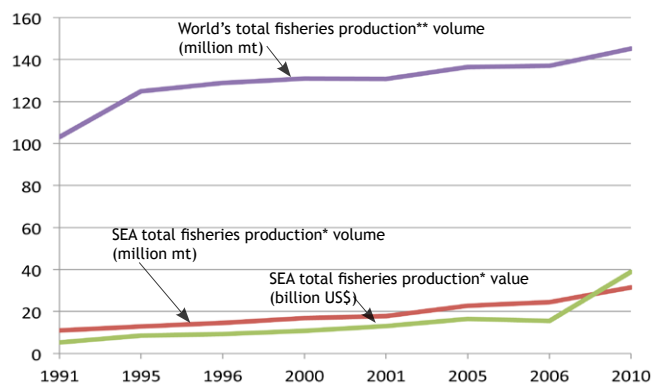


# Trending Fisheries Development in Southeast Asia towards Poverty Alleviation

V.T. Sulit

Perceiving from the region's fishery statistics only, it is easily recognizable that the trend of fisheries production of Southeast Asia appears to be increasing over the last two or more decades. This does not mean that fisheries production of each country may be increasing as there could be increases in some while decreases could have also taken place in other countries. However, there is no reason why such trend would not continue to increase in the future, as could be generally attributable to improvements in fisheries management and adoption of good and responsible practices by concerned stakeholders in the region. Nonetheless, such increasing trend must fully accord with the ever increasing population of Southeast Asia to enable the fisheries sector to provide the nutrition and protein requirements of the region's populace and alleviate poverty especially in the remote rural areas.



**Fig. 1.** Total fisheries production of Southeast Asia from 1991 to 2010 (by five-year period)

\* *Fishery Statistical Bulletin for the South China Sea Area 2000-2007 (SEAFDEC, 2010) and Fishery Statistical Bulletin of Southeast Asia (SEAFDEC, 2010-2012)*  
 \*\* *FAO FishStat Plus and State of the World Fisheries and Aquaculture 2004 and 2010*

During the past two decades, fisheries production of the Southeast Asian countries had been slowly but gradually rising at an average annual rate of about 3.7% in terms of volume and about 6.0% in terms of value (Fig. 1). However, it is feared that such minimal annual increase might not be able to sufficiently provide the socio-economic needs of the increasing millions of people in the region who are dependent on the fisheries sector for food and livelihood. In an effort to address such concern, the Southeast Asian countries have been adopting various measures to sustain production from fisheries as well as from aquaculture, not only through management of fishing efforts and adoption of good and responsible practices but also in improving fisheries management that integrates the social, economic

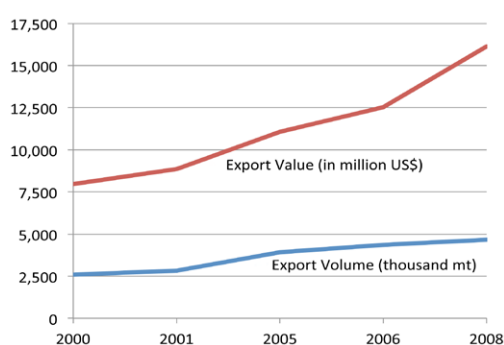
and environmental aspects in what is known as the ecosystem approach to fisheries management.

With the region's population growth which is forever on the rise (Table 1), the countries are therefore putting more focus in improving fisheries management that could maximize the benefits to the rural poor, by mainly addressing the needs and requirements of stakeholders in the fisheries and aquaculture sector as well as other supporting sectors that also play major role in providing livelihood and employment opportunities in rural communities. With technical assistance provided by the Southeast Asian Fisheries Development Center (SEAFDEC), the Southeast Asian countries are now implementing fisheries

**Table 1.** Population of the Southeast Asian countries with projections for 2025 and 2050 (millions)

Countries	2008	2009	2010	Mid-2011	Mid-2025	Mid-2050
Brunei Darussalam	0.4	0.5	0.4	0.4	0.5	0.6
Cambodia	14.7	14.8	15.1	14.7	19.0	23.8
Indonesia	239.9	240.3	235.5	238.2	273.2	309.4
Lao PDR	5.9	6.3	6.4	6.3	8.3	10.7
Malaysia	27.7	28.3	28.9	28.9	34.9	41.0
Myanmar	49.2	50.0	53.4	54.0	61.7	70.8
Philippines	90.5	92.0	94.0	95.7	117.6	140.5
Singapore	4.8	5.0	5.1	5.2	5.7	5.5
Thailand	66.1	65.0	68.1	69.5	72.6	73.4
Vietnam	86.2	88.1	88.9	87.9	103.2	113.7
<b>Total</b>	<b>585.4</b>	<b>590.3</b>	<b>595.8</b>	<b>600.8</b>	<b>696.7</b>	<b>789.4</b>

Source: World Population Data Sheet 2009, 2010; Population Reference Bureau, Washington D.C., U.S.A.



