# FISHERY STATISTICAL BULLETIN OF SOUTHEAST ASIA 2010





Southeast Asian Fisheries Development Center

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#### **FOREWORD**

The Southeast Asian Fisheries Development Center (SEAFDEC) has always recognized the importance of fishery statistics as it presents a better understanding of and familiarity with the status of fisheries especially in the Southeast Asian region where fishery production trend could be affected by the multi-species characteristics of the fisheries. Moreover, fishery statistics are also necessary for planning and management of fisheries in order that sustainable development of fisheries could be achieved for the food security of the people. Considering therefore the significant contribution of fisheries to the countries' economic development, SEAFDEC has always encouraged the countries in the region to improve their collection and compilation of fishery statistics, data and information. Specifically, the important areas that need to be enhanced include various aspects in the national fishery statistical systems such as the quality, availability, reliability, accuracy, and timeliness of statistics in line with the prescribed minimum requirements taking into consideration the regionally standardized definitions and classifications for fishery statistics. With such national efforts, SEAFDEC could enhance the regional compilation as well as the data analysis and exchange, and also improve the ways of presenting the information in a user-friendly manner for management and decision-making.

One of the important activities of SEAFDEC is to provide the Member Countries with a collective picture of the fisheries of the Southeast Asian region through the compiled fishery statistics and information from the national statistics collection systems. This has been made possible through the annual Fishery Statistical Bulletin of the South China Sea Area regularly published starting in the late 1970s, which was redesigned since 2008 into the Fishery Statistical Bulletin of Southeast Asia. The Bulletin includes an excellent summary of the fishery statistics that are crucial in understanding the real-time status and trends of fisheries in the Southeast Asian region. As a matter of fact, the possible ways and means of improving fisheries management could also be derived from the Bulletin especially by looking the potentials of the fishery resources and other factors that could possibly influence the fishery production trend.

Currently, the Southeast Asian countries accounts for almost 19% of the world's total fish production. Fish and fishery products are important sources of animal protein and nutrition for a large portion of the Southeast Asian population, and are increasingly becoming important source of income and trade for the region. SEAFDEC therefore strives to contribute to improving the sustainability of fisheries and maintaining the role of fisheries in the region's economic development, by providing continued assistance to the Member Countries especially towards the better utilization of the harmonized fishery information included in the Bulletin in fisheries development planning and management. Through improved cooperation in the region not only at national but also at regional level, SEAFDEC will continue to promote the need to improve the countries' systems for collection and compilation of fishery statistics, data and information. For this 2010 Bulletin, SEAFDEC presents the compiled data and information with brief analysis of the regional production trends with the hope that this would tickle the interest of the countries in assessing the factors that influence the production trends at the national level.

As this juncture therefore, and on behalf of SEAFDEC, I wish to express our profound gratitude to the national agencies responsible for the collection and compilation of fishery statistics, for their continued support and cooperation. Our gratitude specifically also goes to the staff of these agencies for their untiring efforts in providing SEAFDEC with the necessary data and information that went into the 2010 Bulletin. For all your efforts, SEAFDEC is indeed very thankful.

Chumnarn Pongsri Secretary-General

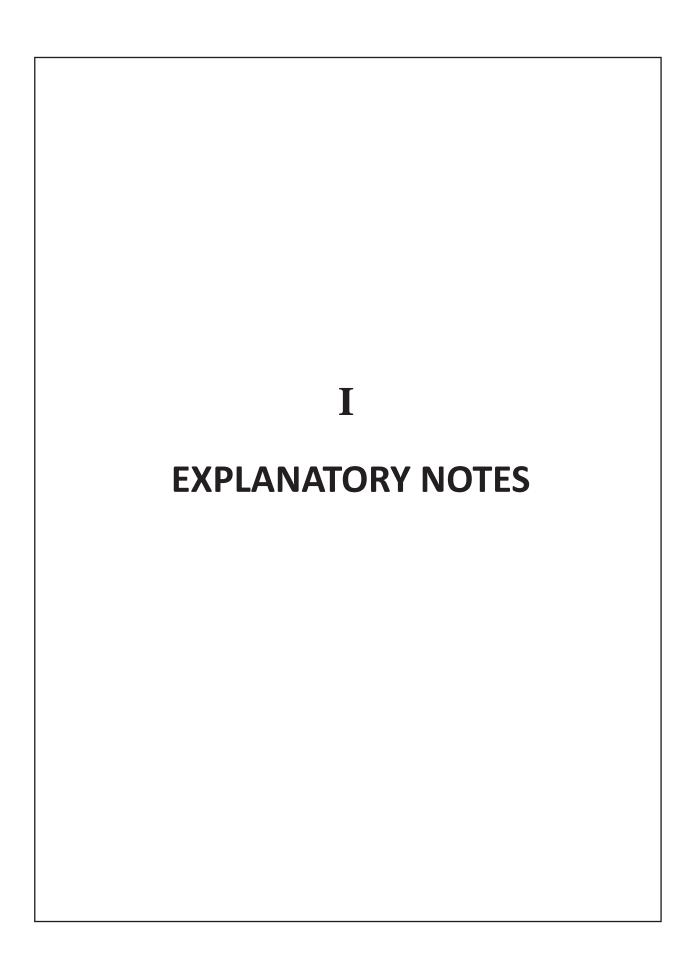
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#### I. EXPLANATORY NOTES

#### 1. GENERAL NOTES

#### 1.1 Data Source

Data and information available from various sources could be used as inputs for the Bulletin. These include the data collected through statistical surveys, from government records and semi-governmental organizations. In addition, data and information derived from new statistical techniques or small-scale surveys could also be used to provide inputs to the Bulletin.

# 1.2 Incomplete Data

Although it is desirable that standardized and complete data be supplied for the Bulletin; data that may not be entirely compatible with the coverage, definition and classification but could be useful should also be reported by countries, provided that the extent of incompleteness indicated as a footnote.

#### 1.3 Time Reference

The Fishery Statistics Bulletin of Southeast Asia has been published starting from the statistics of the year 2008. The statistical period, in principle, covers January to December of the reporting year. In cases where country was unable to supply the statistics of the reporting year by the timeline as indicated, the latest data available may be given, provided that the year to which the data belongs indicated in the space provided.

#### 1.4 Unit of Measurement

Units of measurement used in the Bulletin are standardized as follows:

- Fishery production statistics in quantity are reported in metric tons, except ornamental fish and reptiles which are reported in piece/number
- Fishery production statistics in value are reported in US\$ 1,000
- Fish prices are reported in US\$/kg

# 1.5 Standard Symbols and Abbreviations

The following standard symbols and abbreviations are used throughout the tables in this Bulletin:

... = Not available

– = Magnitude zero or not applicable

0 = Magnitude insignificant, *i.e.*, less than half of the measurement

MT = Metric Tons

US\$ 1,000 = 1,000 dollars in U.S. currency

No. = Number Q = Quantity V = Value ij EXPLANATORY NOTES

## 2. NOTES ON STATISTICS

## 2.1 Statistical Coverage

Fishery Statistics Bulletin of Southeast Asia covers the fishery statistics on Production; Fishing Units; Fishing Boats; Fishers; and Fish Price. Production (landings) covers fishes, crustaceans, mollusks, and other aquatic animals and plants taken for all purposes (capture fisheries and aquaculture) by all types and classes of fishing units and aquaculture activities operating in marine, brackishwater and freshwater areas, in appropriate geographical categories.

#### 2.2 Geographical Coverage

The data also cover all production by commercial and small-scale fisheries and aquaculture activities in freshwater, brackishwater and marine water designated by FAO Fishing Area 57 (Indian Ocean, Eastern), 71 (Pacific, Western Central), 61 (Pacific, Northwest), and 04 (Asia, Inland Water). Countries and sub-areas to be used in marine fishery statistics are established in consistent with the FAO Fishing Areas (see detail description in *Appendix 1*).

# 2.3 Fishery Structure and Sub-sectors

In line with the structure of fisheries in the Southeast Asian region, the statistics are divided into two main sectors, *i.e.* Capture Fishery and Aquaculture. Capture means an economic activity to catch or collect aquatic organisms which grow naturally in public waters and which do not belong to the property of any person, whereas culture means an economic activity to rear the young aquatic organisms such as fry, fingerings, oyster seeds, etc. to commercial size. Unlike capture, aquatic organisms under culture operations belong to the property of a specific person or a group of specific persons who manage them until they grow to commercial size.

## 2.3.1 Statistics on Capture Fisheries

With concerns in the different environment of fishery resources and other components of capture fishery, the statistics compiled under this section are classified into two sectors, namely Marine Capture Fishery and Inland Capture Fishery. Statistics on production or catch, fishing gear, fishing boats, fishing units, fishers, etc. will be collected and compiled under each sector.

## 2.3.1.1 Marine Capture Fisheries

#### a. Coverage and Definition

Marine capture fishery is divided into two sub-sectors: small-scale fishery (including subsistence fishery /artisanal/ traditional) and commercial fishery. As it is not possible to establish common definition of these two categories in the region, the national distinction between small-scale and commercial fisheries of countries in the region is given in *Appendix 2*. The data for marine capture fishery exclude sport fishing, recreation, and research.

#### b. Marine Capture Production

The statistics for marine production represent the statistics on catches and landings of marine and brackishwater species of aquatic organisms, killed, caught, trapped or collected for all commercial, industrial, and subsistence purposes. The statistics in terms of quantity will be used to assess the stock of the marine organisms, to disclose the size of a fishing industry as a whole, and to be used as index showing the status and trend of a fishing industry by annual series of fisheries industry in monetary terms to adequately compare the economic size of the fisheries industry with those of other industries.

#### **b.1** Unit of Measurement

# 1) Production in quantity

Production in quantity represents the weight equivalent of the landing. Production in quantity should be reported in metric tons, except those expressed in numbers or in kilograms. If production is reported in kilograms, this has been

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converted into metric tons estimated by rounding off to the nearest hundredths. The production of ornamental fish and reptiles will be reported in numbers.

There are many instances where the catches on board fishing vessels are gutted, filleted, salted, dried etc. or reduced to meals, oil etc. The data on the landing of such species and products require conversion by accurate yield rates (conversion factors) to establish the live weight equivalents (nominal catches) at the time of their capture.

#### 2) Production in value

Production in value represents the products' value equivalent of the landing (average monthly weighted value, where available). It is generally estimated by multiplying the quantity of production by the producers' price. In reporting production in value, the amount reported in the national currencies have been converted to US\$.

# **b.2 Statistics on Marine Capture Production**

# 1) Production by species

Marine capture production covers production from all kinds of commercial and small-scale fisheries broken down by species (at the species, genus, family or higher taxonomic levels) into statistical categories called species items.

The standard statistical list of marine species is developed in consistent with the 'International Standard Statistical Classification of Aquatic Animals and Plants' (ISSCAAP) with two-digit group code. Statistics on marine species items or group items or group should be reported by referring to the FAO English name, Taxonomic code in 10 digits, and inter-agency 3-alpha code, and national/local name. Please refer to *Appendix 3* for the ISSCAAP and the regional list of aquatic animals and plants.

# 2) Production by type of fishing gear

The production classifies under commercial and small-scale fisheries, where possible should be further classified into detailed types of fishing gear for each category.

To complete the statistics on production by type of fishing gear, the Regional Classification of Fishing Gear developed in consistent with the CWP-International Standard Statistical Classification of Fishing Gear (ISSCFG) is shown as *Appendix 4*.

# c. Fishing Boats

Fishing boats can also be called in various terms as fishing vessels, fishing fleets, or fishing crafts. Fishing boat means any vessel, boat, ship of other craft and is equipped and used for fishing or in support of such activity. Statistics on fishing boats will be used to clarify the amount of capital invested in a fishery corresponding to the size of fishing boat. Such statistics can also be used as inputs for the economic analysis and measure of the material input productivity of fishing industry, and as a rough indication of the fishing effort considering the size of the fishing boat.

#### c.1 Coverage of Fishing Boats

The statistics should cover annual data of fishing boats in marine areas. All boats used in fishing, whether registered with the government or not, should be included.

# c.2 Classification of Fishing Boats

Based on the characteristics of marine capture fisheries in the Southeast Asian region, one fishing boat can operate various types of fishing gear as well as catching many target species.

The regional classification of fishing boats is therefore developed separately from the Coordinating Working Party on Fishery Statistics (CWP) in order to present the specificity of the fisheries situation of the region. In compiling the

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statistics on fishing boats and fishing units for marine capture fisheries in the region, the Regional Classification of Fishing Boats by Type of Boats has been developed as shown in *Appendix 5*.

Tonnage is expressed uniformly in gross ton. When a unit other than gross tons is used to measure the size of the boat, this should be converted into gross tons. Although the method of measurement of the tonnage of fishing boats varies from country to country, statistics should be based on national measurement standards.

# d. Fishing Units

Fishing unit means the smallest unit in fishing operation, which comprises generally a fishing boat, fishers and fishing gears. In cases where two fishing boats are jointly operated in fishing such as the pair trawler or two-boat purse seine, these two fishing boats are regarded as one fishing unit.

A fishing boat may be counted as two or more fishing units on the same year if it uses different kinds of fishing gears in separate seasons. For instance, in cases where a fishing boat operates trawl fishing half a year and gill net fishing during the other half of the year, the fishing boat is regarded as two fishing units. Fishing units are generally counted by type of fishing gear. The statistics on fishing unit is mainly used to consider the limitation of the number of fishing units for fisheries management.

## d.1 Coverage of Fishing Units

The statistics should cover the annual data of fishing units operated in marine and coastal areas. Fishing units operating without boats or non-powered boats are excluded.

#### d.2 Classification of Fishing Units

Fishing units are classified by type and size of fishing boats as well as major types of fishing gear. In cases where a fishing unit operates more than one fishing boats such as the pair trawl and two-boat purse seine, the size is represented by the tonnage of the major single fishing boat from among the boats employed. The type of fishing gear is based on the national classifications. In order to facilitate reporting of the statistics on fishing units, please refer to *Appendix 4* for the details.

#### e. Fishers

#### e.1 Coverage of Fishers

The statistics on fishers are generally obtained from the Marine Fishery Census of the Member Countries. The statistics should cover all commercial and subsistence fishers operating in marine and brackishwater areas for catching and landing of all aquatic animals.

#### e.2 Classification of Fishers

Statistics on the number of fishers by sub-sectors of fisheries and working status should be based on the following two main categories: full-time fishers and part-time fishers. For the detailed classification of the fishers, please refer to *Appendix 6*.

- (a) Full-time fishers: fishers who spend all of their working time in fishing.
- (b) Part-time fishers: fishers who spend part of their working time in fishing.

# 2.3.1.2 Inland Capture Fisheries

# a. Coverage and Definition

Inland Capture Fishery refers to any activity involving the catching or collection of aquatic organisms, which grow naturally in inland water bodies for economic, livelihoods and food security purposes. The statistics cover the annual data of commercial and subsistence operations for catching and collecting, and landing production of all aquatic animals in freshwater areas.

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The statistics on inland capture fishery cover all productions and the people involves in fishing designated by FAO Fishing Area 04.

#### b. Inland Capture Production

The statistics for inland capture production present the catch of freshwater species of aquatic organisms that are killed, caught, trapped or collected for all commercial and subsistence purposes.

## b.1 Unit of Measurement

#### 1) Production in quantity

Production in quantity represents the weight equivalent of aquatic organisms caught and collected in inland water bodies. Production in quantity should be reported in metric tons, except those expressed in numbers. If production is reported in kilograms, this has been converted into metric tons estimated by rounding off to the nearest hundredths.

#### 2) Production in value

Production in value represents an estimation of the value equivalent at the first point of sale, indicating seasonal variations in the average total value where available, with estimations including aquatic products caught and collected for subsistence and household purposes. In reporting production in value, the amount reported in national currencies have been converted to US\$.

## **b.2 Statistics on Inland Capture Production**

#### 1) Production by species

Inland capture production covers all aquatic animals and plants in inland waters broken down by species (at the species, genus, family or higher taxonomic levels) into statistical categories called species items. The standard statistical list of freshwater species is developed in consistent with the 'International Standard Statistical Classification of Aquatic Animals and Plants' (ISSCAAP). The statistics of freshwater species items or groups should be reported using the same format as that for marine species. The regional standard statistical list of aquatic species is given in *Appendix 3*.

# 2) Production by type of water bodies

Statistics on production from inland capture fishery should be presented in accordance with the following types of water bodies:

- (a) Lakes: non-flowing, naturally enclosed bodies of water, including regulated natural lakes but excluding reservoirs
- (b) Rivers: running water body such as rivers, drainage canals, irrigation canals which also cover creeks, streams and other linear water bodies
- (c) Floodplains/rice fields: seasonally flooded areas including paddy fields
- (d) Reservoirs: artificial impoundments of water used for irrigation, flood control, municipal water supplies, recreation, hydroelectric power generation, and so forth
- (e) Others: any water bodies other than the above; Peri-urban wetland is included in this category

# 3) Production by type of fisheries

Inland fisheries is quite diverse in its involvement of different groups of people, the scale of operation and the types of gear/boat used as well as in its seasonal variation. As available records would allow, the statistics under the Framework should try reflect such variations.

- (a) Categories of scale:
  - Commercial
  - Family/small-scale
  - Household occasional fishing

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- (b) Categories of application/seasonality/licensing:
  - Fishing lots/Leasable fisheries and other types of licensed fisheries and/or areas for (commercial ) fishing
  - Dai fisheries (term used to exemplify the national/regional importance of specific type of fisheries)
  - Community fisheries and other rights/based fisheries at village level
  - "On farm" fishing, fishing in rice fields, etc.
- (c) Categories of equipment/gear/boat:
  - Set nets/traps
  - Gear operated from boats
  - Mobile gear/hand line/hooks/etc.

#### c. Fishers

## c.1 Coverage of Fishers

The statistics on fishers for inland capture fishery are generally obtained from the respective National Fishery Census (or Agricultural Census). Statistics on fishers cover fishers engaged in inland capture fishery while persons operate fishing in marine area as well as any type of aquaculture should be excluded.

#### c.2 Classification of Fishers

Fishers in this section are mostly rural people who, in one way or another, seasonally or the whole year, full-time or part-time, are involved in activities related to the catch and collection of aquatic organisms in inland water bodies. Some of the information/statistics related to household occasional fishing could also be found in other sources of statistics that are available at fisheries agencies.

As far as possible, the relative involvement of people in fishing should be reported to reflect the importance of inland fisheries to the countries, whether nationally, locally, seasonally as well as for rural livelihood in general. Fishers/people involved in fishing could be classified into:

- (a) Full-time fishers
- (b) Part-time fishers (including seasonally full-time fishers)
- (c) Occasional fishing by household members (which could be a daily exercise)

## 2.3.2 Statistics on Aquaculture

# a. Coverage and Definition

Aquaculture means the farming of aquatic organisms including fish, mollusks, crustaceans, echinoderms, and aquatic plants. Farming implies some forms of intervention in the rearing process to enhance production, such as regular stocking, feeding and protection from predators. Farming also implies individual or cooperate ownership of or rights resulting from contractual arrangements to the stock being cultivated primarily for livelihood and business activities. For statistics purposes, aquatic organisms harvested by an individual or corporation, which has owned them throughout their rearing period contribute to aquaculture, whereas aquatic organisms exploited by the public as a common property resources, with or without appropriate licenses, are the harvest of fisheries.

Considering the different ecology and resources in aquaculture, the statistics on aquaculture could be classified into three sub-sectors, namely: mariculture, brackishwater culture, and freshwater culture. The distinction between these categories should be based on culture environment where the aquatic organism is farmed or cultivated. Considering aquaculture production, some aquatics species can be cultured in various environments, its production then could be reported in more than one sub-sector, *e.g.* Java barb, tilapia, milkfish, etc.

#### 1) Mariculture

The farming or growing-out of aquatic animals/plants takes place in full seawater. This includes the culture of groupers,

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milkfish and other marine fishes in sea cages offshore or in coral reef coves; abalone and giant clams in coral reefs; seaweeds in longlines along the sea coasts; oysters in longlines.

## 2) Brackishwater culture

The farming or growing-out of aquatic animals/plants takes place in estuaries, river mouths, mangrove lagoons or in ponds with seawater. This includes culture of groupers and other fishes in cages; milkfish and penaeid shrimps in ponds; mud crab in pens in mangroves; oysters, mussels and other bivalves in estuaries.

## 3) Freshwater aquaculture

The farming or growing-out of aquatic animals/plants takes place in lakes, reservoirs, rivers, rice fields, small farm impoundments or in freshwater ponds. This includes culture of carps, tilapias and other freshwater fish species in reservoirs, lake cages, and ponds; catfishes in ponds; freshwater prawns in ponds.

## b. Aquaculture Production

#### b.1 Unit of Measurement

#### 1) Production in quantity

Production in quantity represents the weight at farm gate. Production in quantity should be reported in metric tons, except those expressed in numbers. If production is reported in kilograms, this has been converted into metric tons estimated by rounding off to the nearest hundredths.

## 2) Production in value

Production in value represents the producers' price at farm gate. It is generally estimated by multiplying the quantity of production by the farm gate price by species. In reporting production in value, the amount reported in the national currencies have been converted to US\$.

#### **b.2 Statistics on Aquaculture Production**

Aquaculture production means the output of farmed aquatic organisms either for final consumption or as raw materials for transformation into other products or for trade. It includes commodities quantified by numbers rather than by weight such as ornamental fishes and hatchery output. The statistics on production could be classified into the following categories:

# 1) Production by culture environment

The statistics on production should be based on the culture environment where the aquatic organism was cultivated, such as mariculture, brackishwater culture and freshwater aquaculture. One species can be reported in more than one type of environment depending on its tolerance and the culture status in the each country.

#### 2) Production by species

Production from aquaculture could be broken down by species from all types of culture environments in the Southeast Asian region. The list of species is provided in *Appendix 3*.

## 3) Production by methods of culture

To facilitate aquaculture management, the production statistics should be reported by methods of culture such as ponds, pens, paddy field or paddy cum fish, etc. The definition of each method is described below:

- (a) Ponds and tanks: artificial units of varying sizes constructed above or below ground level capable of holding and interchanging water
- (b) Pens: water areas confined by net, mesh and other barriers allowing uncontrolled water column between substrate and surface; where pens and enclosures will generally enclose a relatively large volume of water
- (c) Cages: open or covered enclosed structures constructed with net, mesh, or any porous

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- material allowing natural water interchange. These structures may be floated, suspended, or fixed to the substrate but still permitting water interchange from below
- (d) Paddy fields: paddy fields used for rice and aquatic organisms; rearing them in rice paddies to any marketable size
- (e) Others: methods other than the above; rafts, ropes, stakes are included in this category

#### c. Artificial Seed Production

The statistics on artificial seed production is presented in order to assess the recruitment in aquaculture and facilitate management purpose. Production could be reported by species in terms of the number of larvae, fingerlings, juveniles, etc., used that focuses on two main objectives, *i.e.* for wild stock enhancement and aquaculture practices. As part of wild stock enhancement, production covers both the number released to a controlled environment and to the wild; whereas production for aquaculture practices covers seed stocks for mariculture, brackishwater culture and freshwater culture.

#### d. Aquaculture Unit

Aquaculture unit refers to a management unit, which operates aquaculture in marine, brackishwater and freshwater areas. The term covers both economic units (companies) and households conducting activities in culturing aquatic organisms. In Southeast Asian countries, the use of this term varies from country to country, *e.g.* fishing establishments in Indonesia, farms in Singapore and Thailand.

#### e. Area under Culture

Area under culture can be referred to as the net area (water surface area) and gross area. Net area refers to the areas of the culture facilitates but limited to the water surface area, whereas gross area refers to the culture facilities, including not only the water surface area but also the area of the dike surrounding the water area. For ponds and cages, the area under culture will be reported both in net area and gross area while for the other culture methods this could be reported only as net area. The number of culture facilities should also be reported in order to facilitate aquaculture management.

## f. Fish Farmers

Fish farmers (or aquaculture workers) under this item, refer to persons who are engaged in aquaculture activities such as people working in farms, hatcheries, and employed in shellfish culture operations, maintenance of aquaculture facilities, water supply, feeding, etc. As the number of fish farmers engaged in aquaculture often varies according to the season such as harvesting or construction of the aquaculture facilities, only the fish farmers who are engaged full-time in aquaculture are counted in reporting the statistics on the number of fish farmers.

## 2.3.3 Statistics on Fish Price

#### a. Coverage

Statistics on fish price cover aquatic organisms in the form of fresh fish only, which includes marine and freshwater species but excluding processed fish.

#### b. Definition of Price

Statistics on price refer to products' price, considered as average weighted price which is realized at wholesale markets or in landing centers where producers sell their catches (applicable in some countries in the region). The price is determined (there) by means of auction, negotiation between producers and wholesalers and middlemen, etc., which can also be used to estimate the total production in value.

# c. Unit of Price

The products' price has been reported in US\$ per kilogram of fresh fish by species. The figure includes two digits after the decimal point by rounding off to the nearest hundredths.

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Appendix 1

#### **CLASSIFICATION OF FISHING AREAS**

The fishing areas of the Southeast Asian region, established for fishery statistical purposes, consist of inland and marine fishing areas, which is consistent with the definition and classification of capture fishery. They are standardized in accordance with the FAO Major Fishing Areas, the boundaries of which were determined in consultation with international fishery agencies taking into account various considerations, including:

- (i) The boundary of national regions and the natural divisions of oceans and seas;
- (ii) The boundaries of adjacent statistical fisheries bodies already established in inter-governmental conventions and treaties;
- (iii) Existing national practices;
- (iv) National boundaries;
- (v) The longitude and latitude grid system;
- (vi) The distribution of the aquatic fauna; and
- (vii) The distribution of the resources and the environmental conditions within an area.

## 1. Inland Fishing Areas

All inland waters of Southeast Asian countries are identified under the Area 04 (Asia, Inland Water). There is no subarea that is recognized for the collection of catch and effort data for the Southeast Asian region. The data presented by Lao PDR, which is the sole landlocked country in the region, are therefore reported under Area 04 only.

