

## Fifth SEAFDEC Department: Racing towards Sustainable Development and Management of Inland Fisheries in Southeast Asia

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The Southeast Asian Fisheries Development Center (SEAFDEC) was established on 28 December 1967 with the signing of the **Agreement Establishing the Southeast Asian Fisheries Development Center** by Senior Officers of the Contracting Governments, namely: Japan, Malaysia, Philippines, Singapore, Thailand, and Viet-Nam. Open to the governments of the Southeast Asian countries referring to the Union of Burma, the Kingdom of Cambodia, the Republic of Indonesia, the Kingdom of Laos, Malaysia, the Republic of the Philippines, the Republic of Singapore, the Kingdom of Thailand, and the Republic of Viet-Nam, and Japan, the Membership of the Center was amended by the Protocol Amending the Agreement on 18 November 1994 so that the Membership of the Center shall be open to the governments of the Southeast Asian countries and Japan. Thus, in addition to the abovementioned six countries, the Government of the Socialist Republic of Viet Nam renewed its membership in SEAFDEC in 1995, the Government of Brunei Darussalam became new member in 1995, the Union of Myanmar in 1999, the Government of the Republic of Indonesia in 2000, the Government of Cambodia in 2001, and the Government of Lao People's Democratic Republic in 2002. To date, SEAFDEC has 11 Member Countries.

Concurrent with the establishment of SEAFDEC, two Departments were also established on 28 December 1967, namely: Marine Fisheries Training Department (TD, based in Samut Prakan, Thailand) and Marine Fisheries Research Department (MFRD, based in Singapore); and the Secretariat (based in Thailand). Recognizing the need to improve fish culture techniques in the region, the

Member Governments agreed on 7 July 1973 to establish the Aquaculture Department (AOD) in Iloilo, Philippines as the third SEAFDEC Department, thus enabling SEAFDEC to promote research, training and extension activities in fish culture. In order to promote the proper development and management of fishery resources in the EEZs of the Member Countries, the Marine Fishery Resources Development and Management Department (MFRDMD) was established in Kuala Terengganu, Malaysia on 6 February 1992 as the fourth Department of SEAFDEC.

Since the abovementioned four SEAFDEC Departments put more focus on marine fisheries and aquaculture, and considering the importance of inland fisheries for food security, livelihood and well-being of peoples in the whole Southeast Asian region, the establishment of a regional center for inland fisheries was put forward by *His Excellency Dr. Fadel Muhammad*, the former Minister of Marine Affairs and Fisheries of Indonesia during the ASEAN-SEAFDEC Conference held in June 2011. The proposal which was unanimously supported by the SEAFDEC Council of Directors in the subsequent year, came into fruition two years later when the Government of Indonesia represented by *Prof. Syarief Widjaja*, the Secretary-General of the Ministry of Marine Affairs and Fisheries (MMAF) and SEAFDEC Council Director for Indonesia, signed the National Legitimacy Document on 2 September 2014 to officially launch the establishment of the Inland Fishery Resources Development and Management Department (IFRDMD) in Palembang, Indonesia as the fifth Department of SEAFDEC.

The signing of the Legitimacy Document by the Government of Indonesia in September 2014 gives due recognition to IFRDMD as an inter-governmental organization under



the SEAFDEC framework and accordingly confirms the necessary privileges for IFRDMD. This development also provided the assurance that more focus of SEAFDEC activities would be given on inland fisheries, as well as on inland fishery resource conservation and management. The new SEAFDEC Department would only be operational by 2015 once the construction of buildings, laboratories, and other facilities which has been ongoing would be completed. However, initial activities of IFRDMD have already been ongoing during the last quarter 2014, at its temporary site in the compound of Indonesia's Research Institute for Inland Fisheries also in Palembang. The conduct of such initial activities enabled the IFRDMD to promptly address regionally important and relevant issues at the soonest time possible.