**Fig. 2.** Export of fish and fishery products by Southeast Asian countries

Sources: *Fishery Statistical Bulletin for the South China Sea Area 2000-2007* (SEAFDEC, 2010a) and *Fishery Statistical Bulletin of Southeast Asia 2008* (SEAFDEC, 2010b)

development programs that are focused towards improving rural livelihoods with the ultimate goal of alleviating poverty in the rural communities.

## Where does the fish catch of Southeast Asian countries go?

In Southeast Asia, the fisheries sector has been playing a vital role in providing sufficient supply of fish to the people and in improving the economies of the countries in Southeast Asia. The region's fish catch is sold either as fresh or frozen or in comminuted form or other value-added products such as cured and fermented fish products. A major portion of the fish and fishery products is also exported (Fig. 2) to fish supply deficit countries while still another considerable portion is converted into animal feeds.

From the region's total fisheries production in 2010 of 31.4 million mt, a maximum of about 14 million mt is processed into traditional fish products based on the claims

of Yeap and Tan (2002) that 30-45% of the region's annual fisheries production is destined to be processed and value-added into traditional and surimi-based fishery products. Meanwhile, FAO (2012) argued that about 13.6% of the world's total fisheries production had been converted into non-food uses such as fish meal and fish oil or as direct feeds in aquaculture. Granting that these assumptions are still valid, the region's fisheries production in 2010 is left with only about 13.0 million mt for domestic consumption of its people and for export to other countries in the region and outside. Therefore, the more affluent countries of the region have to import fish from other countries in order to address the increasing demand for fish and fishery products (Table 2). Where will the less prosperous countries get sufficient supply of fish to feed their people?

The peoples of Southeast Asia are by nature fish-eating, and due to enhanced economic development of many countries major portions of the populace can afford to buy fish. This would increase not only the region's demand for fish but also possibly increasing the per capita fish consumption. With the region's average per capita consumption at a high of about 39 kg/person/year (Table 3), it is likely that the region would consume about 65% of the total supply of fish and fishery products available in the region, i.e. from production plus importations. Many countries are also trying to balance the volume of fish for consumption with those for export, and also improving their respective systems of collecting fisheries information especially from small-scale fisheries and inland capture fisheries to ensure that the written assumptions conform to the picture of the real situation. The inadequate information on the region's fisheries production exacerbates all efforts in presenting the clear and actual situation of the fisheries sector of the region.

**Table 2.** Import of fish and fishery products by Southeast Asian countries in 2007 (Volume in thousand mt; Value in million US\$)

Countries	2000		2001		2005		2006		2008	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Brunei Darussalam	6.6	15.2	8.3	13.4	6.4	15.8	7.7	25.7	4.9	12.3
Cambodia	3.2	2.7	1.1	0.5	3.1	3.7	3.1	4.3	2.2	2.4
Indonesia	171.3	101.6	152.0	93.7	128.4	106.3	165.2	142.7	199.0	202.0
Lao PDR	2.5	2.1	3.1	2.2	3.6	3.3	3.0	3.1	3.9	4.4
Malaysia	323.2	307.5	349.3	335.2	399.4	533.9	435.6	587.0	383.3	591.6
Myanmar	1.5	1.9	0.6	0.6	1.9	3.2	1.4	2.6	2.4	5.2
Philippines	248.4	111.6	181.0	71.4	182.8	102.8	179.6	101.1	210.2	176.6
Singapore	183.9	560.4	174.4	494.4	253.6	776.6	244.7	757.6	225.7	916.1
Thailand	813.8	826.7	977.7	1,072.9	1,445.4	1,457.9	1,470.6	1,574.0	1,533.7	2,447.8
Vietnam	8.0	36.2	42.5	60.2	165.6	276.6	200.7	302.4	253.3	461.1
<b>Total</b>	<b>1,762.4</b>	<b>1,965.9</b>	<b>1,890.0</b>	<b>2,144.5</b>	<b>2,590.2</b>	<b>3,280.1</b>	<b>2,711.6</b>	<b>3,500.5</b>	<b>2,818.6</b>	<b>4,819.5</b>