## 2. Marine Fishing Areas

The marine fishing areas of the Southeast Asian countries are identified under Area 57 (Indian Ocean, Eastern), Area 71 (Pacific, Western Central) and Area 61 (Pacific, Northwest). Countries and their sub-areas to be used in marine fishery statistics are as follows:

Countries Sub-areas for marine fishery statistics		FAO Marine Fishing Area	SEAFDEC Sub-area
a) Brunei Darussalam		71	71i
b) Cambodia		71	71b
c) Indonesia		57,71	
	West Sumatra	57	57e
	South Java	57	57e
	Malacca Strait	57,71	57d, 71k
	East Sumatra	71	71k
	North Java	71	71k
	Bali-Nusa Tenggara	57	57f, 71k
	South-west Kalimantan	71	71k
	East Kalimantan	71	71k
	South Sulawesi	71	71k
	North Sulawesi	71	71k
	Maluku-Papua	71	71k

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Countries	Sub-areas for marine fishery statistics	FAO Marine Fishing Area	SEAFDEC Sub-area
d) Malaysia			
	West Coast of Peninsular Malaysia	57	57c
	East Coast of Peninsular Malaysia		71e
	Sarawak	71	71f
	Saba (including Labuan)	71	71g
e) Myanmar		57	57a
f) Philippines		71	71j
	Luzon	71	71j
	Visayas	71	71j
	Mindanao	71	71j
g) Singapore		71	71h
h) Thailand		57,71	
	Gulf of Thailand	71	71a
	Indian Ocean	57	57b
i) Vietnam		61,71	
	North Vietnam	61	61a
	Central Vietnam	61	61b
	Southwest Vietnam	71	71c
	Southeast Vietnam	71	71d

# Area 57 (Indian Ocean, Eastern)

Under fishing area 57, marine fishery statistics such as production, species, fishing gear, fishing vessel, fishing units, etc. will be collected and reported within the Exclusive Economic Zone (EEZ) of each country.

To facilitate the reporting fishery statistics by each country, the fishing area in the Southeast Asian region can be divided into 6 sub-areas under which correspond to the existing EEZs of Myanmar, Thailand, Malaysia and Indonesia. The sub-areas under area 57 are as follow:

Sub-area 57a: Marine fishing area of Myanmar

Sub-area 57b: Marine fishing area of Thailand (Indian Ocean)

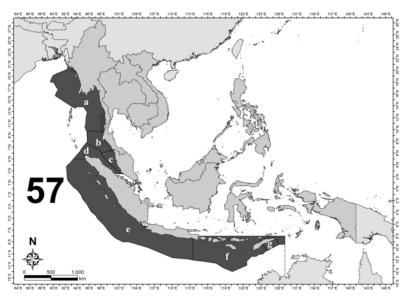
Sub-area 57c: Marine fishing area of Malaysia (West Coast of Peninsular Malaysia)

Sub-area 57d: Marine fishing area of Indonesia (Malacca Strait)

Sub-area 57e: Marine fishing area of Indonesia (West Sumatra and South Java)

Sub-area 57f: Marine fishing area of Indonesia (Bali-Nusa Tenggara)

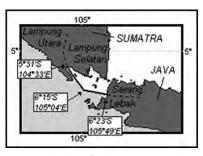
EXPLANATORY NOTES xi



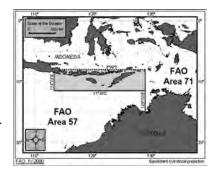
Sub-areas of the fishing area 57, Indian Ocean, Eastern

# Boundary between Area 57 and 71

- 1. At the Strait of Malacca, the areas bounded by a line commencing from East Sumatra and across the strait at 2° 30′ N latitude to meet the West Coast of Peninsular Malaysia.
- 2. At marine waters between Sumatra and Java, the areas bounded by a line commencing on the coast of Sumatra at the boundary between the District of Lampung Utara and the District of Lampung Selatan at 5°31′ S latitude, 104°33′ E longitude. The boundary is running along a rhomb line between Cape Tjuku Redak on the mainland of Sumatra and Cape Batu Kebucung on the Island of Tebuan to the position 6° 15′ S latitude, 105° 04′ E longitude; then along a rhomb line between Cape Parat on the Island of Panaitan and the southeastern tip of the Island of Rakarta to the western coast of Java at the boundary between the District of Lebak and the District of Serang at 6° 23′ S latitude, 105° 49′ E longitude.
- 3. At marine waters of Java and Bali-Nusa Tenggara, the areas bounded by a line commencing from 8°00′ S latitude starting the coast of South Java at Surabaya and running east to meet at 129°00′ E longitude; thence running due south until meet Northern coast of Australia. The area under the line is recognized as the fishing area 57 whereas the other above the line accepted as fishing area 71.



Boundary line for the Area 57 and 71 at the marine waters between Sumatra and Java



Boundary line for the Area 57 and 71 at the marine waters of South Java and Bali-Nusa Tenggara

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# Area 71 (Pacific, Western Central)

Under fishing area 71, marine fishery statistics such as production, species, fishing gear, fishing vessel, fishing units, etc. will be collected and reported within the Exclusive Economic Zone (EEZ) of each country. There are 8 Southeast Asian countries identified under fishing area 71, namely Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. To facilitate reporting fishery statistics by each country, the fishing area can be divided into 11 sub-areas, corresponding to the existing EEZ of these countries. The sub-areas under area 71 are as follows:

Sub-area 71a: Marine fishing area of Thailand (Gulf of Thailand)

Sub-area 71b: Marine fishing area of Cambodia

Sub-area 71c: Marine fishing area of Vietnam (Southwest Vietnam)
Sub-area 71d: Marine fishing area of Vietnam (Southeast Vietnam)

Sub-area 71e: Marine fishing area of Malaysia (East Coast of Peninsular Malaysia)

Sub-area 71f: Marine fishing area of Malaysia (Sarawak)
Sub-area 71g: Marine fishing area of Malaysia (Sabah)

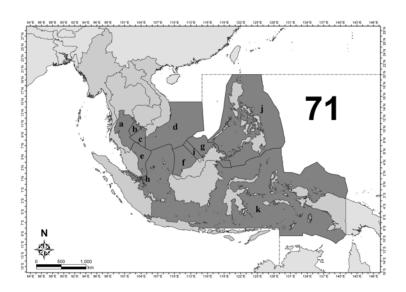
Sub-area 71h: Marine fishing area of Singapore

Sub-area 71i: Marine fishing area of Brunei Darussalam

Sub-area 71j: Marine fishing area of Philippines (Luzon, Visayas, Mindanao)

Sub-area 71k: Marine fishing area of Indonesia (East Sumatra, North Java, Bali-Nusa Tenggara,

South-West Kalimantan, East Kalimantan, South Sulawesi, North Sulawesi, Maluku-Papua)



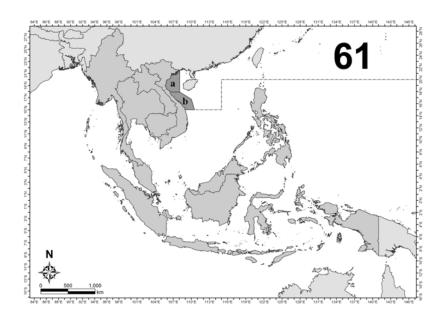
Sub-areas of the fishing area 71, Pacific, Western Central

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# Area 61 (Pacific, Northwest)

Under fishing area 61, the marine fishery statistics such as production, species, fishing gear, fishing vessel, fishing units, etc. will be collected and reported within the Exclusive Economic Zone (EEZ) of each country. There is only one country identified under fishing area 61, which is Vietnam. The fishing area can be divided into 2 sub-areas as follows:

Sub-area 61a: Marine fishing area of Vietnam (North Vietnam)
Sub-area 61b: Marine fishing area of Vietnam (Central Vietnam)



Sub-areas of the fishing area 61, Pacific, Northwest

Appendix 2

# **CLASSIFICATION OF SMALL-SCALE AND COMMERCIAL FISHERIES**

Due to different legal definitions used by each country, the following table shows the classification of small-scale and commercial fisheries of countries in the region.

Countries	Small-scale Fisheries	Commercial Fisheries
Brunei Darussalam	Small-scale/artisanal fisheries:	Trawler, seiner, long liner
	Operating in all zones but concentrating	a) <60 GT; <350 Hp operating in Zone 2
	in Zone 1 (0-3 nm)	b) 60.1-150 GT; 351-600 Hp operating in Zone 3
		c) 151-200 GT; 600-800 Hp operating in Zone 4
Cambodia	Coastal fisheries, small-scale fisheries	Commercial fisheries: more than 50 Hp
	with/without engine (from 5-50 Hp)	operating in Zone 2
	operating in Zone 1	
Indonesia	Fisheries that its operation without	a) Fisheries that its operation using outboard
	using boat, using non-power boat, using	motor size 5-30 GT or inboard motor size
	outboard motor size <5 GT, or inboard	5-30 GT
	motor size <5 GT	b) Fisheries that its operating using outboard
		motor size ≥ 30 GT
Lao PDR	-	-
Malaysia	Traditional fisheries: small-scale	Commercial fisheries: Medium and large-scale
,	fisheries using traditional fishing gears	fisheries using commercial fishing gears such as
	(i.e. other than trawls and purse seines)	trawls and purse seines
	with vessel less than 40 GRT operating	a) With vessels less than 40 GRT operating in
	in all zones concentrating in Zone A	Zone B
	m an zeries series in ann g in zerie i	b) With vessels from 40-70 GRT operating in
		Zone C
		c) With vessels above 70 GRT operating in
		Zone C2
Myanmar	Coastal fisheries: vessels of less than 30 ft	Industrial fisheries: vessels more than 30 ft or
iviyaninai	or using less than 12 Hp engine operating	using more than 12 Hp engines operating in
	in Zone 1	Zone 2
Philippines	Municipal fisheries: small-scale fisheries	Commercial fisheries:
	with vessels of less than 3 GT operating	a) Small-scale commercial fisheries: from 3.1-20
	in Zone 1 and 2	GT vessels operating in Zone 2; can also
	III Zone I and Z	operate within 10.1-15 km (within Zone 1)
		if authority is granted by the concerned local
		government unit (LGU)
		b) Medium-scale commercial fisheries: from
		20.1-150 GT operating in Zone 2; can also
		operate within 10.1-15 km (within zone 1)
		i i
		if authority is granted by the concerned local
		government unit (LGU)
		c) Large-scale commercial fisheries: more than
C:	Constitution in the Consti	150 GT operating in Zone 2
Singapore	Small-scale fisheries with vessels of less	Large-scale commercial fisheries: Inboard engine
The sile is al	than 3 GT operating in Zone 1	less than 50 GT or 380 Hp operating in Zone 2
Thailand	Small-scale fisheries: vessels of less	Large-scale fisheries: vessels of more than 5 GT
Viotnam	than 5 GT operating in Zone 1 Small-scale fisheries: vessels with no	operating in Zone 2
Vietnam		Large-scale fisheries: vessels with engine more
	engine and with engine but less than	than 40 Hp
	40 Hp	

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# Fishing Zones of Countries in Southeast Asia

Countries	Fishing Zone 1	Fishing Zone 2	Fishing Zone 3	Fishing Zone 4
Brunei Darussalam	From shore line to 3 nm	From 3 nm to 20 nm	From 20 nm to 45 nm	From 45 nm to EEZ limit
Cambodia	From shore line to 20 m depth	From 20 m depth to EEZ limit		
Indonesia	From shore line to 4 nm	From the outer limit of first fishing zone to 12 nm from shore	From the outer limit of second fishing zone to EEZ limit	
Malaysia	From shore line to 5 nm	From 5 nm to 12 nm	From 12 nm to 30 nm	From 30 nm to EEZ limit
Myanmar	From shore line to 5 nm in the northern area, 10 nm in the southern area	From outer limit of first fishing zone to EEZ limit		
Philippines	From shore line to 15 km	From 15 km to EEZ limit		
Singapore	From shore line to within Port Limits	From 12 nm to EEZ limit		
Thailand	From shore line to 12 nm	From 12 nm to EEZ limit		
Vietnam	From shore line to 30 m depth in Northern and Southern areas, to 50 m depth in Central area	From 30 to 50 m depth to the EEZ limit		

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Appendix 3

# LIST OF AQUATIC ANIMALS AND PLANTS

For the statistics on production of capture fishery and aquaculture in the Southeast Asian region, broken down into species, the International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP) developed by CWP will be used as basis to develop the Regional Standard Statistic List of Aquatic Species, which focused on the species available and distributed in the region.

For Capture production, since some aquatic animals particularly diadromous species may be caught in both marine and inland waters, the statistics will be reported in two parts of capture fisheries. Regarding aquaculture production since some aquatic species can be cultured in more than one culture environment, production can then be reported based on where the species are cultured.

The ISSCAAP applied for the region is as follows:

Code	Group of Species
1	Freshwater fishes
11	Carps, barbels and other cyprinids
12	Tilapias and other cichilds
13	Miscellaneous freshwater fishes
2	Diadromous fishes
24	Shads
25	Miscellaneous diadromous fishes
3	Marine fishes
31	Flounders, halibuts, soles
33	Miscellaneous coastal fishes
34	Miscellaneous demersal fishes
35	Herring, sardines, anchovies
36	Tunas, bonitos, billfishes
37	Miscellaneous pelagic fishes
38	Sharks, rays, chimaeras
39	Marine fishes not identified
4	Crustaceans
41	Freshwater crustaceans
42	Crabs, sea-spiders
43	Lobsters, spiny-rock lobsters
45	Shrimps, prawns
47	Miscellaneous marine crustaceans
5	Mollusks
51	Freshwater mollusks
52	Abalones, winkles, conch
53	Oysters
54	Mussels
55	Scallops, pectens
56	Squids, cuttlefishes, octopuses
57	Miscellaneous marine mollusks

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7	Miscellaneous aquatic animals			
71	Frogs and other amphibians			
72	Turtles			
73	Crocodiles and alligators			
76	Sea-urchins and other echinoderms			
77	Miscellaneous aquatic invertebrates			
8	Miscellaneous aquatic animal products			
81	Pearls, mother-of pearl, shells			
82	Corals			
83	Sponges			
9	Aquatic plants			
91	Brown seaweeds			
92	Red seaweeds			
93	Green seaweeds			
94	Miscellaneous aquatic plants			

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Appendix 4

#### **CLASSIFICATION OF FISHING GEARS**

For the statistics on fishing units and marine capture production, breakdown into types of fishing gear, the classification of fishing gears will be used as follows:

Major Group	Minor Group	Standard Abbreviation	ISSCFG Code
1.Purse seine		PS	01.1.0
2.Seine Net		SX	02.9.0
	2.1 Boat seine	SV	02.2.0
	2.2 Beach seine	SB	02.1.0
3.Trawl		TX	03.9.0
	3.1 Beam trawl	TBB	03.1.1
	3.2 Otter board trawl	OT	03.4.9
	3.3 Pair trawl	PT	03.5.9
4.Lift net		LN	05.9.0
5.Gill net		GN	07.9.1
6.Trap		FIX	08.9.0
	6.1 Stationary trap	-	-
	6.2 Portable trap	-	-
7.Hook and lines		LX	09.9.0
8.Push/Scoop net		-	-
9.Shellfish and seaweed collecting gear		-	-
10.Others		MIS	20.0.0

# **Types of Fishing Gears and Definitions**

# 1. Purse seine

A net roughly rectangular in shape without a distinct bag is set vertically in water, to surround the school of fish with purse line, generally of pelagic nature.

Actually, this group of fishing gear called 'Surrounding Net', which is sub-divided into three major groups, *i.e.*: a) one boat purse seine; b) two-boat purse seine; and c) surrounding net without a purse line. However, in term of fishery statistics, no countries in the region collect the data in such individual groups. Thus, purse seine is the only gear of surrounding net which collect data without detail in one or two-boat operations. However, countries in the region agreed to separately report production from: a) Anchovies purse seine; and b) Fish purse seine.

# 2. Seine net

A bag shaped net with two wings, normally; the wings are larger than those of trawls nets. The net is pulled towards a stationary boat or onto a beach. A seine net of primitive nature sometimes does not have a bag. Insofar as the net is pulled towards a stationary boat or beach, it is included herein. The seine net is sub-divided into two minor groups: a) boat seine; and b) beach seine.

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#### 2.1 Boat seine

Boat seine consists of two wings, a body and a bag, which is similar to that of trawls. Operated from a boat, they are generally used on the bottom, where they are hauled by two ropes, usually very long, set in the water so as to ensure that as many fish as possible are driven or herded towards the opening of the net. Danish seine is also included herein.

#### 2.2 Beach seine

Beach seine is a simple fishing gear; one end of the wing is held by a group of fishermen on the shore, the net is first set at right angles to the seashore and the direction of the net setting turns gradually towards the shore. After setting all the net, the towing line of the wing is laid out and the boat runs toward the shore providing a certain distance between the landing and setting points. Then, from the two ends of the wings, the buoy line and the sinker line are hauled to catch the fish.

#### 3. Trawl

A conical bag shaped-net with two or more wings, pulled by one to two boats for a period of time, to catch mainly fish or other aquatic animals that live directly on or stay near the sea bed. When such a gear is used in mid-water with the same catching mechanism, the mid-water trawl is included under this group. The trawl is also sub-divided into three minor groups: a) beam trawl; b) otter board trawl; and c) pair trawl.

#### 3.1 Beam trawl

The main feature of this trawl is a beam, mostly made of iron. Its purpose is to spread the netting. Sometimes a heavy beam is supported by steel shoes at each end which run over the sea bed. A ground rope and a head rope are joined together to the cement ski that works as a bobbin. The principle catch of beam trawl are shrimps, therefore the mesh size is relatively small. The mesh size of beam trawl also depends on the target species.

#### 3.2 Otter board trawl

Otter boards are used for horizontal spreading of the net mouth. Most otter trawl nets consist of two panels; this is called a 'two-seam net'. The mouth is oval-shaped when viewed from front. Two wings stretch out to increase the swept area and to guide the fish in the net's path down to the cod-end.

# 3.3 Pair trawl

Pair trawl means this net is towed by two boats. In pair trawling, the net mouth is kept open by outward towing of the two boats, which always try to keep the same distance between them during operation. The otter boards are not necessary, the arrangement of gear has been simplified, the wrap is connected directly to the sweep lines, the other is joined to a triangular iron frame at the end of Gridles from each wing of the net.

## 4. Lift net

A sheet of net, usually square, but may sometimes be conical, is stretched by several rods, ropes, or a frame and is set either at the bottom or in mid-water for some time and then lifted to trap the fish swimming above it. Both stationary lift nets and portable lift nets are included herein.

# Gill net

A net wall, with its lower end weighted by sinkers (or heavy net, as in drift gill net) and the upper end raise by floats, is set across the path of migrating fish. Fish trying to make their way through the net wall are gilled or entangled in the mesh. The trammel net with two to three wall nets is also included herein. The migrating fish are entangled between two layers of nets and not in the mesh where a combination of different types of nets are used.

#### 6. Tran

Trap referred to a gear that is set or stationed in the water for a certain period, regardless of the kind of materials used of their construction. The fish when are naturally confined in a collecting unit from which escape is prevented

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by labyrinths and/or retarding devices such as gorges, funnels, etc. without any active fishing operation taking place. Trap is also sub-divided into two minor groups: a) stationary trap; and b) portable trap.

## 6.1 Stationary trap

Considering its operation, this group of trap is stationed in the water for long period at least until the end of fishing season. Most of stationary gear is operated in relation to water current. Stationary trap covers bamboo stake trap, bamboo fence trap, set net, bag net, etc.

## 6.2 Portable trap

Trap is portable, designed in form of cages or basket. It can be made of various materials such as wood, bamboo, metal rods, wire netting, etc. It is used with or without bait depending on the target species. Fish trap, crab trap, shrimp trap are included herein.

## 7. Hook and lines

This gear generally consists of line(s) and hook(s) where natural or artificial baits are hooked to attract fish or other aquatic animals. Unbaited hook or a jig may also be used.

#### 8. Push/Scoop net

A bag net with a fixed or variable opening is operated in shallow waters or from boats. Some large-scale scoop nets are operated from a motorized boat such as the boat push net.

## 9. Shellfish and seaweed collecting gear

All manual gears and complex devices which are used for collecting shellfish and seaweeds, regardless of the type of materials used for their construction. While the manual gear are operated by an individual, some of the more complex devices such as cockle dredge, clam dredge, etc. need a motor boat for their operation.

# 10. Others

This group of fishing gear covers the great variety of other fishing gears and methods which are not specified elsewhere, including cast net drive-in-net, muro ami, harpoon, etc.

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# Appendix 5

# **CLASSIFICATION OF FISHING BOATS**

To compile the statistics on the fishing units considering the existing fishing operations in the region, the Regional Classification of Fishing Boats by Type of Boats is referred to provide figures of the fishing vessel as follows:

Boat Type		Size of Boat
First level	Second level	Size of Boat
1.Non-powered boat		
2.Powered boat		
	2.1Out-board powered boat	
	2.2In-board powered boat	Less than 5 tons
		5-9.9 tons
		10-19.9 tons
		20-49.9 tons
		50-99.9 tons
		100-199.9 tons
		200-499.9 tons
		More than 500 tons

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Appendix 6

# **CLASSIFICATION OF FISHERS AND FARMERS**

To compile statistics on the number of fishers by sub-sectors of fisheries and working status, the classification of fishers and farmers will be used as follows:

Main Category	Working Area	Working Status
	1.1 Marine capture fisheries	Full-time fishers
		Part-time fishers
1.Fishers	1.2 Inland capture fisheries	Full-time fishers
(engaged in fisheries)		Part-time fishers
		Occasional fishing by household members
	2.1 Mariculture	
2.Farmers (engaged in aquaculture)	2.2 Brackishwater culture	
(engagea in aquaculture)	2.3 Freshwater culture	

II SUMMARY 2010
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2	

#### STATISTICAL SUMMARY

# AN OVERVIEW OF THE FISHERY SECTOR OF SOUTHEAST ASIA IN 2010

#### I. THE FISHERIES SECTOR

Fisheries and aquaculture products are globally important as primary sources of protein food for many peoples in the world. Although 11 countries comprise the Southeast Asian region, namely: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Timor-Leste, Thailand, and Vietnam, the scope of this publication covers only ten of the Southeast Asian countries in view of the unavailability of fishery statistics and information from Timor-Leste.

Worldwide, the trend of fishery production from both capture fisheries and aquaculture (**Table 1**) had been increasing steadily from 2006 to 2009 at an average increase of 1.9% annually but an increase of about 14% could be noted from 2009 to 2010. This situation could imply that the initiatives of many countries in promoting the sustainable development of fisheries have already been generating tangible results. While Asia (including Southeast Asia) had been contributing considerably to the increasing world's fishery production more particularly during the past 5 years, in 2010 Asia's fishery production accounted for about 72% of the total global production, which was the highest so far. This feat could be reflected from the efforts of the countries in the Asian region to adopt responsible fishing practices and promote sustainable management of their respective fisheries sector. Meanwhile, the contribution of the ten Southeast Asian countries to the world's total fishery production in 2010 was about 19% or an increase of 8% from that of 2009.

Table 1. Fishery production by continent from 2006 to 2010 (million MT)

	2006	2007	2008	2009	2010
World*	137.1	139.8	142.3	145.1	168.4
Africa	7.9	8.1	8.4	8.3	9.1
America	25.1	24.6	24.5	23.6	20.2
Asia**	62.1	64.3	65.4	67.0	89.9
Southeast Asia***	24.5	25.3	27.2	28.9	31.4
Europe	15.9	15.9	15.4	15.9	16.4
Oceania	1.6	1.6	1.4	1.4	1.4

<sup>\*</sup> Source of main data: FAO FishStat Plus-Universal Software for Fishery Statistical Time Series

Specifically, the total fishery production of the Southeast Asian region (**Table 2**) had continuously increased from 2006 to 2010 in terms of volume and value. In terms of volume, the annual average increase from 2006 to 2010 was 6% while the increase was 20% annually in terms of value. This could mean that in addition to increasing their volume of production, countries in the Southeast Asian region must have been producing high value commodities from fisheries and aquaculture. By country, Indonesia reported the highest fishery production in 2010 in terms of volume which accounted for about 37.0% of the total fishery production of Southeast Asia, followed by Philippines contributing about 16.4% and Vietnam at 16.3%. In descending order, Myanmar ranked next accounting for 12.4% then followed by Thailand (9.9%), Malaysia (5.8%), and Cambodia (1.8%). Lao PDR, Singapore and Brunei Darussalam contributed the least volume to the total fishery production of Southeast Asia in 2010. In terms of value, Indonesia also led the countries of Southeast Asia accounting for about 36.4% of the total value of the region's fishery production. Vietnam which came third in terms of volume, ranked second in terms of value contributing about 17.9%, followed by Myanmar

<sup>\*\*</sup> Excludes Southeast Asia

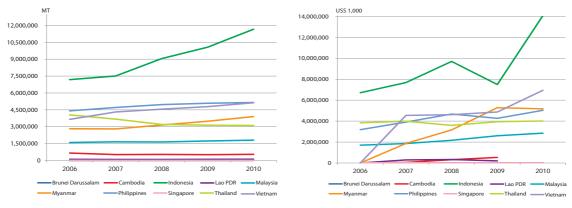
<sup>\*\*\*</sup> Source: Fishery Statistical Bulletin of Southeast Asia (SEAFDEC, 2010)

contributing about 15.0%. Meanwhile, Philippines which ranked second in terms of production volume came in fourth in terms of production value accounting for 11.7%. It should be noted that the value of the fishery production of Indonesia was an all time low in 2009 at an average of US\$ 745/MT but this had considerably increased to about US\$ 1,210/MT in 2010, which could imply that the country had recently produced good quantities of high value commodities. The trend of the fishery production by the Southeast Asian countries in 2006-2010 is shown in **Fig. 1**.

Table 2. Total fishery production of Southeast Asia by quantity and value (2006-2010)

<b>Total Fishery Production</b>	2006	2007	2008	2009	2010
Quantity (MT)	24,501,767	25,302,870	27,207,826	28,917,096	31,438,435
Value (US\$ 1,000)	15,476,118	24,234,354	28,585,816	29,215,311	38,744,163

Fig. 1. Fishery production of the Southeast Asian countries in 2006-2010 (left: by quantity; right: by value)



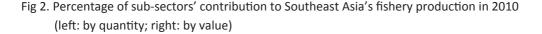
<sup>\*</sup> Excluded data in value 2010 from Cambodia and Lao PDR

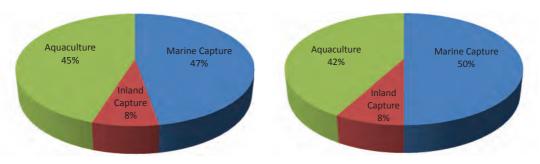
Fishery production of Southeast Asia comes from three sub-sectors, namely: marine capture fisheries, inland capture fisheries, and aquaculture. **Table 3** which shows the total fishery production of the region by sub-sector in 2010 indicates that the largest portion of the production was derived from marine capture fisheries accounting for approximately 47% followed by aquaculture of about 45% and inland capture fisheries at 8% (**Fig. 2**). While inland capture fisheries contributed the least volume and value to the region's total fishery production, it should be noted that the value per unit quantity of its production (US\$ 1,060/MT) came second after marine capture fisheries (US\$ 1,070/MT). This could mean that the market must have already recognized the value of aquatic products harvested through inland capture fisheries.