### Box 1. Characteristics of the Inland Capture Fisheries of Southeast Asia

- Inland capture fisheries comprises *large number of small-scale fishers*, mostly subsistent and engaged in only part-time fishing activities
- Activities related to inland capture fisheries are *highly seasonal*, with the highest peak during flood receding periods or at the end of the rainy season
- Production from inland capture fisheries is *highly diversified*, where catch could be large in number and quantity, but small in size with high species diversity
- Inland fishery resources could be *freely accessed at any time*, and production could be *landed anywhere* without proper recording
- Inland fisheries *production goes to various channels*, for direct household consumption, sold in local markets, or exported to markets within the region

Source: Chumnarn (2014)

## Status of Inland Capture Fisheries in the Southeast Asian Region

In 2012, the total production from inland capture fisheries of the Southeast Asian region was reported to be approximately 2.8 million metric tons (MT), accounting for more than 7% of the region's total fisheries production (from all sectors) or about 16% of the total production from capture fisheries (SEAFDEC, 2014). The top-producing Southeast Asian country is Myanmar, followed by Cambodia and Indonesia. Other countries are also closing in, such as the Philippines,

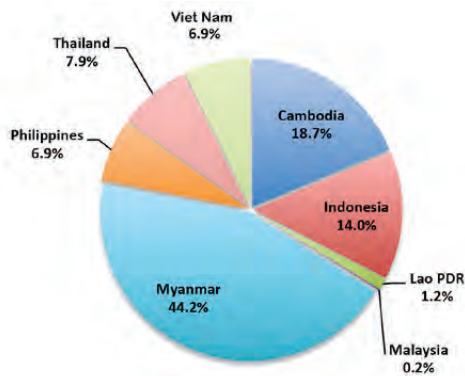


Fig. 1. Contribution of Southeast Asian countries to the region's total production from inland capture fisheries

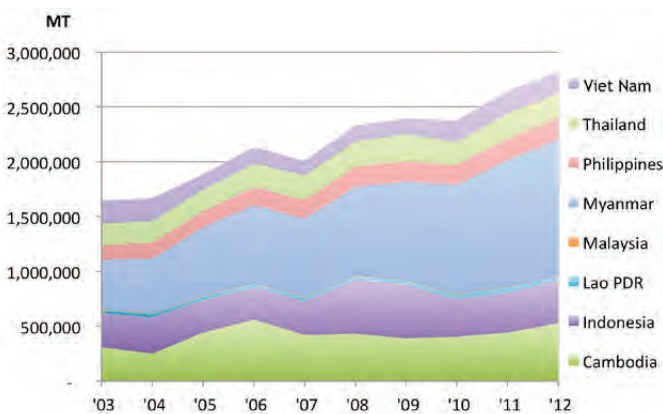


Fig. 2. Production from inland capture fisheries of the Southeast Asian countries

Thailand and Viet Nam which have also been reported to consistently produce considerable amount of inland fisheries products during the past decade (Fig. 1 and Fig. 2). For the region's only landlocked country Lao PDR, its production may not be very high but this is derived mainly from inland fisheries. The foregoing therefore connotes the relevance of inland fisheries to food security in the Southeast Asian region. Considering also the characteristics of the region's inland fisheries (Box 1), it has become imperative for this sub-sector to be properly and sustainably managed, and SEAFDEC/IFRDMD would be very relevant for the sustainable development and management of this fisheries sub-sector.

## Issues and Concerns

Inland fisheries form an important component of the economies of many countries in the region, specifically creating employment and income generating opportunities, and serving as source of food supply for rural communities. This contribution is particularly important for poverty alleviation, food security and nutritional well-being of



many rural communities, particularly in the developing countries, as well as in low income food deficit countries. Nevertheless, the sustainable development of the region's inland fisheries is confronted with issues and concerns that need to be addressed as shown in **Box 2**.