Sources: *Fishery Statistical Bulletin for the South China Sea Area* (SEAFDEC, 2000-2009) and *Fishery Statistical Bulletin of Southeast Asia* (SEAFDEC, 2010)

**Table 3.** Fish consumption of the Southeast Asian countries in 2009 and 2010

Countries	Fisheries Production (thousand mt) <sup>1</sup>			Population (millions) <sup>2</sup>			Fish Consumption <sup>3</sup> kg/person/year (2007)
	2008	2009	2010	2008	2009	2010	
Brunei Darussalam	2.7	2.4	2.8	0.4	0.5	0.4	44.04
Cambodia	536.3	515.0	550.0	14.7	14.8	15.1	32.97
Indonesia	9,054.9	10,064.1	11,662.3	239.9	240.3	235.5	31.43
Lao PDR	93.5	105.0	113.0	5.9	6.3	6.4	24.86
Malaysia	1,639.0	1,729.0	1,806.6	27.7	28.3	28.9	54.40
Myanmar	3,147.6	3,491.1	3,902.0	49.2	50.0	53.4	42.75
Philippines	4,964.7	5,084.7	5,155.6	90.5	92.0	94.0	53.49
Singapore	5.2	5.7	5.2	4.8	5.0	5.1	23.00 <sup>4</sup>
Thailand	3,204.2	3,137.7	3,113.3	66.1	65.0	68.1	37.97
Vietnam	4,559.7	4,782.4	5,127.6	86.2	88.1	88.9	41.47
<b>Total</b>	<b>27,207.8</b>	<b>28,917.1</b>	<b>31,438.4</b>	<b>585.4</b>	<b>590.3</b>	<b>595.8</b>	<b>Ave: 38.64</b>

Sources: Fishery Statistical Bulletin for the South China Sea Area (SEAFDEC, 2000-2009) and Fishery Statistical Bulletin of Southeast Asia (SEAFDEC, 2010)

## How are the major concerns in Southeast Asian fisheries being addressed?

In the given scenario of the region's fisheries, there appears to be no more fish left for export that could have improved the economies of the countries and enhanced the socio-economic well-being of the fishers. In addition, there is also no more fish left that could be transformed into value-added fish products that could have supplemented the incomes of women and children in rural communities. Where would this group of people go?

Assuming further that there are about 15 million small-scale fishers in Southeast Asia, and granting that for every fisher household there are other 2-4 fish workers, *i.e.* spouse and young children working in ancillary activities, this would mean a total of about 45 million fish workers in the region. Taking into account the trend of the region's fish export data (Fig. 2) which had been increasing at the rate of 16.03% per year, and considering the lower range of such trend, it can be predicted that the export value in 2010 could have reached the minimum of US\$21,719.4 million. This implies that each fish worker must have earned at most US\$480.0 per year or a minimum of US\$1.30/day from the fish they caught and exported. This amount is just some cents above the lower limit of US\$1.25 poverty threshold but much lower than the upper limit of US\$2.50 poverty line (Chen and Ravallion, 2010). Therefore, there is nowhere for these groups of people can go in order to augment their incomes. So, they will have to remain the most marginalized groups

of society, while continue muddling in severe poverty. These are the groups that need assistance in order that they would be able to extricate themselves out from poverty. Therefore, governments should consider redirecting their objectives of national fisheries development towards alleviating poverty especially in remote rural fishing communities.

## Initiatives of Southeast Asian Countries

The countries in Southeast Asia have not been short of developing approaches and strategies that aim to alleviate poverty for the benefit of their respective rural fishing communities. In the CLMV countries for example, the Royal Kingdom of Cambodia has developed its Millennium Development Goals which include the need to eradicate extreme poverty and hunger in the country through a rectangular strategy, the first and foremost rectangle of which focused on enhancing the agriculture sector through reforms in the fisheries sector (FiA, 2008). Lao PDR has also been exerting efforts to reduce poverty in the country which mainly aim to liberate Lao PDR from the group of the world's Least Developed Countries by 2020 through sustainable and equitable development especially in its inland fisheries sector (Sirimanotham and Norachack, 2008). Myanmar has also developed strategies for the improvement of the country's fisheries production which include the objective of upgrading the socio-economic status of its fisheries communities including fish farmers, through the adoption of responsible fishing and good aquaculture practices, as well as the generally-accepted food safety policies. However, the country needs technical and financial support for such endeavors (Kywe and Than, 2008). The Comprehensive Poverty Reduction and Growth Strategy (CPRGS) of Vietnam had been promoted

<sup>1</sup> Source: Fishery Statistical Bulletin of Southeast Asia 2010 (SEAFDEC, 2012)

<sup>2</sup> Sources: World Population Data Sheet 2009, 2010; Population Reference Bureau, Washington D.C., U.S.A.