Table 3. Fishery production (quantity and value) of Southeast Asia in 2010

Sub-sector	Quantity (MT)	Value (US\$ 1,000)	Value/Quantity (US\$/MT)
Marine capture fisheries	14,874,445	15,898,768	1,070
Inland capture fisheries	2,377,253	2,526,476	1,060
Aquaculture	14,186,737	13,377,740	940
Total	31,874,435	31,802,984*	998

<sup>\*</sup> Excluded data from Cambodia, Lao PDR and Vietnam





#### II. MARINE CAPTURE FISHERIES PRODUCTION IN SOUTHEAST ASIA

As shown in **Table 4**, the regional production from marine capture fisheries had been generally increasing from 2006 until 2010, although in terms of volume the annual average rate was only 1.6% compared to 11% average increase in terms of value. This is in spite of the drop in production value in 2009 which must have been affected by the steep dive in the production value of Indonesia. However, the total production value recovered in 2010 by about 35%, which again must have been a possible impact of the large increase in the production value of Indonesia.

Table 4. Production from marine capture fisheries by quantity and value in Southeast Asia from 2006 to 2010

<b>Marine Fishery Production</b>	2006	2007	2008	2009	2010
Quantity (MT)	13,938,748	14,056,985	13,814,368	14,140,387	14,874,445
Value (US\$ 1,000)	9,100,292	10,422,912	12,338,215	10,416,661	15,898,768

In 2010, Indonesia remained the largest producer accounting for 33.8% of the region's total production volume from marine capture fisheries, followed by Philippines contributing 16.3%, Vietnam (15.0%), Myanmar (13.8%), Thailand (10.9%), and Malaysia (9.6%). In terms of value, Indonesia still led the bunch of producing countries contributing about 41.2% to the region's total production value from marine capture fisheries. Myanmar came next accounting for 21.4% then by Philippines (15.9%), Malaysia (12.7%), and then by Thailand (8.7%). Vietnam did not provide data on the value of its production from marine capture fisheries. The region's top producing countries in marine capture fisheries in terms of volume in 2010, are indicated in **Fig. 3**.

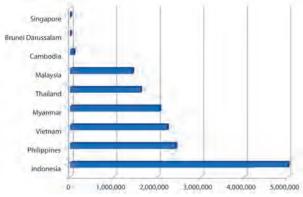


Fig. 3. Marine capture fisheries production in 2010 (MT)

In aggregating the production from marine capture fisheries by commodity groups, the results showed that marine fishes provided the highest production in 2010 (**Table 5**) accounting for about 76.4%, while the crustacean group contributed 4.1%, and the mollusk group 3.5%. Except for the mollusk group, production in 2010 of the other groups had been decreasing, especially marine fishes which decreased by about 10% from that of 2009 while the crustacean group by about 16% from the corresponding production in 2009.

Table 5. Production of major commodity groups from marine capture fisheries in Southeast Asia (2006-2010)

	2006	2007	2008	2009	2010
Marine fishes	10,763,001	12,396,854	12,510,689	12,509,592	11,364,304
Crustaceans	621,568	787,943	738,780	715,624	615,705
Mollusks	601,646	841,372	524,547	490,778	516,264
Total marine capture fisheries production (MT)	13,938,748	14,056,985	13,814,368	14,140,387	14,874,445

Comparing the total fisheries production in 2010 with that of 2009, it can be observed that the decreased production of the marine fishes group could have been the result of the decreased production of Indonesia in various major commodities such as the stolephorus anchovies in fishing area 57¹ and 71², kawakawa (57 and 71), and narrow-barred Spanish mackerel (57), scad nei (*Decapteus* spp.), short mackerel (*Rastrelliger brachysoma*), and marine fishes nei fishing area 57. In addition, the Philippine production of major marine fishes also decreased considerably, especially for sardinellas nei, frigate tuna, stolephorus anchovies, yellowfin tuna, and skipjack tuna. Notably, the decreasing production of *Rastrelliger* spp. of Malaysia (57) and Thailand (71) could have also contributed to the abovementioned overall decreasing trend. Moreover, with respect to the marine fishes nei, the production of Indonesia and Myanmar in fishing area 71 also decreased.

Moreover, the decreased production of major crustacean groups in 2010 compared with those of 2009 could have been brought about by decreases in the production of the blue swimming crab of Thailand in fishing area 71, *Scylla seratta* production of Indonesia in 57, and *Penaeus monodon* production of Indonesia in 57 and that of Thailand in 57 and 71. Meanwhile, the increased production of the mollusks group in 2010 from that in 2009 could have been the result of increased production of the blood cockle, hard clams and other bivalves.

Table 6. Ten major 10 marine species caught in the region in 2010 (left by quantity; right by value)

Common name	Quantity (MT)	Ratio (%)	Common name	Value (US\$ 1,000)	Ratio (%)	Value <sup>3</sup> per MT
Misc. fishes	2,975,262	20.00	Misc. fishes	4,232,002	26.62	1,420
Scad nei	626,422	4.20	Skipjack tuna	632,973	3.98	1,120
Sardinellas nei	567,593	3.82	Scad nei	582,665	3.66	930
Skipjack tuna	565,688	3.80	Yellowfin tuna	493,261	3.32	1,755
Indian mackerel	354,902	2.39	Short mackerel	445,301	2.80	1,340
Short mackerel	331,822	2.23	Natantia decapods nei	435,408	2.70	3,140
Frigate tuna	285,806	1.92	Common squids nei	428,522	2.70	1,855
Yellowfin tuna	281,227	1.89	Other mackerels	422,621	2.66	3,705
Threadfin breams nei	278,883	1.87	Stolophorus anchovies	331,995	2.09	1,210
Stolephorus anchovies	274,514	1.84	Frigate tuna	319,926	2.01	1,120

<sup>&</sup>lt;sup>1</sup>Fishing area 57 covers the marine fishing areas of Myanmar, Thailand (Indian Ocean), Malaysia (West Coast of Pinnisular Malaysia), and Indonesia (Malacca Striat, West Sumatra and South Java, Bali-Nusa Tenggara)

<sup>&</sup>lt;sup>2</sup> Fishing area 71 covers the marine fishing areas of Thailand (Gulf of Thailand), Cambodia, Vietnam (Southwest and Southest), Malaysia (East Coast of Pinnisular Malaysia, Sabah, Sarawak), Singapore, Brunei Darussalam, Philippines (Luzon, Visayas, Mindanao), and Indonesia (East Sumatra, North Java, Bali-Nusa Tenggara, South-West Kalimantan, East Kalimantan, South Sulawesi, North Sulawesi, Maluku-Papua)

<sup>&</sup>lt;sup>3</sup> Value in US\$ per metric ton of production

**Table 6** shows the top ten commodities that provided sizeable contributions to the total production from marine capture fisheries (by quantity and value) in Southeast Asia in 2010. Miscellaneous marine fishes contribute the highest volume (20.0%) to the region's total production from marine capture fisheries and the same commodity group also accounts for the highest value (26.7%). Meanwhile, skipjack tuna which contributed 3.8% to the total production volume (ranked fourth highest) accounted for 4.0% of the total production value (ranked the second highest).

It should be noted that in terms of value per metric ton of production, the data in Table 6 also suggests that the value of other *Rastrelliger* mackerels is the highest among the commodities harvested through marine capture fisheries at US\$ 3,705/MT followed by Natantia decapods at US\$ 3,140/MT and common squids at US\$ 1,855/MT. While the value of yellowfin tuna was US\$ 1,755/MT, skipjack tuna and frigate tuna were valued at US\$ 1,120/MT. Miscellaneous marine fishes which contributed the highest volume in 2010 is valued at US\$ 1,420/MT, short mackerels at US\$ 1,340/MT, stelophorus anchovies at US\$ 1,210/MT, and scads at US\$ 930/MT.

#### III. INLAND CAPTURE FISHERIES PRODUCTION IN SOUTHEAST ASIA

Capture fisheries production from inland waters has been generally increasing and its reported growth from 2006 to 2009 had been remarkable although it slightly declined in 2010. The total inland capture fisheries production of the region in 2010 was reported to be 2,377,253 MT accounting for about 8% of the region's total fishery production. However, it is noteworthy to recognize that the compilation and reporting of production from inland capture fisheries had been particularly weak and need improvement while the data that had been reported were found to be insufficient in terms of quantity and species composition. Moreover, it is a common fact that catches by rural community members who comprise the main users of the inland resources, are consumed locally and are not usually reported in the national statistics. Accordingly, the figures on the total catch from inland capture fisheries provided in this publication could be considered as indicative only.

Table 7. Contribution of inland capture fisheries to total fishery production in 2010

Country	Inland capture production (MT)	Total capture production (MT)	% of inland capture production to total capture production	Total fishery production (MT)	% of inland capture fisheries production to total fishery production
Brunei Darussalam		2,351	-	2,772	-
Cambodia	405,000	490,000	82.65	550,000	73.63
Indonesia	344,972	5,384,388	6.41	11,662,311	2.96
Lao PDR	30,900	30,900	100	113,000	27.34
Malaysia	4,545	1,433,426	0.32	1,806,577	0.25
Myanmar	1,002,430	3,051,020	38.41	3,901,979	25.69
Philippines	185,046	2,609,882	7.09	5,155,647	3.59
Singapore		1,732	-	5,233	-
Thailand	209,800	1,827,199	11.48	3,113,316	6.74
Vietnam	194,200	2,420,800	8.02	5,127,600	3.79
Total	2,377,253	17,251,698	13.78	31,438,445	7.56

While eight countries have been reporting the information on catch from inland capture fisheries, only five have reported their corresponding production values. Thus, the actual regional production trend of the inland capture fisheries sector could not be established as of the moment. Myanmar had been consistently the top producer with stable inland catches from 2006 until 2010, where its catch from inland capture fisheries accounted for about 38.4% of the country's total capture fisheries production, 25.7% of the country's total fisheries production, and 3.2% of the region's total fisheries production (Table 7). Cambodia came in as

the second highest producer with its production volume of 405,000 MT in 2010 representing 82.7% of the country's production from inland fisheries, 73.6% of the country's total fisheries production, and 1.3% of the region's total fisheries production. However, as mentioned elsewhere in this publication, such production volume could not be confirmed as of the moment considering that there is a need to improve the collection and compilation of fisheries statistics in the country especially with regards to its inland capture fisheries.

Moreover, the production data from inland capture fisheries of Lao PDR is something to be reckoned with since all its production from capture fisheries is derived from inland fisheries. In this regard, assistance is being sought from concerned agencies and organizations for the improvement of the collection and compilation of fisheries statistics in Lao PDR in order to establish the real picture of the fisheries sector of the country. Meanwhile, the fisheries production from inland capture fisheries of Myanmar, Cambodia and Vietnam in 2010 could not be analyzed in terms of species composition since the species breakdown had not been reported. Nevertheless, production of Indonesia as the region's third highest producer comprised mainly the striped snakehead (*Chana striata*) which accounts for about 9.9% of the country's total production from inland capture fisheries. As shown in Table 8, from among the top ten major species harvested through inland capture fisheries in the region in 2010, striped snakehead gave the highest production accounting for 2.6% of the region's total inland capture fisheries followed by freshwater mollusks (2.6%), Nile tilapia (*Oreochromis niloticus*), silver barb (*Barbonymus gonionotus*) and so on. Furthermore, it should be noted that although the reported production of giant freshwater river prawn (*Macrobrachium rosenbergii*) in 2010 could be relatively low at 10,798 MT but the value per metric ton of production was the highest at US\$ 4,740/MT followed by the Asian redtail catfish at US\$ 2,280/MT and striped snakehead at US\$ 1,970/MT.

Table 8. Ten major inland species caught in the region in 2010 (left by quantity; right by value)

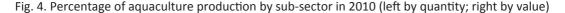
Common name	Quantity (MT)	Ratio (%)	Common name	Value (US\$ 1,000)	Ratio (%)	Value⁴ per MT
Misc. fish	1,579,564	66.44	Misc. fish	1,671,350	66.15	1,060
Striped snakehead	62,023	2.61	Striped snakehead	122,085	4.83	1,970
Freshwater mollusks nei	61,497	2.59	Nile tilapia	73,298	2.90	1,370
Nile tilapia	55,645	2.34	Tilapia nei	53,324	2.11	1,190
Silver barb	45,662	1.92	Silver barb	52,845	2.09	1,160
Tilapia nei	44,896	1.89	Giant river prawn	51,200	2.03	4,740
Snakeskin gourami	31,559	1.33	Torpedo-shaped	45,721	1.81	1,535
Torpedo-shaped	29,796	1.25	catfishes nei			
catfishes nei			Climbing perch	44,861	1.77	1,695
Cyprinids nei	27,136	1.41	Asian redtail catfish	32,948	1.30	2,280
Climbing perch	26,456	1.11	Snakeskin gourami	32,405	1.28	1,025

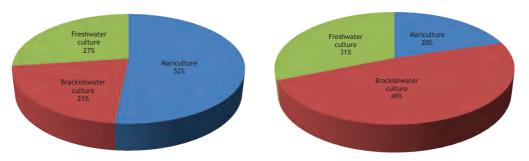
## IV. AQUACULTURE PRODUCTION IN SOUTHEAST ASIA

In 2010, the total region's production from aquaculture accounted for about 45.1% of the region's total fisheries production in terms of volume and 34.5% in terms of value. Aquaculture production comes from three environments, namely: marine, brackishwater, and freshwater.

In terms of volume, aquaculture in marine areas or better known as mariculture contributed 52.0% to the region's total aquaculture production while culture in brackishwater areas or brackishwater culture contributed 21.0%, and the remaining 27.0% came from freshwater culture (**Fig. 4**). However, in terms of value, brackishwater culture production contributed the highest at 49.0% followed by freshwater culture production at 31.0% and mariculture production at 20%.

<sup>&</sup>lt;sup>4</sup> Value in US\$ per metric ton of production





From 2006 to 2010, the total production from aquaculture in Southeast Asia steadily increased at the rate of about 12% per year (**Fig 5**), the highest annual increase of about 17% was recorded between 2007 and 2008, which could have been a result of the sudden rise of the aquaculture production of Indonesia and Vietnam during the same period, while such production trend continued to increase from 2007 until 2010. Except for the aquaculture production of Brunei Darussalam and Singapore which had been decreasing, production from aquaculture of the other Southeast Asian countries continued to increase, although that of Thailand considerably decreased in 2010.

The aquaculture production of Indonesia as the largest producer in 2010 from aquaculture contributed 44.3% in production volume and 52.2% in production value, to the region's total production from aquaculture. The country's aquaculture production comes mainly from the Eucheuma seaweeds (*Eucheuma* spp.) which accounted for about 54.2% of its aquaculture production. In the case of Vietnam, which was the second highest aquaculture producer of the region in 2010, its production accounted for about 19.1% of the region's total aquaculture production. The Philippines which ranked third in terms of aquaculture production had Zanzibar weeds (*Euchema cottonii*) as one of its major products which accounted for 58.8% of the country's production from aquaculture followed by milkfish (*Chanos chanos*) at 10.3%, and the Elkhorm sea moss (*Kappaphycus alvarezeii*) at 6.7%.

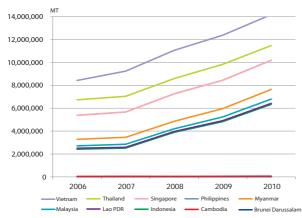


Fig. 5. Aquaculture production of the Southeast Asian countries from 2006 to 2010

In the case of Thailand, its major aquaculture product was the whiteleg shrimps (*Penaeus vannamei*) which accounted for 43.6% of the country's total aquaculture production followed by Nile tilapia (*Oreochromis niloticus*) at 13.9%, green mussel (*Perna viridis*) at 13.0%, catfish hybrid (*Clarias gariepinus x C. macrocephalus*) at 9.1%, and blood cockle (*Anadara granosa*) at 5.8%. For Myanmar, its main aquaculture product is roho labeo (*Labeo rohita*) which accounted for 64.2% of the country's production from aquaculture, followed by catla (*Catla catla*) at 5.5%, giant tiger prawn (*Penaeus monodon*) at 5.4%, tilapia nei (*Oreochromis* spp.) at 4.6%, and mrigal carp (*Cirrhinus mrigala*) at 3.7% of the country's total aquaculture production. As

mentioned earlier, aquaculture production of Thailand had decreased in 2010 compared with that of its production of 2009 which could have been brought about by decreases in the production mainly of the whiteleg shrimp (by almost 30%), green mussel, catfishes, and in Nile tilapia production.

In terms of value per volume of aquaculture production in 2010, Brunei Darussalam attained the highest average value at US\$11,760/MT followed by Singapore at US\$ 4,245/MT, Thailand at US\$ 2,200/MT, Malaysia at US\$ 2,125/MT, Indonesia at US\$ 1,110/MT, Myanmar at US\$ 1,080/MT, and the Philippines at US\$ 720/MT. It should be noted that in 2009, the average value of the aquaculture production of Brunei Darussalam was US\$ 1,440/MT while that of Singapore was US\$ 2,465/MT. The production value per metric ton of Vietnam's production could not be calculated as the country's total production value in 2010 was not reported, but the country's production value per metric ton volume in 2009 was about US\$ 1,915/MT.

It should be recalled that in 2009, mariculture production accounted for 40% of the total production from aquaculture in terms of volume, while brackishwater culture production accounted for 22% and freshwater culture production at 27%. In terms of value, mariculture contributed 14% to the value of the total aquaculture production, brackishwater culture production at 45%, and freshwater culture production at 41%. This means that in terms of volume, production from mariculture in 2010 increased by about 23% from that of 2009 which could be brought about by the increased production of seaweeds by Indonesia, while those from brackishwater culture and freshwater culture had decreased. In terms of value, those from mariculture and brackishwater culture had increased but the value of production from freshwater culture had considerably decreased.

#### 4.1 Mariculture

In 2010, the region's total production from mariculture contributed about 52.0% to the region's total production volume from aquaculture and 20.4% to the region's total aquaculture production value. In terms of volume, Euchema seaweeds (*Euchema* spp.) which was mainly produced by Indonesia accounted for about 59.0% of the total production from mariculture, followed by the Zanzibar weeds (*Euchema cottonii*) as main products of the Philippines which accounted for 26%, green mussel (*Perna viridis*) mainly produced by Thailand at 3.0%, and blood cockle (*Anadara granosa*) as main mariculture product of Malaysia at 3% (**Fig. 6**).

In terms of value of the aquaculture production, Euchema seaweeds contributed by 42.0% of the total value of mariculture products followed by the penguin wing oyster (*Pteria penguin*) which was mainly produced in Indonesia accounting for 31.0%. In addition, Zanzibar weeds (*Euchema cottonii*) provided 9%, marine fishes at 8%, other crabs at 5%, blood cockle at 3%, and green mussel at 1% to the total value of the region's mariculture production (**Fig 6**).

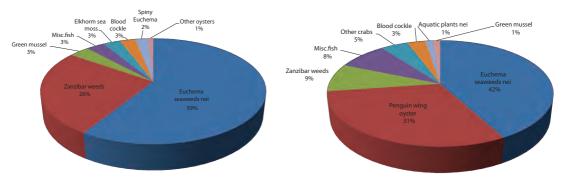


Fig. 6. Mariculture production in 2010 by major species (left by quantity; right by value)

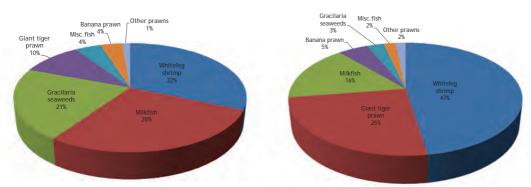
Mariculture production by country and by species indicated that Indonesia contributed the largest amount of aquatic plants production through the Euchema seaweeds (*Euchema* spp.) followed by the Philippine production of the Zanzibar weeds (*Euchema cottonii*). The other countries shared the production volume of the other species such as green mussels by Malaysia, Philippines, Singapore, and Thailand; miscellaneous fishes by Vietnam and Cambodia; Elkhorm moss (*Kappaphycus alvarezii*) by the Philippines, blood cockle by Malaysia, Indonesia and Thailand; spiny Eucheuma (*Eucheuma denticulatum*) by the Philippines; and other oysters by Thailand.

Furthermore, with respect to the value per volume of mariculture production in 2010, Singapore had an average of US\$ 33,175/MT which could be brought about by the country's production of the highly economic species of groupers. This was followed by Myanmar at US\$ 2,565 for the value of its production of *Penaeus monodon* from fishing area 57, Philippines at US\$ 485/MT, Indonesia at US\$ 410/MT, Thailand at US\$ 407/MT, and Malaysia at US\$ 385/MT.

#### 4.2 Brackishwater culture

The main brackishwater species cultured in the Southeast Asian region include the crustaceans, miscellaneous fishes and aquatic plants. The total production from brackishwater culture in 2010 represented about 21% of the region's total aquaculture. Production of the whiteleg shrimp (*Penaeus vannamei*) mainly contributed by Thailand and Indonesia was the highest volume from brakishwater culture representing 32.0% of the region's total production from brackishwater culture. The second highest production from brackishwater culture was contributed by milkfish (*Chanos chanos*) accounting for about 28.0% of the region's total production from brackishwater culture reported by Indonesia and the Philippines, and the third highest production came from the Gracilaria seaweeds (*Gracilaria* spp.) at 21.0% contributed by Indonesia and the Philippines. This was followed by the giant tiger prawn (*Penaeus monodon*) at 10.0% reported by Indonesia, Malaysia, Philippines, Myanmar, and Thailand. In terms of brackishwater culture production value, the highest was the whiteleg shrimp (*Penaeus vannamei*), followed by the giant tiger prawn (*Penaeus monodon*) with Indonesia contributing the highest production value. Milkfish (*Chanos chanos*) which came in third in terms of production value was mainly produced by the Philippines (**Fig. 7**).

Fig. 7 Brackishwater culture production in 2010 by species (left by quantity; right by value)



In terms of the average value per production volume from brackishwater aquaculture production, from among the countries that reported their respective production value, Brunei Darussalam posted the highest at US\$ 16,380/MT which could be brought about by the country's production of the export commodity blue shrimp (*Penaeus stylirostris*), followed by Malaysia at US\$ 3,945/MT, Thailand at US\$ 3,545/MT, Indonesia at US\$ 2,405/MT, and the Philippines at US\$ 1,580/MT. While Cambodia, Singapore, and Vietnam did not report their respective production from brackishwater aquaculture in terms of average value per production volume, Myanmar reported only its production volume but not the corresponding value.

#### 4.3 Freshwater culture

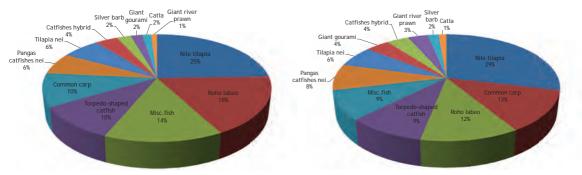
The region's total production from freshwater culture in 2010 accounted for about 27% of the region's total production from aquaculture, which had decreased by about 30% from that of the 2009 production volume which could have been affected by the failure of Vietnam to report its production in 2010. Indonesia was the highest producer contributing about 43.5% of the region's total production from freshwater culture, and was followed by Myanmar at 25.1%, Thailand at 14.0%, Philippines at 9.9%, Malaysia at 5.0%, and Lao PDR at 2.7%. In terms of value, this sub-sector accounted for 31% of the region's total aquaculture production value,

making freshwater culture a very important fishery sub-sector even considering that its production value in 2010 had decreased by almost 25% compared with that of 2009 which could have been affected by the non-reporting of the corresponding values for the production volume by Cambodia, Lao PDR and Vietnam.

In terms of production volume of freshwater culture by species (**Fig 8**), the Nile tilapia (*Oreochromis niloticus*) accounted for 25% of the region's total production from freshwater culture which had been contributed by Indonesia, Thailand and the Philippines. This was followed by roho labeo (*Labeo rohita*) at 18% contributed mainly by Myanmar; miscellaneous freshwater fishes at 14% contributed by Vietnam and Cambodia; the torpedo-shaped catfish (*Clarias* spp.) at 10% contributed by Indonesia, Malaysia, Myanmar and the Philippines; and common carp (*Cyprinus carpio*) also at 10% contributed by Indonesia, Myanmar and Thailand. For the production value, the highest contributor to the region's total production value from freshwater culture was Nile tilapia at 29% followed by common carp (13%), roho labeo (12%), torpedo-shaped catfishes (9%), pangas catfishes (8%), and tilapia (6%).

Fig. 8 Freshwater culture production in 2010 by species (left by quantity; right by value)

As for the values of freshwater culture production, Brunei Darussalam presented the highest average value



at US\$ 7,895/MT mainly coming from the country's production of the African catfish (*Clarias gariepinus*). This was followed by Singapore at US\$ 4,120/MT mainly for the value of its production of the Indonesian snakehead (*Channa micropeltes*), Malaysia at US\$ 1,625/MT, Indonesia at US\$ 1,585/MT, Thailand at US\$ 1,515/MT, Philippines at US\$ 1,365/MT, and Myanmar at US\$ 940/MT.

### V. FISHING GEAR ANALYSIS

Analysis of the fishing gear used in the region in 2010 was made only for four countries that reported their respective production from marine capture fisheries by type of fishing gear, namely: Brunei Darussalam, Malaysia, Myanmar, and Singapore. The highest production by type of gears in Brunei Darussalam came from the trawls accounting for about 49.0% of the total production of all types of gears, of which miscellenaeus marine fishes contributed 52.0% to the trawl's total production. This was followed by the purse seine with the Indian mackerel (*Rastrelliger kanagurta*) comprising almost all of the production. In the case of Myanmar, the highest catch production by gear used was provided by trawls at 1,157,329 MT or 56.5% of all types of gears representing the miscellaneous marine fishes that accounted for 61.2% of the trawl's total catch. This was followed by the purse seines with total catch of 490,241 MT or 23.9% of all types of gears of which the miscellaneous marine fishes accounted for about 85.0% of purse seines' total production. For Malaysia, trawls were very prominent with total production that accounted for 50.0% of the production from all types of gears, of which trash fishes comprised 35.0% of the trawl's total production. This was followed by the purse seines contributing about 26.0% to the total production from all types of gears, of which the scads (*Decapterus* spp.) comprised 19.0% of the purse seines' total production.

Gill nets came third with production of 186,651 MT or 13.1% of the production from all types of gears, where the Rastrelliger mackerels (*Rastrelliger* spp.) contributed about 25.0% to the gill nets' total production. Singapore reported that its highest production in terms of gear used was from the trawls at 754 MT or 43.5% of the production from all types of gears, of which Penaeus shrimps (*Penaeus* spp.) gave the highest production accounting for about 19.0% of trawl's total production.

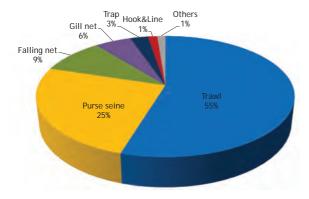


Fig 9. Marine capture fishery production by type of gear in 2010

Fig 9 shows the marine capture fishery production of the Southeast Asian region by type of gear used. Trawls had been the largest producing fishing gear accounting for about 55% of the total production from all types of gears, followed by the purse seines at about 25%, the falling net at 9%, gill net at 6%, traps at 3%, hook and line at 1%, and others at 1%. However, it should be noted that such data on gears used in marine capture fisheries could not be properly analyzed as several countries such as Cambodia, Indonesia, Philippines, Thailand, and Vietnam did not provide the relevant information.