Box 2. Action Plans to Address the Challenges that Confront Inland Fisheries Development in Southeast Asia	
<p><b>Rectifying the low priority that planners and policy makers give to inland fisheries</b></p> <ul style="list-style-type: none"> <li>- Enhancing the methodologies for collecting statistics on production from inland capture fisheries to address the concerns on inadequacy of data and other relevant information</li> <li>- Boosting the development of non-conventional data collection and model for inland ecosystem valuation using existing data and information to advocate the importance of inland fisheries</li> <li>- Synthesizing and packaging meaningful information for policy makers and public by integrating data available from various sources, e.g. censuses and statistics, research studies, local/traditional knowledge</li> </ul>	
<p><b>Applying the ecosystem approach to fisheries in inland fisheries management</b></p> <ul style="list-style-type: none"> <li>- Promoting the “catchment approach” to ensure consistency in management levels (local, national or regional) and ecosystem boundary</li> <li>- Strengthening the “holistic approach” by taking into consideration the activities of other sectors involved and sharing the same inland resources/ecosystems</li> </ul>	
<p><b>Securing ecosystem functions and improving R&amp;D on mitigation measures</b></p> <ul style="list-style-type: none"> <li>- Raising the awareness of other sectors as well as planners/policy makers on the importance of inland fisheries and its ecosystem functions, by generating and disseminating relevant and credible information</li> <li>- Establishing and advocating measures to mitigate the impacts of development projects, e.g. incorporation of fish passages in cross-river barrier construction, stock enhancement programs, integration of underpasses in road construction and development</li> </ul>	
<p><b>Maximizing the utilization of inland fishery resources</b></p> <ul style="list-style-type: none"> <li>- Developing and upholding responsible fishing gears/practices that promote species selectivity</li> <li>- Enhancing preservation and post-harvest technologies to ensure that fish is utilized for year-round consumption, improve safety and quality of traditional fish products for local consumption, and generate value-added products</li> </ul>	
<p><b>Developing appropriate resources enhancement programs</b></p> <ul style="list-style-type: none"> <li>- Enhancing the yield from inland capture fisheries by stocking hatchery-bred seeds (focus on low trophic and indigenous species) in closed ecosystem</li> <li>- Strengthening conservation measures through the use of indigenous species with seeds produced specifically for stock enhancement purposes</li> <li>- Promoting habitat conservation and improvement by making the habitats favorable for enhancing natural reproduction of aquatic species</li> <li>- Developing indicators for evaluating the successes of resource enhancement programs</li> <li>- Promoting culture-based fisheries</li> </ul>	

## Conclusion and Recommendations

The sustainability of inland capture fisheries is very much dependent on the quality of aquatic habitats and ecosystems. However, fishery is not the only sector dependent on inland ecosystems, as the same ecosystems also provide wide ranges of products and services for people living adjacent to inland fisheries areas. These resulted in competition/conflicts among resource users with different interests, e.g. fisheries, irrigation for agriculture, forestry, transport, tourism, and development opportunities, as well as hydropower development. Initiatives have been undertaken by the fisheries-related sectors in conserving and managing the aquatic ecosystems to enhance inland fisheries production and sustain the livelihoods of people living in inland fisheries areas. The unavailability of reliable data and information on the importance of inland fisheries, has led to this sub-sector being overlooked by planners and policy makers, and given low priority compared to the other development sectors sharing the same water resources. Such situation also resulted in management decisions that may have created negative impacts to this sub-sector.

In order to improve awareness on the importance of inland fisheries and enhance better conservation and management of inland ecosystems for the sustainability of inland fisheries, it is therefore necessary for countries in the Southeast Asian region to improve data collection of inland fisheries. There is also a need to improve governance for sustainable inland fisheries through the application of ecosystem approach to fisheries, as well as co-management in order to appropriately integrate inland fisheries management with habitat management, and enhance the involvement of local communities and relevant stakeholders in the planning, management and conservation of the inland aquatic habitats and resources.



Considering the abovementioned conditions, SEAFDEC/IFRDMD is tasked to manage and coordinate the project activities of SEAFDEC that aim to promote the sustainable development and management of the region's inland capture fisheries. Its initial project on the "Promotion of Responsible Utilization of Inland Fisheries Resources in Southeast Asia" is considered as a way of establishing and strengthening regional networking for sustainable inland fisheries management and fish conservation of inland water resources. Capacity building activities such as regional training courses and workshops would be organized as these are key measures to improve the capacity of ASEAN fisheries officials on the responsible utilization of inland fisheries resources.

## Way Forward

At the onset, IFRDMD has initiated the implementation of the project on the "Promotion of Responsible Utilization of Inland Fisheries Resources in Southeast Asia" which is aimed at reviewing activities and methodologies for promoting inland fisheries in the ASEAN Member States (AMS) and finding ways and means for the sustainable development of inland fisheries, promoting effective inland fisheries management measures in AMS, and conducting studies on the development of habitat conservation/resources enhancement measures suitable for Southeast Asia.

Specifically for 2015 and racing for the sustainable development of inland fisheries, IFRDMD plans to carry out the following activities: (1) workshop to review activities and methodologies for promotion of inland fisheries and find ways forward; (2) study on co-management and right-based fisheries management applicable to inland fisheries in Southeast Asia; (3) workshop to develop guidelines for effective inland fisheries management in Southeast Asia; (4) regional training course on improving the management of inland fisheries; (5) study on the development of habitat conservation and resources enhancement measures applicable to Southeast Asia; and (6) workshop to develop policy recommendations on responsible inland fishery resources utilization in Southeast Asia.

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