<sup>3</sup> Sources: Fishery Statistical Bulletin for the South China Sea Area (SEAFDEC, 2010) and Fishery Statistical Bulletin of Southeast Asia (SEAFDEC, 2011)

<sup>4</sup> Source: Agri-Food & Veterinary Authority of Singapore

in the country since 2002. The CPRGS takes advantage of fisheries and aquaculture as the major players in the country's national poverty reduction program from 2010 and beyond (Dao and Nhung, 2008).

The Philippines promotes poverty alleviation through people and resource development in accordance with the country's Fisheries Code of 1998 and Local Government Code of 1991, which had been used to establish the National Anti-Poverty Alleviation Commission (NAPC). Specifically for the country's fisheries sector, the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) closely partners with the people's organizations, *e.g.* a broadcast alliance of fisherfolk organizations of the country known as *Pampano (Pambansang Alyansa and mga Mangingisda at Pamunuan ng Organisasyon)*, as well as with the collaboration of the Fisheries and Aquatic Resources Management Council (FARMC), a consultative and recommendation body for policy formulation at the local and national levels (Domenden and Capricho, 2008).

### Initiatives of SEAFDEC

The assumptions used in this paper are not intended to invite any external interventions considering that these are based mainly on the available fishery statistics that had been compiled by SEAFDEC based on inputs from the Southeast Asian countries. However, these are meant to construct a picture of the actual situation of the fisheries communities in the region to assist SEAFDEC in formulating activities that aim to address the socio-economic concerns in fishing communities. Nonetheless, one has to go to the fishing communities to see how fishers are surviving through difficult times. While also recognizing that fishers are "not passive" beneficiaries of interventions but are in fact the "drivers of change" as stressed by Arthur and Sheriff (2008), SEAFDEC had focused its attention to the well-being of the fishers when it implemented two ASEAN Foundation funded projects in 2008-2010 that aim to alleviate poverty in rural fishing communities.

The Promotion of "One Village, One Fisheries Product (FOVOP)" System to Improve the Livelihood of the Fisheries Communities in the ASEAN Region has been carried out in the Southeast Asian countries through the conduct of human resource development activities as a strategy for improving the rural fisheries livelihoods. The approach developed through the FOVOP Project which is laid out in details in the Regional Guidelines for the Promotion of FOVOP in the ASEAN Region, is meant as guide for government agencies in providing support to rural fishing communities in order that their livelihoods are improved and thereby alleviating poverty (Wongsanga and Sulit, 2010; and Wongsanga and Vichitlekarn, 2010).

Moreover, while acknowledging that poverty eradication in rural fishing communities of the region could be effectively advocated by enhancing the capacity of stakeholders in fisheries, SEAFDEC also implemented the Project on Human Resources Development (HRD) for Poverty Alleviation and Food Security by Fisheries Intervention in the ASEAN Region. It was envisioned that through the HRD Project, poverty in fishing communities could be alleviated by enhancing human capacity at the community level using the technical expertise of SEAFDEC as tools in enhancing their skills in fisheries and aquaculture in order to increase fisheries production in a sustainable way. The regional policy recommendations developed through the HRD Project had been promoted to serve as guide for the governments in mainstreaming poverty alleviation and food security by fisheries intervention in their respective national policies (Kankamnerd, 2010).

In a more long-lasting manner, SEAFDEC also supports the efforts of the ASEAN to combat Illegal, Unreported and Unregulated (IUU) Fishing and the Indonesia-based Regional Plan of Action (RPOA) to Promote Responsible Fishing including Combating IUU Fishing, as means of attaining food security and alleviating poverty in the Southeast Asian region (Poernomo *et al.*, 2011). As the technical arm of the ASEAN, SEAFDEC has been conducting consultations with core experts in the region to develop a regional registration of fishing vessels as this could serve as crucial tool for combating IUU fishing in the region and eventually, alleviate poverty in fishing communities. In addition, guidelines that would aim to prohibit the trading of IUU products from the region would also be developed through a series of consultations. Meanwhile, training courses are conducted at SEAFDEC Training Department in Samut Prakan, Thailand to promote the importance and relevance of IUU Fishing Related Countermeasures in the Southeast Asian countries.

