (CCSBT), Indian Ocean Tuna Commission (IOTC), and Western and Central Pacific Fisheries Commission (WCPFC). Among the AMSs, only Indonesia is a member of CCSBT; Indonesia, Malaysia, Philippines, and Thailand are members of IOTC; and only the Philippines is a member of WCPFC.

Moreover, cooperation in the implementation of MCS has also been strengthened through the International Monitoring, Control and Surveillance (IMCS) Network, which was established in 2001 and which provides the global platform for exchanging information and collaborative activities among the networks of States, RFMOs and regional organizations, NGOs, private sector, and for improving the efficiency and effectiveness of fisheries-related MCS activities. The IMCS hosts the

biennial conference on Global Fisheries Enforcement Training Workshop (GFETW).

Another important regional platform for combating IUU fishing is the Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing in the Region (RPOA-IUU) which was endorsed by the ASEAN Ministers responsible for fisheries in May 2007, and embraces eleven (11) countries, namely: Australia, Brunei Darussalam, Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam. The RPOA-IUU is aimed at enhancing and strengthening the overall level of fisheries management in the region in order to sustain the fishery resources and the marine environment, and to optimize the benefit of adopting responsible fishing practices. Through sub-regional approach, the responsibility of the RPOA-IUU is divided into three sub-regional areas, namely: a) southern and eastern South China Sea and Sulu-Sulawesi Seas, b) the Gulf of Thailand, and c) the Arafura-Timor Seas. The RPOA-IUU Coordination Committee holds meetings annually for sharing of information and reporting the progress of the implementation of MCS activities as well as sharing data on IUU Vessels List.

Under the ASEAN mechanism, an ASEAN IUU Task Force was also initiated in 2019 to support effective exchange of information for better communication between the law enforcement authorities and governmental competent authorities responsible for combating IUU fishing (ASEAN, 2020), and during the 27th ASWGF Meeting in June 2019, the AMSs agreed to change the ASEAN IUU Task Force into the ASEAN Network for Combating IUU Fishing (AN-IUU). Subsequently, the concept of the AN-IUU was endorsed by the 42nd Meeting of the ASEAN Ministers on Agriculture and Forestry (AMAF) in October 2020. The AN-IUU would serve as a cooperation framework for information sharing and capacity-building among the AMSs on MCS and dissemination of best practices, especially on maritime domain surveillance and investigation activities, and experiences of the Network among the AMSs.

Moreover, the ASEAN SOM-AMAF endorsed in 2020 the Roadmap on Combating IUU Fishing in the ASEAN Region (2021-2025). Similar with the efforts of the ASEAN in combating IUU fishing, the Asia-Pacific Economic Cooperation (APEC) also endorsed the APEC Roadmap on Combating IUU Fishing at its third Senior Officials' Meeting in 2019. The APEC Roadmap is aimed at addressing the issues on IUU fishing in the Asia and Pacific region through various capacity building programs and strengthening of institutional capacities and compliance with domestic and international conservation and management measures that address IUU fishing within the APEC member countries, through technical assistance

and enhancement of monitoring, control and surveillance, and traceability systems.

Way forward

In the AMSs, the respective national authorities have enhanced the promotion of the MCS system for effective fisheries management and conservation of the fishery resources. Moreover, sub-regional and regional cooperation on MCS have also been strengthened with the aim of improving the governance of trans-boundary fishing and fighting against IUU fishing. Regional cooperation for combating IUU fishing has therefore been enhanced in the Southeast Asian region, through regional and sub-region platforms, *e.g.* APFIC, ASEAN, SEAFDEC, RPOA-IUU, AN-IUU, RFMOs, that provide for effective exchange of information across the countries.

Nonetheless, it is also necessary to provide human capacity building programs as these are essential elements for the AMSs to enhance their knowledge, especially improvement in the areas of policy and legislation, fisheries statistics and data collection, as well as in stock and risk assessments of the fishery resources to provide the scientific-based recommendations for the policy decision makers. Meanwhile, the promotion of MCS, PSM and risk analysis for combating IUU fishing would continue to support the AMSs, especially for the adoption of the technologies on MCS.

Coincidentally, the COVID-19 crisis has shown the need for the countries to accept new technologies to support the implementation of MCS and improve the effectiveness of fisheries management for the sustainability of the fishery resources in the fisheries sector. Reporting of catch from remote areas would benefit from such technologies as these would reduce the risks of spreading the virus, for example replacing the observers' program onboard by cameras. Moreover, and the effectiveness of fisheries management could also be enhanced more effectively through monitoring, control and surveillance (MCS), limiting the fishing effort, and increasing research activities.

6.1.1.6 Combating IUU Fishing in Inland Fisheries

Although the definition of IUU fishing in inland waters has not been established specifically and potentially, the definitions used for IUU fishing in marine fisheries could be referred to with appropriate and adequate adjustments in accordance with the characteristics of inland fisheries. IUU fishing practices, particularly in inland water fisheries, could therefore include: unfriendly fishing methods such as the use of toxic chemical substances, explosive materials, and prohibited gears and ways such as electro-fishing, and many other irresponsible practices (Ma *et al.*, 2018); fishing without license or quota for certain species; catching undersized fish or fish that are otherwise protected by

regulations; and fishing in closed areas or during closed seasons, among others.

A big portion of inland fisheries in Southeast Asia is dominated by the Mekong River Basin bordered by Myanmar, Viet Nam, Thailand, Lao PDR, and Cambodia; and also includes the Indonesian inland waters that comprise the Sundaland, Wallace, and Sahul Land. The Mekong River is considered as the largest inland fisheries producer on earth and provides a significant contribution to the economic growth of around one-half of Southeast Asian countries, namely: Myanmar, Viet Nam, Thailand, Lao PDR, and Cambodia (Hecht *et al.*, 2019). Meanwhile, in the lower part of the Mekong Basin (LMB), people rely heavily on fish which is important for their protein intake, making up 47–80 %, which is considered the highest inland fish protein consumption in the world (Hortle, 2007). This massive figure of inland fisheries in this region suggests that combating IUU fishing is essential and urgent for the sustainability of inland fisheries. In addition, in 2014, Indonesian inland capture fisheries produced 446,509 mt or equivalent to 2.17 % of the national total fish production or 6.96 % of total capture fisheries (SEAFDEC, 2014). Even with a tiny portion of inland waters compared to its marine areas, the inland fisheries of Indonesia have contributed substantially to the country's total fish production.

Recent management measures on sustainable fisheries, such as the imposition of closed season or prohibition of the use of certain fishing gears have also focused more on the marine fisheries sub-sector than in the inland fisheries. This has led to national fisheries policies and interventions skewed toward the marine fisheries sub-sector. Similarly, at the global level, attention on the depletion of fishery resources and on IUU fishing is focused predominately on marine fish stocks despite the importance of freshwater fishes around the world to local communities. As a result, inland fisheries are often underappreciated and undervalued in resource planning and decision-making.

IUU Fishing in Inland Waters

The most common illegal practices that destroy wild inland fishes include electro-fishing, and the use of toxic substances and explosive materials. Electric fishing or electro-fishing can kill not only the targeted fishes in terms of size and species but also other aquatic biotas from all stages of their aquatic life. Mature fishes that contribute to the release recruitment of young fish will die and non-hatched eggs are of no exception. Larval stages of fishes are easily killed by such unselective fishing practice. While the use of toxic substances and explosive materials could significantly demolish the fishery resources including the aquatic biotas, and such practices also contribute to habitats destruction. Toxic chemical materials used for fishing pollute the water and reduce the water quality, kill the aquatic plants that are important as nursery grounds, and