#### VI. NUMBER OF FISHING BOATS BY TYPE AND TONNAGE

This section covers only the boats that have been registered in each country. However, Cambodia, Lao PDR, Philippines and Thailand did not report the number of their registered fishing boats as of 2010. Therefore, based on the available data in 2010, Indonesia had the highest number of boats at 570,827 of which 172,907 were non-powered while 397,920 were powered boats, followed by Malaysia with 49,756 of which 2,977 were non-powered and 46,779 were powered boats. The third highest number was reported by Myanmar at 32,824 of which 17,054 were non-powered and 15,865 were powered boats, followed by Vietnam at 25,346 and Brunei Darussalam at 2,743 which comprised 141 non-powered and 2,602 powered boats. Meanwhile, Singapore reported that all its 39 boats were powered boats.

#### VII. NUMBER OF FISHERS BY WORKING STATUS

In 2010, Indonesia reported the highest number of fishers at 5,971,725 of which 36.2% were involved in marine capture fisheries 50% of which were full-time, 36% part-time fishers, and 14% were occasional fishers. In inland capture fisheries, the country had 457,835 fishers comprising 37% full-time; 42% part-time; and 21% occasional fishers. In aquaculture, the country had 3,351,448 or 56.1% of the country's total fishing workforce. Myanmar had the second highest number of fishers at 3,160,070 of which 43.8% were in marine capture fisheries comprising 16% full-time, 18% part-time, and 66% occasional fishers. In inland capture fisheries, the country had 1,564,125 or 49.5% of its total fishing workforce of which 31% were full-time, 19% were part-time, while the rest were part-time fishers. In aquaculture, the country had 780,000 or 24.7% of its total workforce of which 27% were full-time and 16% part-time fish farmers, while the rest were occasional workers in aquaculture farms. Malaysia had the third highest number of fishers at 155,913 of which 129,622 or 83.1% all were full-time capture fishers while 26,291 or 16.9% were involved in aquaculture all of whom were full-time fish farmers. Singapore had 503 fishers and Brunei Darussalam had 298 fishers (Fig 10). Cambodia, Lao PDR, Philippines, Thailand, and Vietnam did not provide information on their respective number of fishers.

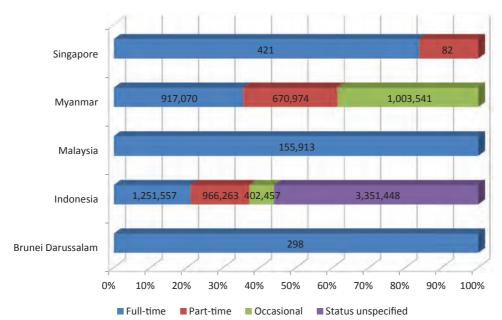


Fig. 10 Number of fishers by working status in 2010

### VIII. AQUACULTURE PRODUCTION OF ORNAMENTAL FISHES

So far, only four countries reported their respective aquaculture production of ornamental fishes in 2010, namely: Brunei Darussalam, Indonesia, Malaysia, and Myanmar. Singapore which provided the relevant data in 2008 and 2009, did not give any information for 2010. Of the four countries, Malaysia reported its highest production in 2010 comprising mainly the cyprinidaes followed by poeciliids and osteichthyes. Myanmar came next with its highest reported production comprising gold fishes, cyprinidaes, and angel fish, while Indonesia's reported production comprised mainly the common carps, Siamese fighting fish, rummy nose tetra, guppies, and Oscar fish. Brunei Darussalam reported its minimal production of ornamental fishes in 2010 comprising mainly the guppies and common carps. In terms of value, the highest was for common carp and guppies in Brunei Darussalam at US\$ 6.30/pc and US\$ 0.70/pc, respectively. The osteoglossids and poeciliids followed at US\$ 0.13/pc and US\$ 0.12/pc, respectively in Malaysia, and goldfish from Myanmar at US\$ 0.11/pc. Efforts will be made to improve the compilation of data from aquaculture production of ornamental fishes considering that this is a budding industry in the fisheries sector.

### IX. SEED PRODUCTION FOR AQUACULTURE

The need to collect information on the volume of seeds produced from the aquaculture industry was recommended in many fora as this factor has a significant role to play in enhancing the economic analysis of the aquaculture industry of the region. Thus, compilation of the said information was started in 2008 with only four countries, namely: Cambodia, Malaysia, Myanmar and Singapore providing the relevant information. Brunei Darussalam joined in 2009 by also giving its country report on this aspect. In 2010, Indonesia entered into the picture but Brunei Darussalam and Cambodia seemed to fade away. In this connection, efforts will be exerted to gather the said information from the countries in Southeast Asia for the next issue of this publication, in order that the true picture of this significant niche of the aquaculture industry could be established.

#### X. ANALYSIS OF PRODUCER PRICE FOR SPECIES FROM CAPTURE FISHERIES

Considering that the capture fisheries of the countries in the region harvest different species, the trend of the producer price could be established only for certain species which are commonly exploited. Generally, it appears that the producer prices of several commodities harvested by Brunei Darussalam are higher than those of the other countries. For example, its producer price of the humpback grouper (*Cromileptes altivelis*) in 2010 was US\$ 21.28/kg compared to Indonesia's US\$ 4.15/kg. However, for the green tiger prawn *Penaeus semisulcatus*, the producer price in Brunei Darussalam of US\$ 8.51/kg did not differ much from that of Thailand's US\$ 7.41/kg.

Meanwhile, the producer price in 2010 of the giant sea perch (Lates calcarifer) in Brunei Darussalam was US\$ 8.51/kg compared to the Philippines' US\$ 1.01/kg. Considering the seven countries exploiting this commodity, the average producer price was US\$ 4.12/kg. As for groupers (Epinephelus spp.), the highest price was Singapore's US\$ 6.55/kg and the lowest price of US\$ 4.00/kg in Myanmar with an average price of US\$ 5.00/kg (n=5). For yellowfin tuna, the producer price in Brunei Darussalam was US\$ 3.55/kg while the lowest price was Indonesia's US\$ 1.62/kg or an average price of US\$ 2.29/kg (n=4). In the case of the giant tiger prawn, the highest producer price was in Brunei Darussalam at US\$ 11.35/kg while the lowest was Myanmar's US\$ 4.00/kg or an average of US\$ 7.00/kg (n=3). For banana prawn (Penaeus merguiensis), the highest price was in Malaysia at US\$ 8.11/kg with the lowest in Indonesia at US\$ 3.00/kg and an average of US\$ 5.58/kg (n=4). For the Indo-Pacific swamp crab (Scylla serrata), the highest price was in Myanmar at US\$ 5.50/kg with the lowest in Indonesia at US\$ 2.35/kg for an average of US\$ 3.84/kg (n=5). In the case of the blue swimming crab (Portunus pelagicus), the highest price was Thailand's US\$ 4.63/kg and the lowest was in the Philippines at US\$ 2.08/kg, and an average of US\$ 3.06/kg (n=4). For the common squids (Loligo spp.), the highest was Singapore's US\$ 6.55/kg while the lowest was in the Philippines at US\$ 1.72/kg with an average of US\$ 3.15/kg (n=5). It should be noted that the producer price trends among the countries in the region for the same commodities generally had wide variations.

#### STATISTICAL SUMMARY

#### AN OVERVIEW OF THE FISHERY SECTOR OF SOUTHEAST ASIA IN 2010

#### I. THE FISHERIES SECTOR

Fisheries and aquaculture products are globally important as primary sources of protein food for many peoples in the world. Although 11 countries comprise the Southeast Asian region, namely: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Timor-Leste, Thailand, and Vietnam, the scope of this publication covers only ten of the Southeast Asian countries in view of the unavailability of fishery statistics and information from Timor-Leste.

Worldwide, the trend of fishery production from both capture fisheries and aquaculture (**Table 1**) had been increasing steadily from 2006 to 2009 at an average increase of 1.9% annually but an increase of about 14% could be noted from 2009 to 2010. This situation could imply that the initiatives of many countries in promoting the sustainable development of fisheries have already been generating tangible results. While Asia (including Southeast Asia) had been contributing considerably to the increasing world's fishery production more particularly during the past 5 years, in 2010 Asia's fishery production accounted for about 72% of the total global production, which was the highest so far. This feat could be reflected from the efforts of the countries in the Asian region to adopt responsible fishing practices and promote sustainable management of their respective fisheries sector. Meanwhile, the contribution of the ten Southeast Asian countries to the world's total fishery production in 2010 was about 19% or an increase of 8% from that of 2009.

Table 1. Fishery production by continent from 2006 to 2010 (million MT)

	2006	2007	2008	2009	2010
World*	137.1	139.8	142.3	145.1	168.4
Africa	7.9	8.1	8.4	8.3	9.1
America	25.1	24.6	24.5	23.6	20.2
Asia**	62.1	64.3	65.4	67.0	89.9
Southeast Asia***	24.5	25.3	27.2	28.9	31.4
Europe	15.9	15.9	15.4	15.9	16.4
Oceania	1.6	1.6	1.4	1.4	1.4

<sup>\*</sup> Source of main data: FAO FishStat Plus-Universal Software for Fishery Statistical Time Series

Specifically, the total fishery production of the Southeast Asian region (**Table 2**) had continuously increased from 2006 to 2010 in terms of volume and value. In terms of volume, the annual average increase from 2006 to 2010 was 6% while the increase was 20% annually in terms of value. This could mean that in addition to increasing their volume of production, countries in the Southeast Asian region must have been producing high value commodities from fisheries and aquaculture. By country, Indonesia reported the highest fishery production in 2010 in terms of volume which accounted for about 37.0% of the total fishery production of Southeast Asia, followed by Philippines contributing about 16.4% and Vietnam at 16.3%. In descending order, Myanmar ranked next accounting for 12.4% then followed by Thailand (9.9%), Malaysia (5.8%), and Cambodia (1.8%). Lao PDR, Singapore and Brunei Darussalam contributed the least volume to the total fishery production of Southeast Asia in 2010. In terms of value, Indonesia also led the countries of Southeast Asia accounting for about 36.4% of the total value of the region's fishery production. Vietnam which came third in terms of volume, ranked second in terms of value contributing about 17.9%, followed by Myanmar

<sup>\*\*</sup> Excludes Southeast Asia

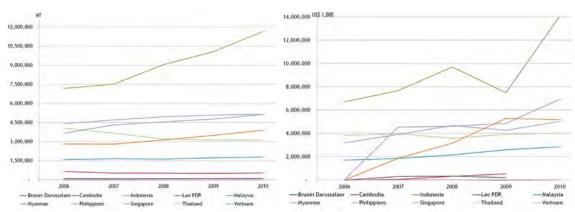
<sup>\*\*\*</sup> Source: Fishery Statistical Bulletin of Southeast Asia (SEAFDEC, 2010)

contributing about 15.0%. Meanwhile, Philippines which ranked second in terms of production volume came in fourth in terms of production value accounting for 11.7%. It should be noted that the value of the fishery production of Indonesia was an all time low in 2009 at an average of US\$ 745/MT but this had considerably increased to about US\$ 1,210/MT in 2010, which could imply that the country had recently produced good quantities of high value commodities. The trend of the fishery production by the Southeast Asian countries in 2006-2010 is shown in **Fig. 1**.

Table 2. Total fishery production of Southeast Asia by quantity and value (2006-2010)

<b>Total Fishery Production</b>	2006	2007	2008	2009	2010
Quantity (MT)	24,501,767	25,302,870	27,207,826	28,917,096	31,438,435
Value (US\$ 1,000)	15,476,118	24,234,354	28,585,816	29,215,311	38,744,163

Fig. 1. Fishery production of the Southeast Asian countries in 2006-2010 (left: by quantity; right: by value)



<sup>\*</sup> Excluded data in value 2010 from Cambodia and Lao PDR

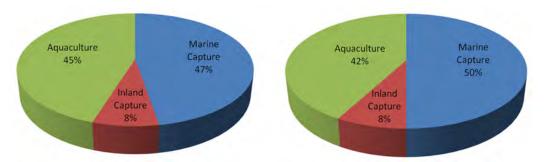
Fishery production of Southeast Asia comes from three sub-sectors, namely: marine capture fisheries, inland capture fisheries, and aquaculture. **Table 3** which shows the total fishery production of the region by sub-sector in 2010 indicates that the largest portion of the production was derived from marine capture fisheries accounting for approximately 47% followed by aquaculture of about 45% and inland capture fisheries at 8% (**Fig. 2**). While inland capture fisheries contributed the least volume and value to the region's total fishery production, it should be noted that the value per unit quantity of its production (US\$ 1,060/MT) came second after marine capture fisheries (US\$ 1,070/MT). This could mean that the market must have already recognized the value of aquatic products harvested through inland capture fisheries.

Table 3. Fishery production (quantity and value) of Southeast Asia in 2010

Sub-sector	Quantity (MT)	Value (US\$ 1,000)	Value/Quantity (US\$/MT)
Marine capture fisheries	14,874,445	15,898,768	1,070
Inland capture fisheries	2,377,253	2,526,476	1,060
Aquaculture	14,186,737	13,377,740	940
Total	31,874,435	31,802,984*	998

<sup>\*</sup> Excluded data from Cambodia, Lao PDR and Vietnam

Fig 2. Percentage of sub-sectors' contribution to Southeast Asia's fishery production in 2010 (left: by quantity; right: by value)



### II. MARINE CAPTURE FISHERIES PRODUCTION IN SOUTHEAST ASIA

As shown in **Table 4**, the regional production from marine capture fisheries had been generally increasing from 2006 until 2010, although in terms of volume the annual average rate was only 1.6% compared to 11% average increase in terms of value. This is in spite of the drop in production value in 2009 which must have been affected by the steep dive in the production value of Indonesia. However, the total production value recovered in 2010 by about 35%, which again must have been a possible impact of the large increase in the production value of Indonesia.

Table 4. Production from marine capture fisheries by quantity and value in Southeast Asia from 2006 to 2010

Marine Fishery Production	2006	2007	2008	2009	2010
Quantity (MT)	13,938,748	14,056,985	13,814,368	14,140,387	14,874,445
Value (US\$ 1,000)	9,100,292	10,422,912	12,338,215	10,416,661	15,898,768

In 2010, Indonesia remained the largest producer accounting for 33.8% of the region's total production volume from marine capture fisheries, followed by Philippines contributing 16.3%, Vietnam (15.0%), Myanmar (13.8%), Thailand (10.9%), and Malaysia (9.6%). In terms of value, Indonesia still led the bunch of producing countries contributing about 41.2% to the region's total production value from marine capture fisheries. Myanmar came next accounting for 21.4% then by Philippines (15.9%), Malaysia (12.7%), and then by Thailand (8.7%). Vietnam did not provide data on the value of its production from marine capture fisheries. The region's top producing countries in marine capture fisheries in terms of volume in 2010, are indicated in **Fig. 3**.

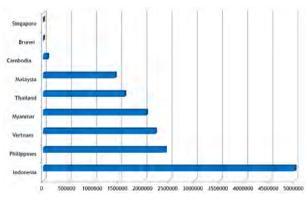


Fig. 3. Marine capture fisheries production in 2010 (MT)

In aggregating the production from marine capture fisheries by commodity groups, the results showed that marine fishes provided the highest production in 2010 (**Table 5**) accounting for about 76.4%, while the crustacean group contributed 4.1%, and the mollusk group 3.5%. Except for the mollusk group, production in 2010 of the other groups had been decreasing, especially marine fishes which decreased by about 10% from that of 2009 while the crustacean group by about 16% from the corresponding production in 2009.

Table 5. Production of major commodity groups from marine capture fisheries in Southeast Asia (2006-2010)

	2006	2007	2008	2009	2010
Marine fishes	10,763,001	12,396,854	12,510,689	12,509,592	11,364,304
Crustaceans	621,568	787,943	738,780	715,624	615,705
Mollusks	601,646	841,372	524,547	490,778	516,264
Total marine capture fisheries production (MT)	13,938,748	14,056,985	13,814,368	14,140,387	14,874,445

Comparing the total fisheries production in 2010 with that of 2009, it can be observed that the decreased production of the marine fishes group could have been the result of the decreased production of Indonesia in various major commodities such as the stolephorus anchovies in fishing area 57¹ and 71², kawakawa (57 and 71), and narrow-barred Spanish mackerel (57), scad nei (*Decapteus* spp.), short mackerel (*Rastrelliger brachysoma*), and marine fishes nei fishing area 57. In addition, the Philippine production of major marine fishes also decreased considerably, especially for sardinellas nei, frigate tuna, stolephorus anchovies, yellowfin tuna, and skipjack tuna. Notably, the decreasing production of *Rastrelliger* spp. of Malaysia (57) and Thailand (71) could have also contributed to the abovementioned overall decreasing trend. Moreover, with respect to the marine fishes nei, the production of Indonesia and Myanmar in fishing area 71 also decreased.

Moreover, the decreased production of major crustacean groups in 2010 compared with those of 2009 could have been brought about by decreases in the production of the blue swimming crab of Thailand in fishing area 71, *Scylla seratta* production of Indonesia in 57, and *Penaeus monodon* production of Indonesia in 57 and that of Thailand in 57 and 71. Meanwhile, the increased production of the mollusks group in 2010 from that in 2009 could have been the result of increased production of the blood cockle, hard clams and other bivalves.

Table 6. Ten major 10 marine species caught in the region in 2010 (left by quantity; right by value)

Common name	Quantity (MT)	Ratio (%)	Common name	Value (US\$ 1,000)	Ratio (%)	Value <sup>3</sup> per MT
Misc. fishes	2,975,262	20.00	Misc. fishes	4,232,002	26.62	1,420
Scad nei	626,422	4.20	Skipjack tuna	632,973	3.98	1,120
Sardinellas nei	567,593	3.82	Scad nei	582,665	3.66	930
Skipjack tuna	565,688	3.80	Yellowfin tuna	493,261	3.32	1,755
Indian mackerel	354,902	2.39	Short mackerel	445,301	2.80	1,340
Short mackerel	331,822	2.23	Natantia decapods nei	435,408	2.70	3,140
Frigate tuna	285,806	1.92	Common squids nei	428,522	2.70	1,855
Yellowfin tuna	281,227	1.89	Other mackerels	422,621	2.66	3,705
Threadfin breams nei	278,883	1.87	Stolophorus anchovies	331,995	2.09	1,210
Stolephorus anchovies	274,514	1.84	Frigate tuna	319,926	2.01	1,120

<sup>&</sup>lt;sup>1</sup>Fishing area 57 covers the marine fishing areas of Myanmar, Thailand (Indian Ocean), Malaysia (West Coast of Pinnisular Malaysia), and Indonesia (Malacca Striat, West Sumatra and South Java, Bali-Nusa Tenggara)

<sup>&</sup>lt;sup>2</sup> Fishing area 71 covers the marine fishing areas of Thailand (Gulf of Thailand), Cambodia, Vietnam (Southwest and Southest), Malaysia (East Coast of Pinnisular Malaysia, Sabah, Sarawak), Singapore, Brunei Darussalam, Philippines (Luzon, Visayas, Mindanao), and Indonesia (East Sumatra, North Java, Bali-Nusa Tenggara, South-West Kalimantan, East Kalimantan, South Sulawesi, North Sulawesi, Maluku-Papua)

<sup>&</sup>lt;sup>3</sup> Value in US\$ per metric ton of production

**Table 6** shows the top ten commodities that provided sizeable contributions to the total production from marine capture fisheries (by quantity and value) in Southeast Asia in 2010. Miscellaneous marine fishes contribute the highest volume (20.0%) to the region's total production from marine capture fisheries and the same commodity group also accounts for the highest value (26.7%). Meanwhile, skipjack tuna which contributed 3.8% to the total production volume (ranked fourth highest) accounted for 4.0% of the total production value (ranked the second highest).

It should be noted that in terms of value per metric ton of production, the data in Table 6 also suggests that the value of other *Rastrelliger* mackerels is the highest among the commodities harvested through marine capture fisheries at US\$ 3,705/MT followed by Natantia decapods at US\$ 3,140/MT and common squids at US\$ 1,855/MT. While the value of yellowfin tuna was US\$ 1,755/MT, skipjack tuna and frigate tuna were valued at US\$ 1,120/MT. Miscellaneous marine fishes which contributed the highest volume in 2010 is valued at US\$ 1,420/MT, short mackerels at US\$ 1,340/MT, stelophorus anchovies at US\$ 1,210/MT, and scads at US\$ 930/MT.

#### III. INLAND CAPTURE FISHERIES PRODUCTION IN SOUTHEAST ASIA

Capture fisheries production from inland waters has been generally increasing and its reported growth from 2006 to 2009 had been remarkable although it slightly declined in 2010. The total inland capture fisheries production of the region in 2010 was reported to be 2,377,253 MT accounting for about 8% of the region's total fishery production. However, it is noteworthy to recognize that the compilation and reporting of production from inland capture fisheries had been particularly weak and need improvement while the data that had been reported were found to be insufficient in terms of quantity and species composition. Moreover, it is a common fact that catches by rural community members who comprise the main users of the inland resources, are consumed locally and are not usually reported in the national statistics. Accordingly, the figures on the total catch from inland capture fisheries provided in this publication could be considered as indicative only.

Table 7. Contribution of inland capture fisheries to total fishery production in 20	Table 7.	Contribution	of inland captur	re fisheries to total	I fishery	production in 20:
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Country	Inland capture production (MT)	Total capture production (MT)	% of inland capture production to total capture production	Total fishery production (MT)	% of inland capture fisheries production to total fishery production
Brunei Darussalam		2,351	-	2,772	-
Cambodia	405,000	490,000	82.65	550,000	73.63
Indonesia	344,972	5,384,388	6.41	11,662,311	2.96
Lao PDR	30,900	30,900	100	113,000	27.34
Malaysia	4,545	1,433,426	0.32	1,806,577	0.25
Myanmar	1,002,430	3,051,020	38.41	3,901,979	25.69
Philippines	185,046	2,609,882	7.09	5,155,647	3.59
Singapore		1,732	-	5,233	-
Thailand	209,800	1,827,199	11.48	3,113,316	6.74
Vietnam	194,200	2,420,800	8.02	5,127,600	3.79
Total	2,377,253	17,251,698	13.78	31,438,445	7.56

While eight countries have been reporting the information on catch from inland capture fisheries, only five have reported their corresponding production values. Thus, the actual regional production trend of the inland capture fisheries sector could not be established as of the moment. Myanmar had been consistently the top producer with stable inland catches from 2006 until 2010, where its catch from inland capture fisheries accounted for about 38.4% of the country's total capture fisheries production, 25.7% of the country's total fisheries production, and 3.2% of the region's total fisheries production (Table 7). Cambodia came in as

the second highest producer with its production volume of 405,000 MT in 2010 representing 82.7% of the country's production from inland fisheries, 73.6% of the country's total fisheries production, and 1.3% of the region's total fisheries production. However, as mentioned elsewhere in this publication, such production volume could not be confirmed as of the moment considering that there is a need to improve the collection and compilation of fisheries statistics in the country especially with regards to its inland capture fisheries.

Moreover, the production data from inland capture fisheries of Lao PDR is something to be reckoned with since all its production from capture fisheries is derived from inland fisheries. In this regard, assistance is being sought from concerned agencies and organizations for the improvement of the collection and compilation of fisheries statistics in Lao PDR in order to establish the real picture of the fisheries sector of the country. Meanwhile, the fisheries production from inland capture fisheries of Myanmar, Cambodia and Vietnam in 2010 could not be analyzed in terms of species composition since the species breakdown had not been reported. Nevertheless, production of Indonesia as the region's third highest producer comprised mainly the striped snakehead (*Chana striata*) which accounts for about 9.9% of the country's total production from inland capture fisheries. As shown in Table 8, from among the top ten major species harvested through inland capture fisheries in the region in 2010, striped snakehead gave the highest production accounting for 2.6% of the region's total inland capture fisheries followed by freshwater mollusks (2.6%), Nile tilapia (*Oreochromis niloticus*), silver barb (*Barbonymus gonionotus*) and so on. Furthermore, it should be noted that although the reported production of giant freshwater river prawn (*Macrobrachium rosenbergii*) in 2010 could be relatively low at 10,798 MT but the value per metric ton of production was the highest at US\$ 4,740/MT followed by the Asian redtail catfish at US\$ 2,280/MT and striped snakehead at US\$ 1,970/MT.

Table 8. Ten major inland species caught in the region in 2010 (left by quantity; right by value)

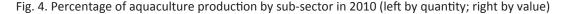
Common name	Quantity (MT)	Ratio (%)	Common name	Value (US\$ 1,000)	Ratio (%)	Value⁴ per MT
Misc. fish	1,579,564	66.44	Misc. fish	1,671,350	66.15	1,060
Striped snakehead	62,023	2.61	Striped snakehead	122,085	4.83	1,970
Freshwater mollusks nei	61,497	2.59	Nile tilapia	73,298	2.90	1,370
Nile tilapia	55,645	2.34	Tilapia nei	53,324	2.11	1,190
Silver barb	45,662	1.92	Silver barb	52,845	2.09	1,160
Tilapia nei	44,896	1.89	Giant river prawn	51,200	2.03	4,740
Snakeskin gourami	31,559	1.33	Torpedo-shaped	45,721	1.81	1,535
Torpedo-shaped	29,796	1.25	catfishes nei			
catfishes nei			Climbing perch	44,861	1.77	1,695
Cyprinids nei	27,136	1.41	Asian redtail catfish	32,948	1.30	2,280
Climbing perch	26,456	1.11	Snakeskin gourami	32,405	1.28	1,025

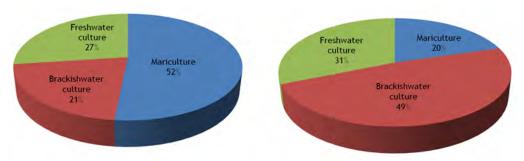
## IV. AQUACULTURE PRODUCTION IN SOUTHEAST ASIA

In 2010, the total region's production from aquaculture accounted for about 45.1% of the region's total fisheries production in terms of volume and 34.5% in terms of value. Aquaculture production comes from three environments, namely: marine, brackishwater, and freshwater.

In terms of volume, aquaculture in marine areas or better known as mariculture contributed 52.0% to the region's total aquaculture production while culture in brackishwater areas or brackishwater culture contributed 21.0%, and the remaining 27.0% came from freshwater culture (**Fig. 4**). However, in terms of value, brackishwater culture production contributed the highest at 49.0% followed by freshwater culture production at 31.0% and mariculture production at 20%.

<sup>&</sup>lt;sup>4</sup> Value in US\$ per metric ton of production





From 2006 to 2010, the total production from aquaculture in Southeast Asia steadily increased at the rate of about 12% per year (**Fig 5**), the highest annual increase of about 17% was recorded between 2007 and 2008, which could have been a result of the sudden rise of the aquaculture production of Indonesia and Vietnam during the same period, while such production trend continued to increase from 2007 until 2010. Except for the aquaculture production of Brunei Darussalam and Singapore which had been decreasing, production from aquaculture of the other Southeast Asian countries continued to increase, although that of Thailand considerably decreased in 2010.