Through its Philippine-based Aquaculture Department (AQD), SEAFDEC has been promoting sustainable aquaculture development in rural areas as means of enhancing rural livelihoods. This is in response to the countries' call for the advancement of good aquaculture practices in rural communities as a strategy for addressing food security and combating poverty in the region. Thus, AQD has been providing technical support to the countries through the conduct of on-site training sessions in selected countries on responsible aquaculture technologies that are technologically feasible and safe, socio-economically viable, and environment-friendly (Toledo *et al.*, 2011). Furthermore, while recognizing the crucial role of fisheries post-harvest technology in the sustainable development of fisheries for food security in Southeast Asia, SEAFDEC through its Marine Fisheries Research Department



(MFRD) in Singapore has been conducting human resource development activities that aim to improve the quality of traditional fish products, as well as promote the adoption of quality, safety and control systems in fishery products to ensure that the niche of the region's fishery products in the world market is not taken by other suppliers. In this regard, MFRD has been developing technologies that aim to optimize the utilization of catch, reduce post-harvest losses, improve quality of traditional fish products, and institute measures to comply with international food safety requirements (Yeap and Chung, 2011).

## What the future may bring to the well-being of rural fishing communities of Southeast Asia

The integration of fisheries into the ASEAN Economic Community which is expected to be completed by 2015 implies that the ASEAN member states would be transformed into a community with free movement of goods, services, investments, and skilled labor as well as free flow of capital. To be able to take full advantage of the integration, the countries must make sure that the social, economic, environmental, and political concerns in their respective fisheries sector are addressed, and should also attempt to reach a certain level of fisheries development that would be at par with the other countries of the region.

Fisheries development could only be sustainable if the well-being of the fishers and fish workers is taken care of by governments, which means that rural livelihoods are improved and poverty is eradicated in rural fishing communities. The relevant technical aspects of as well as the guidelines and recommendations for poverty alleviation have already been laid out as mentioned earlier. It is now the turn of the governments to mainstream these aspects into their respective national development policies. The aforementioned concepts and assumptions boil down to improving governance and management for sustainable fisheries. In this aspect, it is necessary for governments to take a closer look at their small-scale fisheries in relation to the well-being of fishing communities, and ask the question whether fishing communities are participating in fisheries and environmental management, and promoting effective accountability of the resources (SEAFDEC, 2012b). The answer to such question could form a basis for the development of appropriate policies that could improve the well-being of the fishing communities.

Towards this end and in an effort to pave the way for the countries to attain such objective, the ASEAN and SEAFDEC through the 2011 Resolution would want to make sure that the direction of the region's fisheries development is towards "*sustaining the supply of fish*

*and fishery products to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policy, legal and institutional frameworks that encourages and support small-scale fishers/farmers, including providing alternative livelihood opportunities"*.

Moreover, in the accompanying 2011 Plan of Action, the countries should develop fisheries programs and activities that aim among others, to "*strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods, adapt to climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process"* (SEAFDEC, 2011). The provisions in the ASEAN-SEAFDEC Resolution and Plan of Action 2011 have been strengthened with the common vision adopted at the Rio+20 United Nations Conference on Sustainable Development in Rio de Janeiro, Brazil on 20-22 June 2012 that recognizes "*the crucial role of healthy marine ecosystems, sustainable fisheries and sustainable aquaculture for food security and nutrition and in providing the livelihoods of millions of people"*.

In the Philippines, a famous folk song "*Si Filemon*" reveals a message on the need to conserve fishery resources since fish catch has become smaller not only in terms of size but also in quantity. As portrayed in the song by *Filemon*, a small-scale local fisher using selective gear, *i.e.* hook-and-line and operating in nearshore area, he could catch only small fish which when sold to local market give him few cents enough to buy "*tuba*" a local wine produced from coconut sap (Diaz and Bañares, 2008), and perhaps nothing more is left for the subsistence of his family. This song must have been composed more than 50 years ago, but it is sad to note that fisheries management authorities seemed not to have taken heed of the message conveyed in the song. Should the many *Filemons* be therefore left alone to fend for themselves and continue to suffer from absolute poverty without expecting any improvements of their situation, because interventions by fisheries authorities are not adequate enough to address the degrading fishery resources, as the song tried to suggest? May be the right time has already come for fisheries agencies to consider trending their fisheries development policies towards poverty alleviation or else many *Filemons* would just disappear from the seas and oceans, and in the end nobody will catch fish to supply the protein requirements of the rest of the people.

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