The aquaculture production of Indonesia as the largest producer in 2010 from aquaculture contributed 44.3% in production volume and 52.2% in production value, to the region's total production from aquaculture. The country's aquaculture production comes mainly from the Eucheuma seaweeds (*Eucheuma* spp.) which accounted for about 54.2% of its aquaculture production. In the case of Vietnam, which was the second highest aquaculture producer of the region in 2010, its production accounted for about 19.1% of the region's total aquaculture production. The Philippines which ranked third in terms of aquaculture production had Zanzibar weeds (*Euchema cottonii*) as one of its major products which accounted for 58.8% of the country's production from aquaculture followed by milkfish (*Chanos chanos*) at 10.3%, and the Elkhorm sea moss (*Kappaphycus alvarezeii*) at 6.7%.

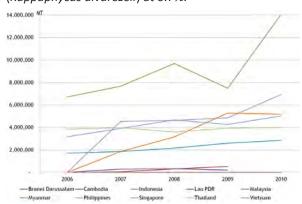


Fig. 5. Aquaculture production of the Southeast Asian countries from 2006 to 2010

In the case of Thailand, its major aquaculture product was the whiteleg shrimps (*Penaeus vannamei*) which accounted for 43.6% of the country's total aquaculture production followed by Nile tilapia (*Oreochromis niloticus*) at 13.9%, green mussel (*Perna viridis*) at 13.0%, catfish hybrid (*Clarias gariepinus x C. macrocephalus*) at 9.1%, and blood cockle (*Anadara granosa*) at 5.8%. For Myanmar, its main aquaculture product is roho labeo (*Labeo rohita*) which accounted for 64.2% of the country's production from aquaculture, followed by catla (*Catla catla*) at 5.5%, giant tiger prawn (*Penaeus monodon*) at 5.4%, tilapia nei (*Oreochromis* spp.) at 4.6%, and mrigal carp

(*Cirrhinus mrigala*) at 3.7% of the country's total aquaculture production. As mentioned earlier, aquaculture production of Thailand had decreased in 2010 compared with that of its production of 2009 which could have been brought about by decreases in the production mainly of the whiteleg shrimp (by almost 30%), green mussel, catfishes, and in Nile tilapia production.

In terms of value per volume of aquaculture production in 2010, Brunei Darussalam attained the highest average value at US\$11,760/MT followed by Singapore at US\$ 4,245/MT, Thailand at US\$ 2,200/MT, Malaysia at US\$ 2,125/MT, Indonesia at US\$ 1,110/MT, Myanmar at US\$ 1,080/MT, and the Philippines at US\$ 720/MT. It should be noted that in 2009, the average value of the aquaculture production of Brunei Darussalam was US\$ 1,440/MT while that of Singapore was US\$ 2,465/MT. The production value per metric ton of Vietnam's production could not be calculated as the country's total production value in 2010 was not reported, but the country's production value per metric ton volume in 2009 was about US\$ 1,915/MT.

It should be recalled that in 2009, mariculture production accounted for 40% of the total production from aquaculture in terms of volume, while brackishwater culture production accounted for 22% and freshwater culture production at 27%. In terms of value, mariculture contributed 14% to the value of the total aquaculture production, brackishwater culture production at 45%, and freshwater culture production at 41%. This means that in terms of volume, production from mariculture in 2010 increased by about 23% from that of 2009 which could be brought about by the increased production of seaweeds by Indonesia, while those from brackishwater culture and freshwater culture had decreased. In terms of value, those from mariculture and brackishwater culture had increased but the value of production from freshwater culture had considerably decreased.

#### 4.1 Mariculture

In 2010, the region's total production from mariculture contributed about 52.0% to the region's total production volume from aquaculture and 20.4% to the region's total aquaculture production value. In terms of volume, Euchema seaweeds (*Euchema* spp.) which was mainly produced by Indonesia accounted for about 59.0% of the total production from mariculture, followed by the Zanzibar weeds (*Euchema cottonii*) as main products of the Philippines which accounted for 26%, green mussel (*Perna viridis*) mainly produced by Thailand at 3.0%, and blood cockle (*Anadara granosa*) as main mariculture product of Malaysia at 3% (**Fig. 6**).

In terms of value of the aquaculture production, Euchema seaweeds contributed by 42.0% of the total value of mariculture products followed by the penguin wing oyster (*Pteria penguin*) which was mainly produced in Indonesia accounting for 31.0%. In addition, Zanzibar weeds (*Euchema cottonii*) provided 9%, marine fishes at 8%, other crabs at 5%, blood cockle at 3%, and green mussel at 1% to the total value of the region's mariculture production (**Fig 6**).

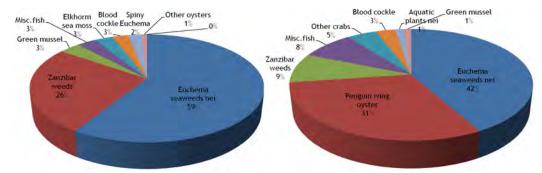


Fig. 6. Mariculture production in 2010 by major species (left by quantity; right by value)

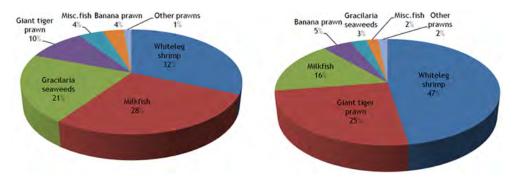
Mariculture production by country and by species indicated that Indonesia contributed the largest amount of aquatic plants production through the Euchema seaweeds (*Euchema* spp.) followed by the Philippine production of the Zanzibar weeds (*Euchema cottonii*). The other countries shared the production volume of the other species such as green mussels by Malaysia, Philippines, Singapore, and Thailand; miscellaneous fishes by Vietnam and Cambodia; Elkhorm moss (*Kappaphycus alvarezii*) by the Philippines, blood cockle by Malaysia, Indonesia and Thailand; spiny Eucheuma (*Eucheuma denticulatum*) by the Philippines; and other oysters by Thailand.

Furthermore, with respect to the value per volume of mariculture production in 2010, Singapore had an average of US\$ 33,175/MT which could be brought about by the country's production of the highly economic species of groupers. This was followed by Myanmar at US\$ 2,565 for the value of its production of *Penaeus monodon* from fishing area 57, Philippines at US\$ 485/MT, Indonesia at US\$ 410/MT, Thailand at US\$ 407/MT, and Malaysia at US\$ 385/MT.

## 4.2 Brackishwater culture

The main brackishwater species cultured in the Southeast Asian region include the crustaceans, miscellaneous fishes and aquatic plants. The total production from brackishwater culture in 2010 represented about 21% of the region's total aquaculture. Production of the whiteleg shrimp (*Penaeus vannamei*) mainly contributed by Thailand and Indonesia was the highest volume from brakishwater culture representing 32.0% of the region's total production from brackishwater culture. The second highest production from brackishwater culture was contributed by milkfish (*Chanos chanos*) accounting for about 28.0% of the region's total production from brackishwater culture reported by Indonesia and the Philippines, and the third highest production came from the Gracilaria seaweeds (*Gracilaria* spp.) at 21.0% contributed by Indonesia and the Philippines. This was followed by the giant tiger prawn (*Penaeus monodon*) at 10.0% reported by Indonesia, Malaysia, Philippines, Myanmar, and Thailand. In terms of brackishwater culture production value, the highest was the whiteleg shrimp (*Penaeus vannamei*), followed by the giant tiger prawn (*Penaeus monodon*) with Indonesia contributing the highest production value. Milkfish (*Chanos chanos*) which came in third in terms of production value was mainly produced by the Philippines (**Fig. 7**).

Fig. 7 Brackishwater culture production in 2010 by species (left by quantity; right by value)



In terms of the average value per production volume from brackishwater aquaculture production, from among the countries that reported their respective production value, Brunei Darussalam posted the highest at US\$ 16,380/MT which could be brought about by the country's production of the export commodity blue shrimp (*Penaeus stylirostris*), followed by Malaysia at US\$ 3,945/MT, Thailand at US\$ 3,545/MT, Indonesia at US\$ 2,405/MT, and the Philippines at US\$ 1,580/MT. While Cambodia, Singapore, and Vietnam did not report their respective production from brackishwater aquaculture in terms of average value per production volume, Myanmar reported only its production volume but not the corresponding value.

## 4.3 Freshwater culture

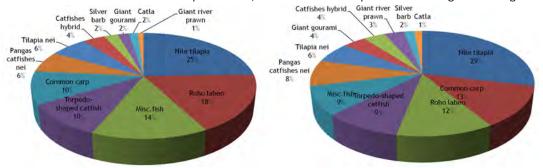
The region's total production from freshwater culture in 2010 accounted for about 27% of the region's total production from aquaculture, which had decreased by about 30% from that of the 2009 production volume which could have been affected by the failure of Vietnam to report its production in 2010. Indonesia was the highest producer contributing about 43.5% of the region's total production from freshwater culture, and was followed by Myanmar at 25.1%, Thailand at 14.0%, Philippines at 9.9%, Malaysia at 5.0%, and Lao PDR at 2.7%. In terms of value, this sub-sector accounted for 31% of the region's total aquaculture production value,

making freshwater culture a very important fishery sub-sector even considering that its production value in 2010 had decreased by almost 25% compared with that of 2009 which could have been affected by the non-reporting of the corresponding values for the production volume by Cambodia, Lao PDR and Vietnam.

In terms of production volume of freshwater culture by species (**Fig 8**), the Nile tilapia (*Oreochromis niloticus*) accounted for 25% of the region's total production from freshwater culture which had been contributed by Indonesia, Thailand and the Philippines. This was followed by roho labeo (*Labeo rohita*) at 18% contributed mainly by Myanmar; miscellaneous freshwater fishes at 14% contributed by Vietnam and Cambodia; the torpedo-shaped catfish (*Clarias* spp.) at 10% contributed by Indonesia, Malaysia, Myanmar and the Philippines; and common carp (*Cyprinus carpio*) also at 10% contributed by Indonesia, Myanmar and Thailand. For the production value, the highest contributor to the region's total production value from freshwater culture was Nile tilapia at 29% followed by common carp (13%), roho labeo (12%), torpedo-shaped catfishes (9%), pangas catfishes (8%), and tilapia (6%).

Fig. 8 Freshwater culture production in 2010 by species (left by quantity; right by value)

As for the values of freshwater culture production, Brunei Darussalam presented the highest average value



at US\$ 7,895/MT mainly coming from the country's production of the African catfish (*Clarias gariepinus*). This was followed by Singapore at US\$ 4,120/MT mainly for the value of its production of the Indonesian snakehead (*Channa micropeltes*), Malaysia at US\$ 1,625/MT, Indonesia at US\$ 1,585/MT, Thailand at US\$ 1,515/MT, Philippines at US\$ 1,365/MT, and Myanmar at US\$ 940/MT.

## V. FISHING GEAR ANALYSIS

Analysis of the fishing gear used in the region in 2010 was made only for four countries that reported their respective production from marine capture fisheries by type of fishing gear, namely: Brunei Darussalam, Malaysia, Myanmar, and Singapore. The highest production by type of gears in Brunei Darussalam came from the trawls accounting for about 49.0% of the total production of all types of gears, of which miscellenaeus marine fishes contributed 52.0% to the trawl's total production. This was followed by the purse seine with the Indian mackerel (*Rastrelliger kanagurta*) comprising almost all of the production. In the case of Myanmar, the highest catch production by gear used was provided by trawls at 1,157,329 MT or 56.5% of all types of gears representing the miscellaneous marine fishes that accounted for 61.2% of the trawl's total catch. This was followed by the purse seines with total catch of 490,241 MT or 23.9% of all types of gears of which the miscellaneous marine fishes accounted for about 85.0% of purse seines' total production. For Malaysia, trawls were very prominent with total production that accounted for 50.0% of the production from all types of gears, of which trash fishes comprised 35.0% of the trawl's total production. This was followed by the purse seines contributing about 26.0% to the total production from all types of gears, of which the scads (*Decapterus* spp.) comprised 19.0% of the purse seines' total production.

Gill nets came third with production of 186,651 MT or 13.1% of the production from all types of gears, where the Rastrelliger mackerels (*Rastrelliger* spp.) contributed about 25.0% to the gill nets' total production. Singapore reported that its highest production in terms of gear used was from the trawls at 754 MT or 43.5% of the production from all types of gears, of which Penaeus shrimps (*Penaeus* spp.) gave the highest production accounting for about 19.0% of trawl's total production.

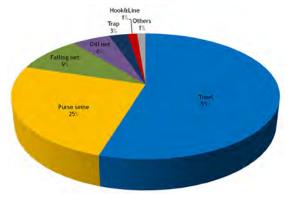


Fig 9. Marine capture fishery production by type of gear in 2010

Fig 9 shows the marine capture fishery production of the Southeast Asian region by type of gear used. Trawls had been the largest producing fishing gear accounting for about 55% of the total production from all types of gears, followed by the purse seines at about 25%, the falling net at 9%, gill net at 6%, traps at 3%, hook and line at 1%, and others at 1%. However, it should be noted that such data on gears used in marine capture fisheries could not be properly analyzed as several countries such as Cambodia, Indonesia, Philippines, Thailand, and Vietnam did not provide the relevant information.

## VI. NUMBER OF FISHING BOATS BY TYPE AND TONNAGE

This section covers only the boats that have been registered in each country. However, Cambodia, Lao PDR, Philippines and Thailand did not report the number of their registered fishing boats as of 2010. Therefore, based on the available data in 2010, Indonesia had the highest number of boats at 570,827 of which 172,907 were non-powered while 397,920 were powered boats, followed by Malaysia with 49,756 of which 2,977 were non-powered and 46,779 were powered boats. The third highest number was reported by Myanmar at 32,824 of which 17,054 were non-powered and 15,865 were powered boats, followed by Vietnam at 25,346 and Brunei Darussalam at 2,743 which comprised 141 non-powered and 2,602 powered boats. Meanwhile, Singapore reported that all its 39 boats were powered boats.

## VII. NUMBER OF FISHERS BY WORKING STATUS

In 2010, Indonesia reported the highest number of fishers at 5,971,725 of which 36.2% were involved in marine capture fisheries 50% of which were full-time, 36% part-time fishers, and 14% were occasional fishers. In inland capture fisheries, the country had 457,835 fishers comprising 37% full-time; 42% part-time; and 21% occasional fishers. In aquaculture, the country had 3,351,448 or 56.1% of the country's total fishing workforce. Myanmar had the second highest number of fishers at 3,160,070 of which 43.8% were in marine capture fisheries comprising 16% full-time, 18% part-time, and 66% occasional fishers. In inland capture fisheries, the country had 1,564,125 or 49.5% of its total fishing workforce of which 31% were full-time, 19% were part-time, while the rest were part-time fishers. In aquaculture, the country had 780,000 or 24.7% of its total workforce of which 27% were full-time and 16% part-time fish farmers, while the rest were occasional workers in aquaculture farms. Malaysia had the third highest number of fishers at 155,913 of which 129,622 or 83.1% all were full-time capture fishers while 26,291 or 16.9% were involved in aquaculture all of whom were full-time fish farmers. Singapore had 503 fishers and Brunei Darussalam had 298 fishers (Fig 10). Cambodia, Lao PDR, Philippines, Thailand, and Vietnam did not provide information on their respective number of fishers.

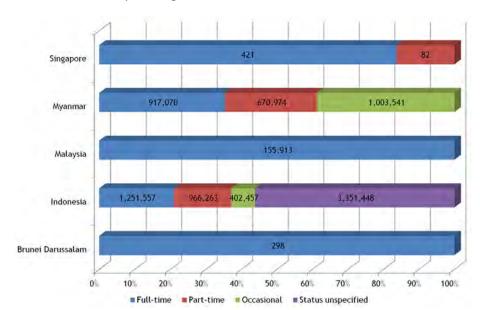


Fig. 10 Number of fishers by working status in 2010

### VIII. AQUACULTURE PRODUCTION OF ORNAMENTAL FISHES

So far, only four countries reported their respective aquaculture production of ornamental fishes in 2010, namely: Brunei Darussalam, Indonesia, Malaysia, and Myanmar. Singapore which provided the relevant data in 2008 and 2009, did not give any information for 2010. Of the four countries, Malaysia reported its highest production in 2010 comprising mainly the cyprinidaes followed by poeciliids and osteichthyes. Myanmar came next with its highest reported production comprising gold fishes, cyprinidaes, and angel fish, while Indonesia's reported production comprised mainly the common carps, Siamese fighting fish, rummy nose tetra, guppies, and Oscar fish. Brunei Darussalam reported its minimal production of ornamental fishes in 2010 comprising mainly the guppies and common carps. In terms of value, the highest was for common carp and guppies in Brunei Darussalam at US\$ 6.30/pc and US\$ 0.70/pc, respectively. The osteoglossids and poeciliids followed at US\$ 0.13/pc and US\$ 0.12/pc, respectively in Malaysia, and goldfish from Myanmar at US\$ 0.11/pc. Efforts will be made to improve the compilation of data from aquaculture production of ornamental fishes considering that this is a budding industry in the fisheries sector.

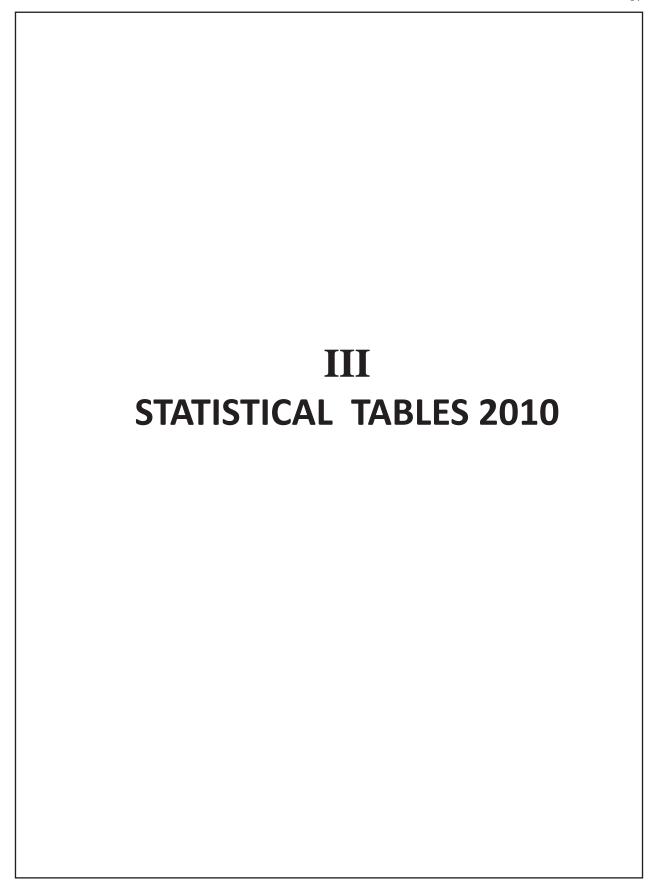
## IX. SEED PRODUCTION FOR AQUACULTURE

The need to collect information on the volume of seeds produced from the aquaculture industry was recommended in many fora as this factor has a significant role to play in enhancing the economic analysis of the aquaculture industry of the region. Thus, compilation of the said information was started in 2008 with only four countries, namely: Cambodia, Malaysia, Myanmar and Singapore providing the relevant information. Brunei Darussalam joined in 2009 by also giving its country report on this aspect. In 2010, Indonesia entered into the picture but Brunei Darussalam and Cambodia seemed to fade away. In this connection, efforts will be exerted to gather the said information from the countries in Southeast Asia for the next issue of this publication, in order that the true picture of this significant niche of the aquaculture industry could be established.

## X. ANALYSIS OF PRODUCER PRICE FOR SPECIES FROM CAPTURE FISHERIES

Considering that the capture fisheries of the countries in the region harvest different species, the trend of the producer price could be established only for certain species which are commonly exploited. Generally, it appears that the producer prices of several commodities harvested by Brunei Darussalam are higher than those of the other countries. For example, its producer price of the humpback grouper (*Cromileptes altivelis*) in 2010 was US\$ 21.28/kg compared to Indonesia's US\$ 4.15/kg. However, for the green tiger prawn *Penaeus semisulcatus*, the producer price in Brunei Darussalam of US\$ 8.51/kg did not differ much from that of Thailand's US\$ 7.41/kg.

Meanwhile, the producer price in 2010 of the giant sea perch (Lates calcarifer) in Brunei Darussalam was US\$ 8.51/kg compared to the Philippines' US\$ 1.01/kg. Considering the seven countries exploiting this commodity, the average producer price was US\$ 4.12/kg. As for groupers (Epinephelus spp.), the highest price was Singapore's US\$ 6.55/kg and the lowest price of US\$ 4.00/kg in Myanmar with an average price of US\$ 5.00/kg (n=5). For yellowfin tuna, the producer price in Brunei Darussalam was US\$ 3.55/kg while the lowest price was Indonesia's US\$ 1.62/kg or an average price of US\$ 2.29/kg (n=4). In the case of the giant tiger prawn, the highest producer price was in Brunei Darussalam at US\$ 11.35/kg while the lowest was Myanmar's US\$ 4.00/kg or an average of US\$ 7.00/kg (n=3). For banana prawn (Penaeus merguiensis), the highest price was in Malaysia at US\$ 8.11/kg with the lowest in Indonesia at US\$ 3.00/kg and an average of US\$ 5.58/kg (n=4). For the Indo-Pacific swamp crab (Scylla serrata), the highest price was in Myanmar at US\$ 5.50/kg with the lowest in Indonesia at US\$ 2.35/kg for an average of US\$ 3.84/kg (n=5). In the case of the blue swimming crab (Portunus pelagicus), the highest price was Thailand's US\$ 4.63/kg and the lowest was in the Philippines at US\$ 2.08/kg, and an average of US\$ 3.06/kg (n=4). For the common squids (Loligo spp.), the highest was Singapore's US\$ 6.55/kg while the lowest was in the Philippines at US\$ 1.72/kg with an average of US\$ 3.15/kg (n=5). It should be noted that the producer price trends among the countries in the region for the same commodities generally had wide variations.



## 1. ANNUAL SERIES OF FISHERY PRODUCTION

## 1.1 Total Production

# 1.1.1 In Quantity

MT

Country		2006	2007	2008	2009	2010
Total	0	24,501,767	25,302,870	27,207,826	28,917,096	31,438,435
Brunei Darussalam	1	2,989	3,225	2,747	2,418	2,772
Cambodia	2	661,542	525,100	536,320	515,000	550,000 A
Indonesia	3	7,183,586	7,510,767	9,054,873	10,064,140	11,662,311
Lao PDR	4	107,800	91,660	93,500	105,000	113,000
Malaysia	5	1,596,051	1,654,221	1,639,017	1,729,002	1,806,577
Myanmar	6	2,817,990	2,808,037	3,147,605	3,491,103	3,901,979
Philippines	7	4,412,158	4,710,952	4,964,703	5,084,674	5,155,647
Singapore	8	11,675	8,026	5,141	5,687	5,233
Thailand	9	4,051,824	3,675,382	3,204,200	3,137,672	3,113,316
Vietnam	10	3,656,152	4,315,500	4,559,720	4,782,400	5,127,600 B

Figures in 2010 from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Figures in 2010 from General Statistics Office of Vietnam Website Notes: A

В

## 1.1.2 In Value

US\$ 1,000

Country		2006	2007	2008	2009	2010
Total	0	15,476,118	24,234,354	28,585,816	29,215,311	38,744,163
Brunei Darussalam	1	9,998	11,061	9,477	5,947	11,626
Cambodia	2		58,038	317,290	533,528	
Indonesia	3	6,712,275	7,683,427	9,700,810	7,493,133	14,085,949
Lao PDR	4		296,962	331,475	204,969	
Malaysia	5	1,706,864	1,855,326	2,163,885	2,599,980	2,821,786
Myanmar	6		1,862,403	3,156,405	5,283,701	5,821,638
Philippines	7	3,184,066	3,912,137	4,675,417	4,266,944	4,534,628
Singapore	8	20,945	23,319	17,822	19,243	25,423
Thailand	9	3,841,970	3,986,931	3,595,535	3,940,087	4,501,934
Vietnam	10		4,544,750	4,617,700	4,867,779	6,941,179 A

Figures in 2010 from General Statistics Office of Vietnam Website Notes: A

# 1.2 Marine Fishery Production

# 1.2.1 In Quantity

ΜT

Country		2006	2007	2008	2009	2010
Total	0	13,938,637	14,056,983	13,814,368	14,140,387	14,874,445
Brunei Darussalam	1	2,279	2,551	2,357	1,958	2,351
Cambodia	2	60,500	54,900	66,000	75,000	85,000 A
Indonesia	3	4,512,191	4,734,280	4,701,933	4,789,410	5,039,416
Lao PDR	4					
Malaysia	5	1,379,859	1,381,424	1,394,531	1,391,088	1,428,881
Myanmar	6	1,525,000	1,485,740	1,679,010	1,867,510	2,048,590
Philippines	7	2,154,802	2,327,815	2,377,514	2,418,838	2,424,476
Singapore	8	3,103	3,522	1,623	2,121	1,732
Thailand	9	2,484,803	2,079,351	1,644,800	1,496,162	1,617,399
Vietnam	10	1,816,100	1,987,400	1,946,600	2,098,300	2,226,600 B

Figures in 2010 from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Figures in 2010 from General Statistics Office of Vietnam Website Notes: A

# 1.2.2 In Value

US\$ 1,000

Country		2006	2007	2008	2009	2010
Total	0	9,100,292	10,422,912	12,338,215	10,416,661	15,898,768
Brunei Darussalam	1	9,018	10,117	9,085	5,289	6,676
Cambodia	2				110,729	
Indonesia	3	4,106,402	4,867,641	4,957,293	1,686,971	6,558,115
Lao PDR	4					
Malaysia	5	1,346,434	1,493,332	1,690,715	1,887,588	2,015,563
Myanmar	6			1,585,514	3,081,391	3,400,287
Philippines	7	1,997,578	2,451,954	2,810,871	2,390,076	2,524,841
Singapore	8	11,468	14,269	8,560	10,450	10,559
Thailand	9	1,629,392	1,585,599	1,276,177	1,244,167	1,382,727
Vietnam	10				•••	

# 1.3 Inland Fishery Production

# 1.3.1 In Quantity

 $\mathsf{MT}$ 

Country		2006	2007	2008	2009	2010
Total	0	2,136,943	2,008,301	2,329,524	2,397,273	2,377,253
Brunei Darussalam	1	10				
Cambodia	2	559,642	420,000	430,600	390,000	405,000 A
Indonesia0	3	293,921	310,457	497,740	494,630	344,972
Lao PDR	4	29,800	28,410	29,200	30,000	30,900
Malaysia	5	4,164	4,283	4,353	4,469	4,545
Myanmar	6	718,000	717,640	814,740	899,430	1,002,430
Philippines	7	165,081	168,311	179,491	188,444	185,406
Singapore	8					
Thailand	9	214,000	225,600	228,600	245,500	209,800
Vietnam	10	152,325	133,600	144,800	144,800	194,200 B

Notes: Α

Figures in 2010 from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Figures in 2010 from General Statistics Office of Vietnam Website

В

## 1.3.2 In Value

US\$ 1,000

Country		2006	2007	2008	2009	2010
Total	0	596,877	985,172	2,215,437	2,834,477	2,526,476
Brunei Darussalam	1					
Cambodia	2			255,500	334,845	
Indonesia	3	264,372	368,247	521,019	616,640	546,937
Lao PDR	4		215,708	240,334	93,168	
Malaysia	5	8,455	9,013	10,290	11,482	13,138
Myanmar	6			788,325	1,349,145	1,503,645
Philippines	7	101,477	125,464	145,912	155,907	174,479
Singapore	8					
Thailand	9	222,573	266,740	254,057	273,290	288,277
Vietnam	10					

# 1.4 Aquaculture Production

# 1.4.1 In Quantity

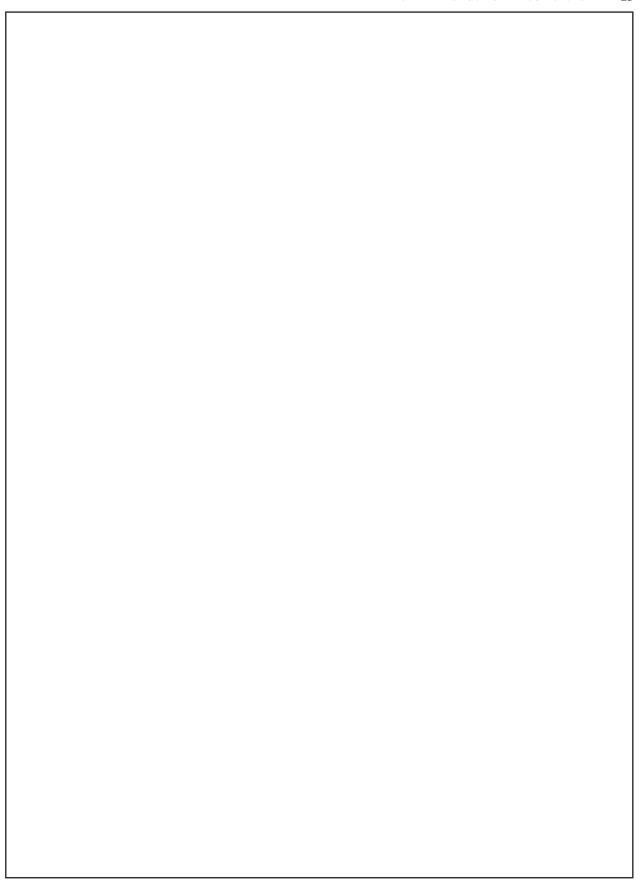
Country		2006	2007	2008	2009	2010
Total	0	8,426,187	9,237,586	11,063,934	12,379,436	14,186,737
Brunei Darussalam	1	700	674	390	460	421
Cambodia	2	41,400	50,200	39,720	50,000	60,000 A
Indonesia	3	2,377,474	2,466,030	3,855,200	4,780,100	6,277,923
Lao PDR	4	78,000	63,250	64,300	75,000	82,100
Malaysia	5	212,028	268,514	240,133	333,445	373,151
Myanmar	6	574,990	604,657	653,855	724,163	850,959
Philippines	7	2,092,275	2,214,826	2,407,698	2,477,392	2,545,765
Singapore	8	8,572	4,504	3,518	3,566	3,501
Thailand	9	1,353,021	1,370,431	1,330,800	1,396,010	1,286,117
Vietnam	10	1,687,727	2,194,500	2,468,320	2,539,300	2,706,800 B

Figures in 2010 from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Figures in 2010 from General Statistics Office of Vietnam Website Notes: Α

## 1.4.2 In Value

US\$ 1,000

Country		2006	2007	2008	2009	2010
Total	0	5,778,949	12,826,273	14,032,164	15,964,173	13,377,740
Brunei Darussalam	1	980	944	392	658	4,950
Cambodia	2		58,038	61,790	87,954	
Indonesia	3	2,341,501	2,447,539	4,222,498	5,189,522	6,980,897
Lao PDR	4		81,255	91,141	111,801	
Malaysia	5	351,975	352,981	462,880	700,910	793,085
Myanmar	6		1,862,403	782,566	853,165	917,706
Philippines	7	1,085,011	1,334,719	1,718,634	1,720,961	1,835,308
Singapore	8	9,477	9,052	9,262	8,793	14,864
Thailand	9	1,990,005	2,134,592	2,065,301	2,422,630	2,830,930
Vietnam	10		4,544,750	4,617,700	4,867,779	



## 2. FISHERY PRODUCTION BY SUB-SECTOR

# 2.1 In Quantity

MT

Country		Year	Total	Marine capture fishery	Inland capture fishery
Total	0	2010	31,874,435	14,874,445	2,377,253
Brunei Darussalam	1	2010	2,772	2,351	
Cambodia A	2	2010	550,000	85,000	405,000
Indonesia	3	2010	11,662,311	5,039,416	344,972
Lao PDR	4	2010	113,000		30,900
Malaysia	5	2010	1,806,577	1,428,881	4,545
Myanmar	6	2010	3,901,979	2,048,590	1,002,430
Philippines	7	2010	5,155,647	2,424,476	185,406
Singapore	8	2010	5,233	1,732	
Thailand	9	2010	3,113,316	1,617,399	209,800
Vietnam B	10	2010	5,127,600	2,226,600	194,200

Figures from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Notes:

Figures from General Statistics Office of Vietnam Website

# 2.1 In Quantity (Cont'd)

MT

Country		Aquaculture					
			Mari-	Brackish-	Fresh-		
		Sub-total	culture	water	water		
				culture	culture		
Total	0	14,186,737	5,886,740	2,435,227	3,097,970		
Brunei Darussalam	1	421	109	293	19		
Cambodia A	2	60,000					
Indonesia	3	6,277,923	3,514,702	1,416,038	1,347,183		
Lao PDR	4	82,100			82,100		
Malaysia	5	373,151	89,366	128,387	155,398		
Myanmar	6	850,959	75,441	3,122	772,396		
Philippines	7	2,545,765	1,933,396	304,276	308,093		
Singapore	8	3,501	3,098		403		
Thailand	9	1,286,117	270,628	583,111	432,378		
Vietnam B	10	2,706,800					

Figures from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website Figures from General Statistics Office of Vietnam Website Notes: Α

В

### 2.2 In Value

US\$ 1,000

Country		Year	Total	Marine capture fishery	Inland capture fishery
Total	0	2010	38,744,163	15,898,768	2,526,476
Brunei Darussalam	1	2010	11,626	6,676	
Cambodia	2	2010			
Indonesia	3	2010	14,085,949	6,558,115	546,937
Lao PDR	4	2010			
Malaysia	5	2010	2,821,786	2,015,563	13,138
Myanmar	6	2010	5,821,638	3,400,287	1,503,645
Philippines	7	2010	4,534,628	2,524,841	174,479
Singapore	8	2010	25,423	10,559	
Thailand	9	2010	4,501,934	1,382,727	288,277
Vietnam A	10	2010	6,941,179		

Notes: A Figures from General Statistics Office of Vietnam Website

### 2.2 In Value (cont'd)

US\$ 1,000

			Aquacı	ılture	
Country			Mari-	Brackish-	Fresh-
Country		Sub-total	culture	water	water
				culture	culture
Total	0	13,377,740	2,722,645	6,468,562	4,186,533
Brunei Darussalam	1	4,950		4,800	150
Cambodia	2				
Indonesia	3	6,980,897	1,437,044	3,409,438	2,134,415
Lao PDR	4				
Malaysia	5	793,085	34,369	506,555	252,161
Myanmar	6	917,706	193,568		724,138
Philippines	7	1,835,308	934,081	481,441	419,786
Singapore	8	14,864	13,204		1,660
Thailand	9	2,830,930	110,379	2,066,328	654,223
Vietnam	10				

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### 3. MARINE CAPTURE FISHERY STATISTICS

### 3.1 Number of Fishing Boats by Type and Tonnage, 2010

Country, Sub-area		Year	Total	Non- powered boat	Sub-total	Out-board powered boat
Brunei Darussalam	1	2010	2,743	141	2,602	2,566
Brunei Muara	2	2010	1,819	43	1,776	1,740
Tutong	3	2010	302	15	287	287
Kuala belait	4	2010	357	69	288	288
Temburong	5	2010	265	14	251	251
Cambodia	6	2010				
Indonesia	7	2010	570,827	172,907	397,920	231,333
West Sumatra	8	2010	36,924	13,546	23,378	13,755
South Jawa	9	2010	27,736	1,841	25,895	19,875
Malaka Strait	10	2010	34,380	6,785	27,595	4,942
East Sumatra	11	2010	58,010	14,661	43,349	13,848
North Jawa	12	2010	84,853	5,450	79,403	55,178
Bali, Nusatenggara, Timor	13	2010	54,651	17,469	37,182	27,441
South/West Kalimantan	14	2010	29,963	7,753	22,210	6,666
East Kalimantan	15	2010	30,873	3,317	27,556	6,416
South Sulawesi	16	2010	67,791	13,438	54,353	35,581
North Sulawesi	17	2010	62,802	27,207	35,595	31,284
Maluku - Papua	18	2010	82,844	61,440	21,404	16,347
Malaysia	19	2010	49,756	2,977	46,779	29,003
West Coast of Peninsular	20	2010	22,285	86	22,199	14,306
East Coast of Peninsular	21	2010	9,307	3	9,304	4,949
Sabah	22	2010	12,172	2,886	9,286	6,134
Sarawak	23	2010	5,689	2	5,687	3,322
Labuan	24	2010	303		303	292
Myanmar	25	2010	32,824	17,054	15,865	
Taninthayi	26	2010	12,367	3,700	8,667	
Mon	27	2010	2,091	278	1,813	
Yangon	28	2010	323	323	95	• • •
Rakhine	29	2010	14,842	11,267	3,575	• • •
Ayeyarwady	30	2010	3,201	1,486	1,715	
Philippines	31	2010				
Singapore	32	2010	39		39	34
Thailand	33	2010	• • •			
Gulf of Thailand	34	2010	•••			
Indian Ocean	35	2010	• • •			
Vietnam A	36	2010	25,346			•••

Notes: A Figures from General Statistics Office of Vietnam Website

				th powered board powered				
Sub- total	< 5 tons	5-9.9 tons	10-19.9 tons	20-49.9 tons	50-99.9 tons	100-199.9 tons	200-499.9 tons	> 500 ton
36					36			
36					36			
166,587	105,820	29,116	9,900	9,040	1,766	1,257	295	2
9,623	6,352	2,310	296	504	148	13	0	
6,020	1,490	2,733	740	973	67	13	4	(
22,653	18,057	2,739	472	1,082	182	119	2	
29,501	23,769	3,214	1,506	836	83	87	6	(
24,225	6,798	6,462	4,225	4,609	1,002	834	272	2
9,741	6,020	2,130	678	523	206	177	5	;
15,544	11,327	3,163	751	244	49	10	0	
21,140	18,199	2,373	558	8	0	2	0	
18,772	13,808	3,992	674	261	29	2	6	
4,311	2,605	1,102	274	140	120	36	30	
5,057	1,738	1,242	814	579	461	169	54	
17,776	2,710	5,115	1,999	1,621	1,226	2,032	1,763	1,31
7,893	656	3,041	706	848	508	912	852	37
4,355	591	832	672	380	231	442	588	61
3,152	863	689	322	295	385	501	75	2
2,365	600	553	299	98	102	176	247	29
11						1	1	
15,865	10,186	2,628	999	810	631	607	4	
8,667	4,906	2,070	647	480	330	234		
1,813	905	447	93	85	118	165		
95	95							
3,575	3,358	34		97	63	20	20	
1,715	922	77	259	148	120	188	188	
5	1	1		3				

### 3.2 Number of Fishing Units by Size of Boat, 2010 3.2.1 Brunei Darussalam

			Out-board		In-bo	ard powe	red boat		
Type of Fishing Gear		Total	powered	Sub-	Less than	5-9.9	10-19.9	20-49.9	50-99.9
			boat	total	5 tons	tons	tons	tons	tons
All Purse Seines	1	11	0	11	0	0	8	3	0
Anchovy Purse Seine	2								
Fish Purse Seine	3	11	0	11	0	0	8	8	0
All Seine Nets	4								
Boat Seine	5								
Beach Seine	6								
All Trawls	7	20	0	20	0	0	18	2	0
Beam Trawl	8								
Otter Board Trawl	9	20	0	20	0	0	18	2	0
Pair Trawl	10								
Lift Nets	11								
All Falling Nets	12								
Anchovy Falling Net	13								
Squid Falling Net	14								
Gill Nets	15								
All Traps	16								
Stationary Trap	17								
Portable Trap	18								
Hooks & Lines	19	10	0	10	0	0	10	0	0
Push/Scoop Nets	20								
Shellfish & Seaweed Collecting Gear	21								
Others	22								

# 3.2 Number of Fishing Units by Size of Boat, 2010 3.2.2 Indonesia

		,	Out-board		In-bo	ard powe	red boat		
Type of Fishing Gear		Total	powered	Sub-	Less than	5-9.9	10-19.9	20-49.9	50-99.9
			boat	total	5 tons	tons	tons	tons	tons
All Purse Seines	1	17,572							
Anchovy Purse Seine	2								
Fish Purse Seine	3								
All Seine Nets	4	66,284							
Boat Seine	5	46,728							
Beach Seine	6	19,556							
All Trawls	7	13,598							
Beam Trawl	8								
Otter Board Trawl	9	11,055							
Pair Trawl	10	2,543							• • •
Lift Nets	11	36,790							
All Falling Nets	12								
Anchovy Falling Net	13								
Squid Falling Net	14								
Gill Nets	15	276,745							
All Traps	16	80,144							
Stationary Trap	17	35,259							
Portable Trap	18	44,885							
Hooks & Lines	19	361,981							
Push/Scoop Nets	20	11,884							
Shellfish & Seaweed Collecting Gear	21	32,838							
Others	22	49,384							

## 3.2 Number of Fishing Units by Size of Boat, 2010 3.2.3 Malaysia $\,$

			Non-	Out-board		In-b	oard pov	vered boa	ıt	
Type of Fishing Gea	r	Total	powered	powered	Sub-	Less than	5-9.9	10-19.9	20-49.9	50-99.9
			boat	boat	total	5 tons	tons	tons	tons	tons
All Purse Seines	1	1,254		2	1,252	47	59	113	199	834
Anchovy Purse Seine	2	133			133	17	6	21	13	76
Fish Purse Seine	3	1,121		2	1,119	30	53	92	186	758
All Seine Nets	4	696	4	86	606	4	597	5		
Boat Seine	5									
Beach Seine	6									
All Trawls	7	6,251			6,251	70	316	1,568	2,270	2,027
Beam Trawl	8									
Otter Board Trawl	9									
Pair Trawl	10									
Lift Nets	11	376	42	288	46	14	16	13	1	2
All Falling Nets	12									
Anchovy Falling Net	13									
Squid Falling Net	14									
Gill Nets	15	31,423	1,363	24,012	6,048	1,718	2,972	1,049	248	61
All Traps	16	1,073	260	474	339	53	84	137	57	8
Stationary Trap	17	203	44	159	126	33	26	7		
Portable Trap	18	870	216	348	306	27	77	137	57	8
Hooks & Lines	19	5,412	623	3,007	1,782	501	526	459	158	138
Push/Scoop Nets	20	23			23		5	18		
Shellfish & Seaweed Collecting Gear	21	300	105	70	125	45	70	9	1	
Others	22	2,948	580	1,064	1,304	258	470	249	324	3

## 3.2 Number of Fishing Units by Size of Boat, 2010 3.2.4 Myanmar

			Non-	Out-board			In-b	oard pow	ered bo	at	
Type of Fishing Gear	-	Total	powered	powered	Sub-	5-9.9	10-19.9	20-49.9	50-99.9	100-199.92	200-499.9
			boat	boat	total	tons	tons	tons	tons	tons	tons
All Purse Seines	1	1,142	204	773	165			9	64	92	
Anchovy Purse Seine	2										
Fish Purse Seine	3										
All Seine Nets	4	4,946	4,524	422							
Boat Seine	5										
Beach Seine	6										
All Trawls	7	960		46	914			83	395	433	3
Beam Trawl	8										
Otter Board Trawl	9										
Pair Trawl	10										
Lift Nets	11	467	347	120							
All Falling Nets	12	1,304		1,269	35		3	28	4		
Anchovy Falling Net	13										
Squid Falling Net	14	1,304		1,269	35		3	28	4		
Gill Nets	15	11,489	3,397	7,843	249	51	163	27	7	1	
All Traps	16	10,228	8,364	1,760	104			47	52	5	
Stationary Trap	17										
Portable Trap	18										
Hooks & Lines	19	3			3		1	1	1		
Push/Scoop Nets	20	920	148	772							
Shellfish & Seaweed Collecting Gear	21	275	70	205							
Others	22	1,185		578	607	6	163	259	102	76	1

### 3.2 Number of Fishing Units by Size of Boat, 2010 3.2.5 Singapore

32

			Out-board		In-bo	ard powe	red boat		
Type of Fishing Gear		Total	powered	Sub-	Less than	5-9.9	10-19.9	20-49.9	50-99.9
			boat	total	5 tons	tons	tons	tons	tons
All Purse Seines	1								
Anchovy Purse Seine	2								
Fish Purse Seine	3								
All Seine Nets	4								
Boat Seine	5								
Beach Seine	6								
All Trawls	7	3		3				3	
Beam Trawl	8								
Otter Board Trawl	9	3		3				3	
Pair Trawl	10								
Lift Nets	11								
All Falling Nets	12								
Anchovy Falling Net	13								
Squid Falling Net	14								
Gill Nets	15	36	34	2	1	1			
All Traps	16								
Stationary Trap	17								
Portable Trap	18								
Hooks & Lines	19								
Push/Scoop Nets	20								
Shellfish & Seaweed Collecting Gear	21								
Others	22								

34

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Anodontostoma chacunda	Chacunda gizzard shad	57		
Anodontostoma chacunda	Chacunda gizzard shad	71	3.06	
Tenualosa toli	Toli shad	57		
Tenualosa toli	Toli shad	71	0.02	
Pellona ditchela	Indian pellona	57		
Pellona ditchela	Indian pellona	71		
Lates calcarifer	Barramundi (= Giant seaperch)	57		
Lates calcarifer	Barramundi (= Giant seaperch)	71	0.96	
Chanos chanos	Milkfish	71		
Psettodes erumei	Indian halibut	57		
Psettodes erumei	Indian halibut	71	15.20	
Pleuronectiformes	Flatfishes nei	57		
Pleuronectiformes	Flatfishes nei	71		
Cynoglossus spp.	Tongue soles nei	57		
Cynoglossus spp.	Tongue soles nei	71		
Harpadon nehereus	Bombay-duck	57		
Harpadon nehereus	Bombay-duck	71		
Saurida tumbil	Greater lizardfish	57		
Saurida tumbil	Greater lizardfish	71	2.24	
Synodontidae	Lizardfishes nei	57		
Synodontidae	Lizardfishes nei	71		
Ariidae	Sea catfishes	57		
Ariidae	Sea catfishes	71	10.77	
Plotosus spp.	Eeltail catfishes	57		
Plotosus spp.	Eeltail catfishes	71	0.56	
Mugilidae	Mullets nei	57		
Mugilidae	Mullets nei	71	1.62	
Caesio caerulaurea	Blue and gold fusilier	57		
Caesio caerulaurea	Blue and gold fusulier	71		
Caesio cunning	Redbelly yellowtail fusilier	57		
Caesio cunning	Redbelly yellowtail fusilier	71		
Caesionodae	Fusiliers nei	57		
Caesionodae	Fusiliers nei	71	1.30	
Epinephelus merra	Honeycomb grouper	57		
Epinephelus merra	Honeycomb grouper	71		

	I						
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1,601		3,501					
8,377		1,009		1,197			
949							
2,135							
		7,229					
		3,027		1,341			
12,438		215				103	
85,257		1,142		856	21	17	
				328			
6,075						1,239	
10,623						1,001	
6,564		1,757					
1,751		1,225		861			
		2,143				2,315	
		1,152				2,019	
918		515	61,611				
6,058		2,135					
5,485							
13,345							
		15,037				13,057	
		11,961		7,346	1	14,546	
17,545		7,434	44,755			2,071	
74,796		11,987		6,193	51	1,197	
		1,516				124	
		1,280				160	
7,909		1,340				3,111	
36,996		2,095		14,261	33	2,883	
1,287							
8,042				24,134			
8,736							
51,154							
		32					
		911			3		
1,834							
2,134							

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Epinephelus tauvina	Greasy grouper	57		
Epinephelus tauvina	Greasy grouper	71		
Epinephelus spp.	Groupers nei	57		
Epinephelus spp.	Groupers nei	71	15.16	
Cephalopholis boenak	Chocolate hind	57		
Cephalopholis boenak	Chocolate hind	71		
Cromileptes altivelis	Humpback grouper	57		
Cromileptes altivelis	Humpback grouper	71		
Plectropomus leopardus	Leopard coral grouper	57		
Plectropomus leopardus	Leopard coral grouper	71	0.51	
Plectropomus spp.	Groupers	71	2.12	
Priacanthus macracanthus	Red bigeye	57		
Priacanthus macracanthus	Red bigeye	71		
Pricanthus spp.	Bigeyes nei	57		
Pricanthus spp.	Bigeyes nei	71	41.40	
Sillago sihama	Silver sillago	57		
Sillago sihama	Silver sillago	71	0.40	
Sillaginidae	Sillago-whitings	57		
Sillaginidae	Sillago-whitings	71		
Mene maculate	Moonfish	71		
Sciaenidae	Croakers, drums nei	57		
Sciaenidae	Croakers, drum nei	71	27.16	
Lutjanus argentimaculatus	Mangrove red snapper	57		
Lutjanus argentimaculatus	Mangrove red snapper	71	0.28	
Lutjanus spp.	Snappers nei	57		
Lutjanus spp.	Snappers nei	71	40.37	
Lutjanidae	Snappers, jobfishes nei	57		
Lutjanidae	Snappers, jobfishes nei	71		
Serranidae	Groupers, seabasses nei	57		
Serranidae	Groupers, seabasses nei	71		
Pristipomoides spp.	Sharptooth jobfishes	57		
Pristipomoides spp.	Sharptooth jobfishes	71	15.50	
Nemipterus spp.	Threadfin breams nei	57		
Nemipterus spp.	Threadfin breams nei	71	61.54	
Scolopsis spp.	Monocole breams	57		
Scolopsis spp.	Monocole breams	71		

MTIndonesia Lao PDR Thailand Malaysia Myanmar Philippines Singapore Vietnam 1,641 . . . 1,964 1,515 3,104 . . . . . . . . . 7,993 37 . . . . . . 14,250 . . . 33,785 3,465 . . . . . . 3,975 . 1,779 8,308 . . . . . . 543 . . . . . . 620 4,394 10,099 12,199 . . . . . . 31,152 16,358 19,447 . . . 165 . . . . . . . . . 878 . . . . . . . . . . . . . . . 1,135 1,948 1,363 5 2,194 14,528 . . . . . . . . . 17,302 24 14,680 20,676 18,417 13,260 . . . . . . 52,347 12,111 38 13,807 ... 924 . . . . . . 7,388 405 19,255 9,166 104,572 4,155 76 . . . . . . . . . . . . . . . 1,038 1,633 3,932 21,232 18 1,022 . . . . . . . . . . . . 2,531 ... 19,889 1,926 . . . 1,077 . . . . . . . . . 2,941 . . . . . . . . . . . . . . . 82,851 16,043 13,210 16,110 . . . 52,165 27,188 45,827 16 25,412 71 . . . 1,941 45

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Leiognathus spp.	Ponyfishes	57		
Leiognathus spp.	Ponyfishes	71	33.26	
Leiognathidae	Ponyfishes (=Slipmouths) nei	57		
Leiognathidae	Ponyfishes (=Slipmouths) nei	71		
Plectorhinchus spp.	Sweetlips	57		
Plectorhinchus spp.	Sweetlips	71	5.99	
Pomadasys argenteus	Silver grunt	57		
Pomadasys argenteus	Silver grunt	71	0.52	
Haemulidae (=Pomodasyidae)	Grunts, sweetlips nei	57		
Haemulidae (=Pomodasyidae)	Grunts, sweetlips nei	71	4.05	
Lethrinidae	Emperors (=Scavengers) nei	57		
Lethrinidae	Emperors (=Scavengers) nei	71	1.45	
Sparidae	Porgies, seabreams nei	71	5.62	
Parupeneus indicus	Indian goatfish	57		
Parupeneus indicus	Indian goatfish	71		
Mullidae	Goatfishes, red mullet nei	71		
Upeneus sulphureus	Sulphur goatfish	57		
Upeneus sulphureus	Sulphur goatfish	71	5.62	
Upeneus vittatus	Yellowstriped goatfish	57		
Upeneus vittatus	Yellowstriped goatfish	71		
Upeneus spp.	Goatfishes	57		
Upeneus spp.	Goatfishes	71		
Gerres spp.	Mojarras nei	57		
Gerres spp.	Mojarras nei	71	0.64	
Drepane punctata	Spotted sicklefish	57		
Drepane punctata	Spotted sicklefish	71	3.25	
Cheilinius undulatus	Humphead wrasse	57		
Cheilinius undulatus	Humphead wrasse	71		
Labridae	Wrasses, hogfishes, etc. nei	57		
Labridae	Wrasses, hogfishes, etc. nei	71		
Eleutheronema tetradactylum	Four finger threadfin	57		
Eleutheronema tetradactylum	Four finger threadfin	71		
Ambassidae	Glass fishes	71		
Percoidei	Percoid nei	71		
Polynemidae	Threadfins, Tasselfishes nei	57		
Polynemidae	Threadfins, Tasselfishes nei	71	1.50	

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
			,				
		260		•••			
20.407		2,288			25		
20,497		•••					• •
62,941		•••		64,138			• •
209							
1,158		•••					
		850					
		2,114					
3,297		33	53,347				
12,148		1,536			25		
6,811		166					
36,105		1,219					
				14,036			
2,210							
5,495							
				30,192			
4,026							
25,169							
12,212							
16,507							
		7,015	77,437				
		7,472				1	
		114					
		868		6,384			
		257					
		814		126			
663							
1,354		***	•••	•••		•••	
		112	•••	•••	• • •		• •
•••		972	•••	16,404	• • •	• • • •	
558			•••		• • •		• •
		•••	•••				• •
8,195		•••		1 000			
• • •		•••		1,882			• •
				15,931			
10,015		6,298	18,133	•••			
26,438		4,609		4,035	33	408	

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Siganus stellatus	Orange-spotted spinefoot	57		
Siganus stellatus	Orange-spotted spinefoot	71		
Siganus virgatus	Barhed spinefoot	57		
Siganus virgatus	Barhed spinefoot	71		
Siganus spp.	Spinefeet nei	57		
Siganus spp.	Spinefeet nei	71	2.45	
Megalops cyprinoides	Indo-Pacific tarpon	57		
Megalops cyprinoides	Indo-Pacific tarpon	71		
Terapon spp.	Terapon perches nei	57		
Terapon spp.	Terapon perches nei	71		
Platax spp.	Batfishes	71		
Muraenesox cinereus	Daggertooth pike conger	57		
Muraenesox cinereus	Daggertooth pike conger	71	0.99	
Trichiurus lepturus	Largehead hairtail	57		
Trichiurus lepturus	Largehead hairtail	71	2.10	
Trichiuridae	Hairtail nei	57		
Trichiuridae	Hairtail nei	71		
Amblygaster sirm	Spotted sardinella	57		
Amblygaster sirm	Spotted sardinella	71	117.85	
Sardinella gibbosa	Goldstripe sardinella	57		
Sardinella gibbosa	Goldstripe sardinella	71	51.75	
Sardinella lemuru	Bali sardinella	57		
Sardinella lemuru	Bali sardinella	71		
Sardinella spp.	Sardinellas nei	57		
Sardinella spp.	Sardinellas nei	71	5.38	
Dussunieria acuta	Rainbow sardinella	71	170.67	
Stolephorus spp.	Stolephorus anchovies	57		
Stolephorus spp.	Stolephorus anchovies	71		
Chirocentrus spp.	Wolf-herring nei	57		
Chirocentrus spp.	Wolf-herring nei	71	1.50	
Auxis thazard	Frigate tuna	57		
Auxis thazard	Frigate tuna	71		
Auxis rochei	Bullet tuna	57		
Auxis rochei	Bullet tuna	71		
Euthynnus affinis	Kawakawa	57		
Euthynnus affinis	Kawakawa	71	66.13	

							MT
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1,802							
12,043							
285							
2,625							
336		234					
2,925		1,879		25,882	6		
		30					
		107		1,542			
3,288							
3,930							
				3,040			
		1,483	10,439			823	
		2,885				1,418	
		4,565	21,683			3,339	
		5,067			31	3,190	
19,599							
37,466				16,710			
628							
3,690							
48,880							
147,187							
83,558							
47,579							
3,342						17,006	
17,448				448,556		81,236	
				10,178			
53,347		7,064					
122,379		11,541		80,183			
5,654		1,047	12,302			2,492	
10,600		4,696		444	37	2,633	
51,889		1					
80,844		3,505					
3,505				149,567			
191					•••		
60,385		5,598	•••			7,201	•••
80,805	•••	14,004		38,237		14,630	•••

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Katsuwonus pelamis	Skipjack tuna	57		
Katsuwonus pelamis	Skipjack tuna	71	46.54	
Thunnus tonggol	Longtail tuna	57		
Thunnus tonggol	Longtail tuna	71		
Thunnus alalunga	Albacore tuna	57		
Thunnus alalunga	Albacore tuna	71	0.12	
Thunnus maccoyii	Southern bluefin tuna	57		
Thunnus albacares	Yellowfin tuna	57		
Thunnus albacares	Yellowfin tuna	71		
Thunnus obesus	Bigeye tuna	57		
Thunnus obesus	Bigeye tuna	71		
Istiophorus platypterus	Indo-pacific sailfish	57		
Istiophorus platypterus	Indo-pacific sailfish	71	0.35	
Istiophoridae	Marlins, sailfishes, etc. nei	57		
Istiophoridae	Marlins, sailfishes, etc. nei	71		• • •
Makaira indica	Black marlin	57		
Makaira indica	Black marlin	71		• • •
Makaira nigricans	Atlantic blue marlin	57		•••
Makaira nigricans	Atlantic blue marlin	71		•••
Tetrapturus audax	Striped marlin	57		
Tetrapturus audax	Striped marlin	71		
Xiphias gladius	Swordfish	57		•••
Xiphias gladius	Swordfish	71		
Scomberomorus commerson	Narrow-barred Spanish mackerel	57		• • •
Scomberomorus commerson	Narrow-barred Spanish mackerel	71	34.94	
Scomberomorous guttatus	Indo-Pacific king mackerel	57		
Scomberomorous guttatus	Indo-Pacific king mackerel	71	9.14	
Scomberomorus spp.	Seerfishes nei	57		•••
Scomberomorus spp.	Seerfishes nei	71		
Sarda orientalis	Striped bonito	57		• • •
Sarda orientalis	Striped bonito	71		•••
Gobiidae	Gobies nei	71		• • •
Acanthuridae	Surgconfishes nei	71		•••
Congridae	Conger eels, etc. nei	71		•••
Atherinidae	Silversides (=Sand smells) nei	71		

МТ

							MT
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
68,466						2,369	
261,483		5,145		228,179			
24,088		14,549				4,086	
65,193		15,165				11,405	
13,030		10				263	
17,104							
474							
47,926		620				1,352	
82,496		1,557		147,276			
24,770		719				172	
27,996		411		11,646			
2,941							
1,824							
•••		201					
•••		455		4,578			
9,747							
957							
320							
89		•••		2,251			
393		• • •					
373							
8,711		169					
429		234		5,528			
22,577							
117,700				18,992			
11,632		•••	14,126				
12,295							
		4,510				3,662	
		12,142			39	6,707	
97							
323							
				12,214			
				7,639			
				3,048			
•••		•••		617			

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Tylosurus spp.	Needlefishes nei	57		
Tylosurus spp.	Needlefishes nei	71		
Atule mate	Yellow tail scad	71	25.43	
Hemiramphus spp.	Halfbeaks nei	57		
Hemiramphus spp.	Halfbeaks nei	71		
Lactarius lactarius	False trevally	57		
Lactarius lactarius	False trevally	71	16.62	
Rachycentron canadum	Cobia	57		
Rachycentron canadum	Cobia	71	1.32	
Decapterus russelli	Indian scad	57		
Decapterus russelli	Indian scad	71		
Decapterus spp.	Scad nei	57		
Decapterus spp.	Scad nei	71	172.19	
Scatophagus spp.	Scats	71		
Exocoetidae	Flying fishes nei	57		
Exocoetidae	Flying fishes nei	71		
Caranx spp.	Jack, crevalles nei	57		
Caranx spp.	Jack, crevalles nei	71		
Carangidae	Carangids nei	57		
Carangidae	Carangids nei	71	31.06	
Selar crumenophthalmus	Bigeye scad	57		
Selar crumenophthalmus	Bigeye scad	71	102.78	
Selaroides leptolepis	Yellowstripe scad	57		
Selaroides leptolepis	Yellowstripe scad	71	1.67	
Seriolina nigrofasciata	Blackbanded trevally	57		
Seriolina nigrofasciata	Blackbanded trevally	71	0.26	
Parastromateus niger	Black pomfret	57		
Parastromateus niger	Black pomfret	71	8.15	
Elagatis bipinnulata	Rainbow runner	57		
Elagatis bipinnulata	Rainbow runner	71	0.02	
Megalaspis cordyla	Hardtail scad	57		
Megalaspis cordyla	Hardtail scad	71	20.70	
Scomberoides spp.	Queenfishes	57		
Scomberoides spp.	Queenfishes	71	6.69	
Coryphaena hippurus	Dolphinfish	57		
Coryphaena hippurus	Dolphinfish	71		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
3,243							
4,568				12,915			
6,740							
18,971				2,738			
8,567							
25,318		302		454			
		236					
		1,107		3,033			
		31,344				23,409	
		51,458				3,959	
47,723							
303,493				274,994	40		
				3,005			
2,188							
9,201				25,887			
22,986							
47,331					40		
		795				9,864	
		10,578		76,207	45	23,477	
1,790		18,813				6,216	
4,625		33,329		121,523		16,077	
64,947		1,614					
114,993		13,882					
						1,439	
						1,202	
12,656		1,952				880	
48,381		4,335				1,807	
3,582		90					
8,657		784		7,509			
20,060		21,514	22,916			12,189	
27,909		7,896		18,914		3,719	
3,428		703					
10,893		2,660		7,274			
2,163							
4,768				184			

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Engraulidae	Anchovies, etc. nei	57		
Engraulidae	Anchovies, etc. nei	71		
Scomber australasicus	Spotted chub mackerel	57		
Scomber australasicus	Spotted chub mackerel	71		
Scomber japonicus	Chub mackerel	71		
Rastrelliger brachysoma	Short mackerel	57		
Rastrelliger brachysoma	Short mackerel	71	3.56	
Rastrelliger kanagurta	Indian mackerel	57		
Rastrelliger kanagurta	Indian mackerel	71	225.98	
Rastrelliger spp.	Other rastrelliger mackerels	57		
Rastrelliger spp.	Other rastrelliger mackerels	71		
Pampus argenteus	Silver pomfret	57		
Pampus argenteus	Silver pomfret	71	0.49	
Sphyraena jello	Pickhandle barracuda	57		
Sphyraena jello	Pickhandle barracuda	71		
Sphyraena barracuda	Great barracuda	57		
Sphyraena barracuda	Great barracuda	71	0.45	
Sphyraena spp.	Barracudas nei	57		
Sphyraena spp.	Barracudas nei	71	19.03	
Alopias spp.	Thresher shark nei	57		
Alopias spp.	Thresher shark nei	71		
Sphyrnidae	Hammerhead sharks nei	57		
Sphyrnidae	Hammerhead sharks nei	71		
Squalidae	Dogfish sharks nei	57		
Squalidae	Dogfish sharks nei	71		
Elasmobranchii	Sharks, rays, skates, etc. nei	57		
Elasmobranchii	Sharks, rays, skates, etc. nei	71		
Lamnidae	Mackerel sharks nei	57		
Lamnidae	Mackerel sharks nei	71		
Carcharhinidae	Requim sharks nei	57		
Carcharhinidae	Requim sharks nei	71	17.98	
Rhynchobatus audtraliae	Whitespotted wedgefish	57		
Rhynchobatus audtraliae	Whitespotted wedgefish	71		
Rhynobatidae	Guitarfishes, etc. nei	71	1.06	
Stromateidae	Butterfishes, pomfret nei	57		
Stromateidae	Butterfishes, pomfret nei	71		

							MT
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
						29,216	
						107,944	
146							
447							
				2,380			
72,467							•••
203,643				55,708			
2,817		154,194	26,490			17,011	
14,982		32,031		93,392		13,759	
						30,560	•••
					58	83,408	
12,142		2,335	25,053			744	
33,579		1,819				467	
94							• • •
700							•••
2,579							
5,061							
		1,590				5,055	
		6,081		10,083	35	6,276	
2,833							
10,057							
1,358							
2,080							
1,875							
710							
		1,181				1,171	
•••		5,612		2,798	10	1,765	
537							
196							
7,485							
18,969							
23							
3,475							
189							
		1,538					
		1,512		2,035	72		

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Dasyatidae	Stingrays, butterfly rays nei	57		
Dasyatidae	Stingrays, butterfly rays nei	71	62.80	
Rajiformes	Rays, stingrays, mantas nei	57		
Rajiformes	Rays, stingrays, mantas nei	71		
Myliobatidae	Eagle rays nei	57		
Myliobatidae	Eagle rays nei	71		
Mobulidae	Mantas, devil rays nei	57		•••
Mobulidae	Mantas, devil rays nei	71		
Clupeoidei	Diadromous clupeoids nei	57		
Clupeoidei	Diadromous clupeoids nei	71		
Stomatopoda	Stomatopods nei	57		
Stomatopoda	Stomatopods nei	71		
Balistidae	Triggerfishes, durgons nei	57		
Balistidae	Triggerfishes, durgons nei	71		
Pristidae	Sawfishes	57		
Pristidae	Sawfishes	71		
Osteichthyes	Marine fishes nei	57		
Osteichthyes	Marine fishes nei	71	618	
Portunus pelagicus	Blue swimming crab	57		
Portunus pelagicus	Blue swimming crab	71		
Scylla serrata	Indo-Pacific swamp crab	57		
Scylla serrata	Indo-Pacific swamp crab	71	0.17	
Panulirus spp.	Tropical spiny lobsters nei	57		
Panulirus spp.	Tropical spiny lobsters nei	71	0.81	
Scyllaridae	Slipper lobsters nei	71		
Penaeus merguiensis	Banana prawn	57		
Penaeus merguiensis	Banana prawn	71	14.48	
Penaeus monodon	Giant tiger prawn	57		
Penaeus monodon	Giant tiger prawn	71	2.57	
Penaeus latisulcatus	Western king prawn	57		
Penaeus latisulcatus	Western king prawn	71		
Penaeus spp.	Penaeus shrimp nei	57		
Penaeus spp.	Penaeus shrimp nei	71	13.01	
Metapenaeus spp.	Metapenaeus shrimps nei	57		
Metapenaeus spp.	Metapenaeus shrimps nei	71	20.50	

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
7,722							
30,077							
		4,173				3,106	
		9,597		2,713	105	2,983	
2,817							
1,415							
265							
2,182							
		3,695					
		31,134		601	1		
						6	
						675	
		170					
		922					
20							
33							
71,157		219,882	1,469,140			203,798	
463,437		174,702		15,856	400	356,272	
4,504						8,276	
38,498				29,751		15,644	
4,256						842	
26,324				1,537	30	1,632	
2,081		26					
5,570		704		205	5		
				86	5		
21,469						3,428	
54,950						6,355	
5,914						963	
22,405						1,928	
						1,427	
						1,476	
						4,973	
				13,370		13,916	
17,832						2,553	
21,773				9,592		6,042	

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Metapenaeus endeavouri	Endeavour shrimp	71	0.83	
Sergestidae	Sergestid shrimp nei	57		
Sergestidae	Sergestid shrimp nei	71		
Crassostrea iredalei	Slipper cupped oyster	71		
Crassostrea spp.	Cupped oyster nei	57		
Crassostrea spp.	Cupped oyster nei	71		
Modiolus spp.	Horse mussels nei	71		
Perna viridis	Green mussel	57		
Perna viridis	Green mussel	71		
Pectinidae	Scallops nei	57		
Pectinidae	Scallops nei	71		
Anadara granosa	Blood cockle	57		
Anadara granosa	Blood cockle	71		
Anadara spp.	Anadara clams nei	71		
Paphia spp.	Short neck clams nei	57		
Paphia spp.	Short neck clams nei	71		
Meretrix spp.	Hard clams nei	57		
Meretrix spp.	Hard clams nei	71		
Bivalvia	Clams, etc. nei	57		
Bivalvia	Clams, etc. nei	71		
Crustacea	Marine crustacea nei	57		
Crustacea	Marine crustacea nei	71		
Brachyura	Marine crab nei	57		
Brachyura	Marine crab nei	71		
Natantia	Natantian decapods nei	57		
Natantia	Natantian decapods nei	71		
Sepiidae, Sepiolidae	Cuttlefish, bobtail squids nei	57		
Sepiidae, Sepiolidae	Cuttlefish, bobtail squids nei	71	36.52	
Loligo spp.	Common squids nei	57		
Loligo spp.	Common squids nei	71	65.18	
Loliginidae, Ommastrephidae	Various squid nei	57		
Loliginidae, Ommastrephidae	Various squid nei	71		
Octopodidae	Octopuses nei	57		
Octopodidae	Octopuses nei	71		
Squiidae	Squiilids nei	71		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
				1,015			
		47,306				903	
		5,460		15,228		7,167	
				119			
22							
281							
						1	
20							
427				29			
2							
1,759				43		152	
7,295							
27,187							
				1			
						1,798	
				3		11,709	
2,170							
9,948							
		1,544					
		915		315			
141		•••	24,508				
1,358		• • •					
		5,605				3,195	
		6,899			98	3,476	
12,547		39,002					
62,785		24,211			189		
10,853		10,455	28,864			8,373	
14,680		12,858		1,699	36	14,864	
22,124		•••	24,248				
72,043				55,957	43	56,335	
		22,321					
		27,800				4 207	•
982		971		 F FO/		4,387	
9,878		965		5,506		5,928 2,851	

### $3.3\ \text{Marine Capture Fishery Production by Species and by Fishing Area, 2010}$

### 3.3.1 In Quantity (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Sepioteuthis lessonlana	Bigfin reef squid	57		
Sepioteuthis lessonlana	Bigfin reef squid	71		
Mollusca	Marine molluscs nei	57		
Mollusca	Marine molluscs nei	71		
Trochus niloticus	Commercial top shell	57		
Trochus niloticus	Commercial top shell	71		
Haliotis spp.	Abalones nei	71		
Holothurioidea	Sea cucumber nei	57		
Holothurioidea	Sea cucumber nei	71	0.01	
Rhopilema spp.	Jellyfishes	57		
Rhopilema spp.	Jellyfishes	71		
Testudinata	Marine turtle nei	57		
Testudinata	Marine turtle nei	71		
Invertebrata	Aquatic invertebrates nei	57		
Invertebrata	Aquatic invertebrates nei	71		
Thenus orientalis	Flathead lobster	57		
Thenus orientalis	Flathead lobster	71	0.02	
Penaeus semisulcatus	Green tiger prawn	57		
Penaeus semisulcatus	Green tiger prawn	71	33.20	
Penaeus indicus	Indian white prawn	71	15.31	
Stronngylocentrotus spp.	Sea urchins nei	71		
Spongidae	Sponges	71		
Rhodophyceae	Red seaweeds	57		
Rhodophyceae	Red seaweeds	71		
Ex Pinctada spp.	Pear oyster shells nei	57		
Ex Pinctada spp.	Pear oyster shells nei	71		
Miscellaneous	Miscellaneous	71		85,000 A

Notes: A Figures from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website

 $\mathsf{MT}$ 

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
						4,526	
				2,276			
673						1	
2,534				3,030		4,495	
86							
527							
				354			
391							
4,584				979			
106		342				107,256	
1,421		4,907		19		2,744	
95							
42							
862						1	
1,750						424	
						124	
						786	
•••						690	
						1,678	
•••				145			
1 010	•••			5			•••
1,810				388			
887	•••					•••	•••
523 932	•••		•••	•••		•••	
	***			•••	•••	•••	2,226,600 B

Notes: B Figures from General Statistics Office of Vietnam Website

### $3.3\ \text{Marine}$ Capture Fishery Production by Species and by Fishing Area, 2010 $3.3.2\ \text{In}$ Value

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Anodontostoma chacunda	Chacunda gizzard shad	57		
Anodontostoma chacunda	Chacunda gizzard shad	71	6.51	
Tenualosa toli	Toli shad	57		
Tenualosa toli	Toli shad	71	0.72	
Pellona ditchela	Indian pellona	57		
Pellona ditchela	Indian pellona	71		
Lates calcarifer	Barramundi (= Giant seaperch)	57		
Lates calcarifer	Barramundi (= Giant seaperch)	71	4.77	
Chanos chanos	Milkfish	71		
Psettodes erumei	Indian halibut	57		
Psettodes erumei	Indian halibut	71	53.90	
Pleuronectiformes	Flatfishes nei	57		
Pleuronectiformes	Flatfishes nei	71		
Cynoglossus spp.	Tongue soles nei	57		
Cynoglossus spp.	Tongue soles nei	71		
Harpadon nehereus	Bombay-duck	57		
Harpadon nehereus	Bombay-duck	71		
Saurida tumbil	Greater lizardfish	57		
Saurida tumbil	Greater lizardfish	71	0.79	8,993
Synodontidae	Lizardfishes nei	57		
Synodontidae	Lizardfishes nei	71		
Ariidae	Sea catfishes	57		
Ariidae	Sea catfishes	71	7.64	
Plotosus spp.	Eeltail catfishes	57		
Plotosus spp.	Eeltail catfishes	71	0.40	
Mugilidae	Mullets nei	57		
Mugilidae	Mullets nei	71	9.19	
Caesio caerulaurea	Blue and gold fusilier	57		
Caesio caerulaurea	Blue and gold fusulier	71		
Caesio cunning	Redbelly yellowtail fusilier	57		
Caesio cunning	Redbelly yellowtail fusilier	71		
Caesionodae	Fusiliers nei	57		
Caesionodae	Fusiliers nei	71	4.61	
Epinephelus merra	Honeycomb grouper	57		
Epinephelus merra	Honeycomb grouper	71		

US\$ 1.000

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1,174		3,048					
6,145		879					
950							
2,137							
		7,217					
		3,022					
31,845		835					
218,283		4,440			137.55	459	
5,113							
8,941						3,068	
7,073		3,529					
1,887		2,460					
		3,183					
		1,711				5,122	
641		462					
4,228		1,915					
3,696							
8,138							
6,473		• • •			6.55	21,120	
22,154		8,231					
94,445		13,273			334.05	4,504	
		4,174					
		3,523				768	
8,606		2,052					
40,255		3,209		17,221	216.15	9,264	
558							
3,489							
8,241							
48,254		***					
		57					
		1,644		30,670	19.65		
4,331							
5,040							

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Epinephelus tauvina	Greasy grouper	57		
Epinephelus tauvina	Greasy grouper	71		
Epinephelus spp.	Groupers nei	57		
Epinephelus spp.	Groupers nei	71	86.01	
Cephalopholis boenak	Chocolate hind	57		
Cephalopholis boenak	Chocolate hind	71		• • •
Cromileptes altivelis	Humpback grouper	57		
Cromileptes altivelis	Humpback grouper	71		• • •
Plectropomus leopardus	Leopard coral grouper	57		
Plectropomus leopardus	Leopard coral grouper	71	2.89	•••
Plectropomus spp.	Groupers	71	12.03	
Priacanthus macracanthus	Red bigeye	57		•••
Priacanthus macracanthus	Red bigeye	71		
Pricanthus spp.	Bigeyes nei	57		
Pricanthus spp.	Bigeyes nei	71	88.09	
Sillago sihama	Silver sillago	57		
Sillago sihama	Silver sillago	71		
Sillaginidae	Sillago-whitings	57		
Sillaginidae	Sillago-whitings	71	0.57	
Mene maculate	Moonfish	71		
Sciaenidae	Croakers, drums nei	57		
Sciaenidae	Croakers, drum nei	71	77.02	
Lutjanus argentimaculatus	Mangrove red snapper	57		
Lutjanus argentimaculatus	Mangrove red snapper	71	1.99	
Lutjanus spp.	Snappers nei	57		
Lutjanus spp.	Snappers nei	71	286.33	
Lutjanidae	Snappers, jobfishes nei	57		
Lutjanidae	Snappers, jobfishes nei	71		
Serranidae	Groupers, seabasses nei	71		
Pristipomoides spp.	Sharptooth jobfishes	57		
Pristipomoides spp.	Sharptooth jobfishes	71	109.93	
Nemipterus spp.	Threadfin breams nei	57		
Nemipterus spp.	Threadfin breams nei	71	218.23	
Scolopsis spp.	Monocole breams	57		
Scolopsis spp.	Monocole breams	71		

							US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
3,875							
4,638							
		7,617		•••			
		40,178			242.35		
44,429							
105,335							
14,392							
16,511							
5,339							
24,934							
420							
480							
7,814		2,895					
24,102		10,777				17,446	
82							
437							
		1,882					
		2,261			32.75	5,093	
					157.20		
11,613		25,547					
41,412		14,965			248.90	25,576	
		3,953					
		31,617					
37,489		887					
203,602		9,095			497.80		
		2,643					
		10,015		41,695	117.90	9,399	
				45,910		18,091	
699							
1,908							
15,897		23,778					
51,690		48,938		72,255	104.80	44,686	
		71					
		1,947				58	

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia	
Leiognathus spp.	Ponyfishes	57			
Leiognathus spp.	Ponyfishes	71	47.18		
Leiognathidae	Ponyfishes (=Slipmouths) nei	71			
Plectorhinchus spp.	Sweetlips	57			
Plectorhinchus spp.	Sweetlips	71	16.99		
Pomadasys argenteus	Silver grunt	57			
Pomadasys argenteus	Silver grunt	71	1.48		
Haemulidae (=Pomodasyidae)	Grunts, sweetlips nei	57			
Haemulidae (=Pomodasyidae)	Grunts, sweetlips nei	71	11.49		
Lethrinidae	Emperors (=Scavengers) nei	57			
Lethrinidae	Emperors (=Scavengers) nei	71	6.17		
Sparidae	Porgies, seabreams nei	71			
Parupeneus indicus	Indian goatfish	57			
Parupeneus indicus	Indian goatfish	71		•••	
Mullidae	Goatfishes, red mullet nei	71		•••	
Upeneus sulphureus	Sulphur goatfish	57		•••	
Upeneus sulphureus	Sulphur goatfish	71	3.99		
Upeneus vittatus	Yellowstriped goatfish	57		•••	
Upeneus vittatus	Yellowstriped goatfish	71		•••	
Upeneus spp.	Goatfishes	57		•••	
Upeneus spp.	Goatfishes	71			
Gerres spp.	Mojarras nei	57		•••	
Gerres spp.	Mojarras nei	71	2.27	•••	
Drepane punctata	Spotted sicklefish	57		•••	
Drepane punctata	Spotted sicklefish	71	11.52		
Cheilinius undulatus	Humphead wrasse	57			
Cheilinius undulatus	Humphead wrasse	71		•••	
Labridae	Wrasses, hogfishes, etc. nei	57			
Labridae	Wrasses, hogfishes, etc. nei	71			
Eleutheronema tetradactylum	Four finger threadfin	57			
Eleutheronema tetradactylum	Four finger threadfin	71			
Ambassidae	Glass fishes	71		•••	
Percoidei	Percoid nei	71			
Polynemidae	Threadfins, Tasselfishes nei	57			
Polynemidae	Threadfins, Tasselfishes nei	71	5.32		

							US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
11,855		243					
36,405		2,140			163.75		
				62,587			
188							
1,042							
		2,430					
		6,043					
2,966		80					
20,927		3,749			163.75		
5,688		443					
30,151		3,253					•••
							•••
1,692							
4,208							
				28,812			
4,433							
27,711							
9,508							
12,852							
		5,736					
		6,109			6.55		
		133					
		1,012					
		376					
		1,190					
1,541							
3,146							
		227					
		1,973		19,963			
453							
6,654							
17,078		19,204					
45,082		14,054			216.15	1,635	

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia	
Siganus stellatus	Orange-spotted spinefoot	57			
Siganus stellatus	Orange-spotted spinefoot	71			
Siganus virgatus	Barhed spinefoot	57			
Siganus virgatus	Barhed spinefoot	71		• • •	
Siganus spp.	Spinefeet nei	57		• • •	
Siganus spp.	Spinefeet nei	71	8.69	• • •	
Megalops cyprinoides	Indo-Pacific tarpon	57			
Megalops cyprinoides	Indo-Pacific tarpon	71		• • •	
Terapon spp.	Terapon perches nei	57			
Terapon spp.	Terapon perches nei	71			
Muraenesox cinereus	Daggertooth pike conger	57			
Muraenesox cinereus	Daggertooth pike conger	71	0.35		
Trichiurus lepturus	Largehead hairtail	57			
Trichiurus lepturus	Largehead hairtail	71	1.49		
Trichiuridae	Hairtail nei	57			
Trichiuridae	Hairtail nei	71			
Amblygaster sirm	Spotted sardinella	57			
Amblygaster sirm	Spotted sardinella	71	250.74		
Sardinella gibbosa	Goldstripe sardinella	57			
Sardinella gibbosa	Goldstripe sardinella	71	110.11		
Sardinella lemuru	Bali sardinella	57			
Sardinella lemuru	Bali sardinella	71			
Sardinella spp.	Sardinellas nei	57			
Sardinella spp.	Sardinellas nei	71	11.45		
Dussunieria acuta	Rainbow sardinella	71	363.13		
Stolephorus spp.	Stolephorus anchovies	57			
Stolephorus spp.	Stolephorus anchovies	71		• • •	
Chirocentrus spp.	Wolf-herring nei	57			
Chirocentrus spp.	Wolf-herring nei	71	0.74		
Auxis thazard	Frigate tuna	57			
Auxis thazard	Frigate tuna	71			
Auxis rochei	Bullet tuna	57			
Auxis rochei	Bullet tuna	71			
Euthynnus affinis	Kawakawa	57			
Euthynnus affinis	Kawakawa	71	187.60	•••	

US\$ 1,000

							US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
2,394							
15,998							
122							
1,123							
356		356					
3,098		2,859		38,815	39.30		
		28					
		102					
2,888							
3,451							
		1,858				2,565	
3,614							
4,767							
5,290					203.50	8,017	
22,012							
42,078				21,729			
240							
1,407							
33,463							
100,764							
39,373							
22,419							
2,021							
10,549				238,784		43,388	
				10,845			
72,200		8,292					
165,628		13,547		72,328			
5,905		2,425					
11,071		10,869			242.35	6,085	
		48,449		1			
75,484		4,505		191,484			
4,442							
242							
68,465		9,171					
91,617		22,941		43,565		19,035	

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Katsuwonus pelamis	Skipjack tuna	57		
Katsuwonus pelamis	Skipjack tuna	71	132.03	
Thunnus tonggol	Longtail tuna	57		
Thunnus tonggol	Longtail tuna	71		
Thunnus alalunga	Albacore tuna	57		
Thunnus alalunga	Albacore tuna	71		
Thunnus maccoyii	Southern bluefin tuna	57		
Thunnus albacares	Yellowfin tuna	57		
Thunnus albacares	Yellowfin tuna	71	0.26	
Thunnus obesus	Bigeye tuna	57		
Thunnus obesus	Bigeye tuna	71		
Istiophorus platypterus	Indo-Pacific sailfish	57		
Istiophorus platypterus	Indo-Pacific sailfish	71	0.74	
Istiophoridae	Marlins, sailfishes, etc. nei	57		
Istiophoridae	Marlins, sailfishes, etc. nei	71		
Makaira indica	Black marlin	57		
Makaira indica	Black marlin	71		
Makaira nigricans	Atlantic blue marlin	57		
Makaira nigricans	Atlantic blue marlin	71		
Tetrapturus audax	Striped marlin	57		
Tetrapturus audax	Striped marlin	71		
Xiphias gladius	Swordfish	57		
Xiphias gladius	Swordfish	71		
Scomberomorus commerson	Narrow-barred Spanish mackerel	57		
Scomberomorus commerson	Narrow-barred Spanish mackerel	71	148.68	
Scomberomorous guttatus	Indo-pacific king mackerel	57		
Scomberomorous guttatus	Indo-pacific king mackerel	71	25.93	
Scomberomorus spp.	Seerfishes nei	57		
Scomberomorus spp.	Seerfishes nei	71	18.98	
Sarda orientalis	Striped bonito	57		
Sarda orientalis	Striped bonito	71		
Tylosurus spp.	Needlefishes nei	71		
Tylosurus spp.	Needlefishes nei	71		
Hemiramphus spp.	Halfbeaks nei	71		
Hemiramphus spp.	Halfbeaks nei	71		

US\$ 1.000

							US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
73,827						2,959	
281,957		6,386		267,712			
27,966		23,406					
75,689		24,398				16,846	
17,991		15				705	
23,615							
2,093							
77,870		1,314				2,089	
134,040		3,298		274,650			
57,142		1,273				196	
64,584		728		22,893			
3,757							
2,330							
		270					
		611					
14,772							
1,450							
661							
184							
572							
543							
13,418		119					
661		165					
42,106							
219,511				41,047			
24,571							
25,972							
		17,324					
		46,641			255.45	31,110	
65							
218							
2,042							
2,876							
3,400							
9,569							

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Lactarius lactarius	False trevally	57		
Lactarius lactarius	False trevally	71	58.94	
Rachycentron canadum	Cobia	71		
Rachycentron canadum	Cobia	57	1.87	
Decapterus russelli	Indian scad	71		
Decapterus russelli	Indian scad	57		
Decapterus spp.	Scad nei	71		• • •
Decapterus spp.	Scad nei	57	244.24	
Exocoetidae	Flying fishes nei	71		
Exocoetidae	Flying fishes nei	57		
Caranx spp.	Jack, crevalles ne	71		
Caranx spp.	Jack, crevalles ne	57		
Carangidae	Carangids nei	71		
Carangidae	Carangids nei	71	220.28	
Selar crumenophthalmus	Bigeye scad	57		
Selar crumenophthalmus	Bigeye scad	71	145.79	
Selaroides leptolepis	Yellowstripe scad	57		
Selaroides leptolepis	Yellowstripe scad	71	5.92	
Seriolina nigrofasciata	Blackbanded trevally	71	1.84	
Parastromateus niger	Black pomfret	57		
Parastromateus niger	Black pomfret	71	46.24	
Elagatis bipinnulata	Rainbow runner	57		
Elagatis bipinnulata	Rainbow runner	71	0.04	
Megalaspis cordyla	Hardtail scad	57		
Megalaspis cordyla	Hardtail scad	71	58.72	
Atule mate	Yellow tail scad	71	90.18	
Scomberoides spp.	Queenfishes	57		
Scomberoides spp.	Queenfishes	71		
Coryphaena hippurus	Dolphinfish	57		
Coryphaena hippurus	Dolphinfish	71		
Engraulidae	Anchovies, etc. nei	71		
Scomber australasicus	Spotted chub mackerel	57		
Scomber australasicus	Spotted chub mackerel	71		
Rastrelliger brachysoma	Short mackerel	57		
Rastrelliger brachysoma	Short mackerel	71	12.62	

ndonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
7,001							
20,690		494					
		323					
		1,521					
		38,442					
		63,112				25,517	
37,482							
238,363				306,314	262		
1,583							
6,658				25,589			
36,081							
74,295					262		
		2,082					
		27,722		101,241	294.75	30,592	
1,970		29,743					
5,090		52,695		153,657		15,726	
75,235		2,083					
133,208		17,924					
						9,742	
20,982		7,911					
80,211		17,568				8,327	
3,261		154					
7,882		1,342					
15,438		30,983					
21,479		11,372				11,619	
4,475		892					
14,220		3,372					
2,173		•••					
4,789		•••					
						45,909	
145		•••					
444							
98,055							
275,549				71,684			

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Rastrelliger kanagurta	Indian mackerel	57		
Rastrelliger kanagurta	Indian mackerel	71	801.35	
Rastrelliger spp.	Other rastrelliger mackerels	57		
Rastrelliger spp.	Other rastrelliger mackerels	71		
Pampus argenteus	Silver pomfret	57		
Pampus argenteus	Silver pomfret	71	8.87	
Sphyraena jello	Pickhandle barracuda	57		
Sphyraena jello	Pickhandle barracuda	71		
Sphyraena barracuda	Great barracuda	57		
Sphyraena barracuda	Great barracuda	71		
Sphyraena spp.	Barracudas nei	57		
Sphyraena spp.	Barracudas nei	71	13.82	
Alopias spp.	Thresher shark nei	57		
Alopias spp.	Thresher shark nei	71		
Sphyrnidae	Hammehead sharks nei	57		
Sphyrnidae	Hammehead sharks nei	71		
Squalidae	Dogfish sharks nei	57		
Squalidae	Dogfish sharks nei	71		
Elasmobranchii	Sharks, rays, skates, etc. nei	57		
Elasmobranchii	Sharks, rays, skates, etc. nei	71		
Lamnidae	Mackerel sharks nei	57		
Lamnidae	Mackerel sharks nei	71		
Carcharhinidae	Requim sharks nei	57		
Carcharhinidae	Requim sharks nei	71	25.5	
Rhynchobatus audtraliae	Whitespotted wedgefish	71		
Rhynchobatus audtraliae	Whitespotted wedgefish	57		
Rhynobatidae	Guitarfishes, etc. nei	71		
Stromateidae	Butterfishes, pomfret nei	57		
Stromateidae	Butterfishes, pomfret nei	71		
Dasyatidae	Stingrays, butterfly rays nei	57		
Dasyatidae	Stingrays, butterfly rays nei	71	89.08	
Rajiformes	Rays, stingrays, mantas nei	57		
Rajiformes	Rays, stingrays, mantas nei	71		
Myliobatidae	Eagle rays nei	57		
Myliobatidae	Eagle rays nei	71		

ndonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnan
3,521							
18,728				118,215		29,396	
		256,472					
		53,277			379.90	112,492	
26,002		18,693					
71,909		14,563				5,955	
95							
711							
2,260							
4,434							
		2,376					
		9,085				15,310	
2,408							
8,547							
1,516							
2,323					229.25		
1,705							
646							
		1,442					
		6,850			65.50	4,093	
1,550							
566							
7,550							
19,134							
17							
2,557							
129							
		11,842					
		11,641			471.60		
7,127							
27,758							
		7,180					
		16,513			687.75	5,293	
2,906							
1,460							

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Mobulidae	Mantas, devil rays nei	57		
Mobulidae	Mantas, devil rays nei	71		
Clupeoidei	Diadromous clupeoids nei	57		
Clupeoidei	Diadromous clupeoids nei	71		
Stomatopoda	Stomatopods nei	71		
Balistidae	Triggerfishes, durgons nei	57		
Balistidae	Triggerfishes, durgons nei	71	7.87	
Pristidae	Sawfishes	57		
Pristidae	Sawfishes	71		
Osteichthyes	Marine fishes nei	57		
Osteichthyes	Marine fishes nei	71	1,317.45	
Portunus pelagicus	Blue swimming crab	57		
Portunus pelagicus	Blue swimming crab	71	47.19	
Scylla serrata	Indo-Pacific swamp crab	57		
Scylla serrata	Indo-Pacific swamp crab	71	0.60	
Panulirus spp.	Tropical spiny lobsters nei	57		
Panulirus spp.	Tropical spiny lobsters nei	71	14.36	
Scyllaridae	Slipper lobsters nei	71		• • •
Penaeus merguiensis	Banana prawn	57		
Penaeus merguiensis	Banana prawn	71	102.70	
Penaeus monodon	Giant tiger prawn	57		
Penaeus monodon	Giant tiger prawn	71	23.70	
Penaeus latisulcatus	Western king prawn	57		
Penaeus latisulcatus	Western king prawn	71		
Penaeus spp.	Penaeus shrimp nei	71	92.27	
Metapenaeus spp.	Metapenaeus shrimps nei	57		
Metapenaeus spp.	Metapenaeus shrimps nei	71	151.28	
Metapenaeus endeavouri	Endeavour shrimp	71		•••
Sergestidae	Sergestid shrimp nei	57		•••
Sergestidae	Sergestid shrimp nei	71	2.23	•••
Crassostrea spp.	Cupped oyster nei	71		
Modiolus spp.	Horse mussels nei	57		
Perna viridis	Green mussel	71		
Perna viridis	Green mussel	57		

US\$ 1,000

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
229							
1,889							
		3,132					
		28,622			6.55		
						2,046	
296							
1,606							
15							
25							
70,574		73,836	3,400,287				
459,637		58,664			1,834.08	165,853	
10,638							
90,932				62,044		84,540	
10,003							
61,869					196.50	7,934	
15,992		190					
42,803		5,097			32.75		
					32.75		
64,452							
164,965						73,260	
33,399							
126,530						30,859	
						18,787	
				10,822		48,459	
50,035							
61,093						36,495	
				4,056			
		29,358					
		3,388		12,327		3,872	
24							
304							
8							
177							

70

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Pectinidae	Scallops nei	71		
Pectinidae	Scallops nei	57		
Anadara granosa	Blood cockle	57		
Anadara granosa	Blood cockle	71		
Meretrix spp.	Hard clams nei	57		
Meretrix spp.	Hard clams nei	71		
Bivalvia	Clams, etc. nei	57		
Bivalvia	Clams, etc. nei	71		
Crustacea	Marine crustacea nei	57		
Crustacea	Marine crustacea nei	71		
Brachyura	Marine crab nei	57		
Brachyura	Marine crab nei	71		
Natantia	Natantian decapods nei	57		
Natantia	Natantian decapods nei	71		
Sepia spp.	Cuttlefish	71	103.60	
Sepiidae, Sepiolidae	Cuttlefish, bobtail squids nei	71		
Sepiidae, Sepiolidae	Cuttlefish, bobtail squids nei	57		
Loligo spp.	Common squids nei	57		
Loligo spp.	Common squids nei	71	232.09	
Loliginidae, Ommastrephidae	Various squid nei	57		
Loliginidae, Ommastrephidae	Various squid nei	71		
Octopodidae	Octopuses nei	57		
Octopodidae	Octopuses nei	71		
Sepioteuthis lessonlana	Bigfin reef squid	71		
Mollusca	Marine molluscs nei	57		
Mollusca	Marine molluscs nei	71		
Trochus niloticus	Commercial top shell	57		
Trochus niloticus	Commercial top shell	71		
Holothurioidea	Sea cucumber nei	57		
Holothurioidea	Sea cucumber nei	71	0.07	
Rhopilema spp.	Jellyfishes	57		
Rhopilema spp.	Jellyfishes	71		
Testudinata	Marine turtle nei	57		
Testudinata	Marine turtle nei	71		

US\$ 1.000

Vietnam	Thailand	Singapore	Philippines	Myanmar	Malaysia	Lao PDR	ndonesia
							1
	433						1,124
							6,030
	869						22,473
							568
							2,605
					1,669		
					989		
							104
							1,004
					18,310		
	13,474	641.90			22,537		
					165,142		27,734
		1,237.95			102,514		138,780
					17,682		16,902
	51,379	235.80			21,744		22,863
							41,963
	153,258	281.65	96,144				136,644
					55,867		
					69,581		
					1,116		1,236
	13,644				1,110		12,433
	21,523						
							435
	1,794						1,638
							297
							1,821
							1,867
							21,884
					387		34
	3,464				5,548		451
							148
							66

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Invertebrata	Aquatic invertebrates nei	57		
Invertebrata	Aquatic invertebrates nei	71		
Paphia spp.	Short neck clams nei	71		
Thenus orientalis	Flathead lobster	71	0.07	
Penaeus semisulcatus	Green tiger prawn	71	306.10	
Penaeus indicus	Indian white prawn	71	108.58	
Rhynchobatus djiddensis	Giant guitarfish	71	1.50	
Alectis indicus	Indian threadfish	71	0.28	

US\$ 1.000

						,	US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
2,527							
5,129						389	
						3,772	
						4,521	
						22,847	
				•			

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 3.4.1 Brunei Darussalam

			Purse Sein	е	!	Seine Net	:
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Anodontostoma chacunda	Chacunda gizzard shad						
Tenualosa macruna	Longtail shad						
Ilisha elongata	Elongate ilisha	0.12					
Lates calcarifer	Barramundi (=Giant seaperch)						
Psettodes erumei	Indian halibut						
Harpodon nehereus	Bombay duck						
Saurida tumbil	Greater lizardfish						
Arius thalassinus	Giant catfish						
Arius spp.	Sea catfishes nei						
Plotosus spp.	Eeltail catfishes						
Mugil cephalus	Flathead grey mullet						
Lisa spp.	Mullets						
Caesio spp.	Fusiliers						
Epinephelus spp.	Groupers nei						
Plectropomus leopardus	Leopard coralgrouper						
Priacanthus tayenus	Purple-spotted bigeye	0.248					
Sillago sihama	Silver sillago						
Johnius spp.	Croakers						
Otolithes ruber	Tigertooth croaker						
Penaphia spp.	Croakers						
Lutjanus argentimaculatus	Mangrove red snapper						
Lutjanus malabaricus	Malabar blood snapper						
Lutjanus johnii	John's snapper						
Lutjanus sebae	Emperor red snapper						
Lutjanus lutjanus	Bigeye snapper						
Lutjanus vitta	Brownstripe red snapper						
Lutjanus russelli	Russell's snapper						
Lutjanus spp.	Snappers nei						
Pristipomoides multidens	Goldenbanded jobfish						
Nemipterus spp.	Threadfin breams nei						
Leiognathus spp.	Ponyfishes (=Slipmouths)	0.707					
Plectorhinchus spp.	Sweetlips						
Pomadasys argenteus	Silver grunt						
Pomadasys spp.	Grunts						

 $\mathsf{MT}$ 

	Tra	I				Falling Ne	.+			Tran				Shell	MII
	1110	Otter		Lift	All	Anchovy		Gill		Trap		Hook and	Push/ Scoop	fish and seaweed	
All trawls	Beam trawl	board trawl	Pair trawl	Net	falling nets	falling net	falling net	Net	All traps	Station- ary trap	Porta- ble trap	Lines	Net	collect- ing gear	Others
0.691								2.335	0.035	0.035					
								0.024							
0.186								0.008	0.006	0.006					
0.208								0.609	0.145	0.113	0.032				
14.62								0.532	0.047	0.045	0.002				
2.23								0.009							
8.312								0.043	0.167	0.167					
								2.251							
									0.556	0.537	0.019				
								0.036	0.002		0.002				
								0.83	0.747	0.743	0.004				
0.182								0.518	0.188	0.188		0.41			
5.123								0.185	6.315	6.286	0.029	0.173			3.361
								0.005	0.478	0.478		0.026			
40.935								0.207	0.006	0.006					
0.122									0.274	0.274					
0.132								0.511				0.019			
8.255								1.048				0.086			
17.066									0.038	0.038					
0.041								0.033	0.115	0.101	0.014	0.007			0.08
0.165								1.126	1.098	0.556	0.542	4.54			3.685
4.675								2.542	3.619	3.588	0.031	0.184			0.017
								0.002				0.001			
0.32								3.969				0.021			
															0.188
								0.104	0.485		0.485	0.028			
13.417								0.024				0.009			0.142
7.752								0.023				2.465			5.26
53.895								7.632				0.008			
20.963								6.679	4.208	0.142	4.066	0.7			
5.205								0.588	0.174	0.104	0.07	0.027			
0.481								0.042							
								3.43	0.174	0.114	0.06	0.448			
														1	

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 3.4.1 Brunei Darussalam (Cont'd)

			Purse Sein	е		Seine Net	:
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Lethrinus spp.	Emperors (=Scavengers) nei						
Upeneus sulphureus	Sulphur goatfish						
Upeneus spp.	Goatfishes						
Gerres spp.	Mojarras (=Silver-biddies) nei						
Drepane punctata	Spotted sicklefish						
Polynemus spp.	Threadfins						
Siganus spp.	Spinefeet (=Rabbitfishes) nei						
Ephippus orbis	Orbfish						
Abalister stellaris	Starry triggerfish						
Muraenesox spp.	Pike+congers nei						
Trichiurus lepturus	Largehead hairtail						
Amblygaster sirm	Spotted sardinella	117.845					
Sardinella gibbosa	Goldstripe sardinella	49.939					
Sardinella fimbriata	Fringescale sardinella						
Dussumieria acuta	Rainbow sardine	170.672					
Chirocentrus dorab	Dorab wolf-herring						
Euthynnus affinis	Kawakawa	63.54					
Katsuwonus pelamis	Skipjack tuna	23.671					
Thunnus albacares	Yellowfin tuna	0.123					
Istiophorus platypterus	Indo-Pacific sailfish	0.048					
Scomberomorus commerson	Narrow-barred spanish mackerel	24.357					
Scomberomorus guttatus	Indo-Pacific king mackerel	5.147					
Lactarius lactarius	False trevally						
Rachycentron canadum	Cobia	0.93					
Decapterus spp.	Scads nei	157.404					
Caranx tille	Tille trevally						
Caranx spp.	Jacks, crevalles nei	0.583					
Alectis indicus	Indian threadfish						
Gnathanodon speciosus	Golden trevally						
Atule mate	Yellowtail scad	0.82					
Alepes djedaba	Shrimp scad						
Alepes spp.	Scads						
Selar crumenophthalmus	Bigeye scad	73.504					

MT

															MT
	Tra			Lift		alling Ne		Gill		Trap		Hook and	Push/ Scoop	Shell fish and	
AII trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	AII traps	Station- ary trap	Porta- ble trap	Lines	Net	seaweed collect- ing gear	Others
0.572								0.392	0.013	0.013		0.217			0.255
5.423								0.195							
								0.546	0.095	0.053	0.042				
1.152								2.014	0.011		0.011	0.074			
0.0223								0.077	0.078	0.078		1.323			
0.01								0.159	2.258	1.657	0.601	0.024			
2.143								0.003	0.069	0.069					
0.992															
0.488								1.609							
								1.219	0.594		0.594				
0.23								2.24	2.909		2.909				
								1.44	0.06	0.06					
0.028								1.266				1.297			
0.035								19.29				3.545			
								0.297							
3.333								5.677				1.575			
3.606								0.371				0.011			
15.869								0.75							
0.39															
4.29								4.851				5.646			
0.122								0.107	0.049		0.049	0.773			
22.069								4.043	0.668	0.087	0.581	2.172			0.478
								0.021	0.02	0.018	0.002				
								0.384				0.112			
1.722								17.30				5.586			
								0.01				0.003			
								0.44	0.039	0.039					
26.365								2.902				0.005			
		<u> </u>	l		<u> </u>	<u> </u>	<u> </u>	<u>I</u>		<u> </u>			<u> </u>	<u> </u>	<u> </u>

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 $3.4.1\ Brunei\ Darussalam\ (Cont'd)$

			Purse Sein	е		Seine Net	
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Seriolina nigrofasciata	Blackbanded trevally						
Serioides leptolepis	Yellowstripe scad						
Parastromateus niger	Black pomfret	7.873					
Elagatis bipinnulata	Rainbow runner						
Megalaspis cordyla	Torpedo scad	10.986					
Scomberoides commerson	Talang queenfish	0.012					
Scomberoides spp.	Queenfish						
Rastrelliger brachysoma	Short mackerel	2.089					
Rastrelliger kanagurta	Indian mackerel	180.841					
Pampus argenteus	Silver pomfret	0.026					
Pampus spp.	Silver pomfret nei						
Sphyraena barracuda	Great barracuda						
Sphyraena spp.	Barracudas nei	8.313					
Carcharhinus dussumieri	Whitecheek shark	0.06					
Dasyatis spp.	Stingrays nei						
Rhynchobatus djiddens	Giant guitarfish						
Scylla serrata	Indo-pacific swamp crab						
Panulirus spp.	Tropical spiny lobsters nei						
Thenus orientalis	Flathead lobster						
Penaeus merguiensis	Banana prawn						
Penaeus monodon	Giant tiger prawn						
Penaeus semisulcatus	Green tiger prawn						
Penaeus indicus	Indian white prawn						
Penaeus spp.	Penaeus shrimps nei						
Metapenaeus brevicron	Yellow shrimp						
Metapenaeus ensis	Greasyback shrimp						
Metapenaeus spp.	Metapenaeus shrimps nei						
Acetes japonicus	Akiami paste shrimp						
Sepia spp.	Cuttlefish						
Loligo spp.	Common squids nei	1.237					
-	Sea cucumbers nei						
Osteichthyes	Marine fishes nei	7.068					

МТ

	Tra	wl		Lift	F	alling Ne	et	Gill		Trap		Hook	Push/	Shell fish and	
All trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	AII traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
								0.246	0.009	0.009					
1.564								0.105							
0.272															
								0.024							
5.55								1.498				2.666			
4.365								2.272	0.025	0.025		0.015			
								0.002							
								1.468							
8.717								30.64	1.072		1.072	4.715			
0.046								0.03	0.014		0.014				
								0.373	0.004		0.004				
0.45															
9.234								1.305	0.182		0.182				
13.809								3.754				0.354			
54.125								7.004	0.923	0.451	0.472	0.747			
0.839								0.184				0.035			
								0.124	0.045	0.045					
0.007								0.675	0.011	0.011		0.009			0.109
0.018								0.001							
10.654									3.823		3.823				
2.57															
33.202															
									15.31		15.31				
0.413								12.60							
0.655								0.179							
15.32															
0.047								4.797	0.339	0.286	0.053				
								3.15							
36.391								0.128							
63.582								0.351				0.005			
															0.008
599.18								0.634	8.928	2.035	6.893	0.109			1.637

### 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 $3.4.2\ \mbox{Malaysia}$

			Purse Sein	е		Seine Net	
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Anodontostoma chacunda	Chacunda gizzard shad	110	1	109	11		
Hilsa kelee	Kelee shad	3		3	1		
Tenualosa macruna	Longtail shad						
Ilisha elongata	Elongate ilisha	1,539	297	1,242	19		
Pellona ditchela	Indian pellona	19		19			
Lates calcarifer	Barramudi (= Giant seaperch)	2		2	4		
Cynoglossidae	Tonguefishes	1		1	4		
Pseudorhombus spp.	Flounders	1		1			
Harpadon nehereus	Bombay duck						
Saurida spp.	Lizard fishes	59		59			
Arius spp.	Sea catfishes nei	92	1	91	781		
Plotosus spp.	Eeltail catfishes				49		
Lisa spp.	Mullets	30		30	9		
Caesio spp.	Fusiliers	18		18	42		
Epinephelus spp.	Groupers nei	3		3	6		
Priacanthus tayenus	purple-spotted bigeye	74		74			
Sillago spp.	Sillago-whitings	27		27	1		
Otolithes rubber	Tigertooth croaker	867	735	132	3,455		
Lutjanus malabaricus	Malabar blood snapper	24		24			
Lutjanus johnii	John's snapper						
Lutjanus russelli	Russell's snapper						
Lutjanus spp.	Snapper nei	30		30			
Pristipomoides multidens	Goldenbannded jobfish						
Nemipterus spp.	Threadfin breams nei	67		67			
Scolopsis spp.	Monocole breams	6		6			
Leiognathus spp.	Ponyfishes	343	26	317	1		
Plectorhinchus spp.	Sweetlips						
Pomadasys argenteus	Silver grunt						
Lethrinus spp.	Emperors	10		10			
Upeneus spp.	Goatfishes	23		23			
Gerres spp.	Mojarras nei	64		64	6		
Drepane punctata	Spotted sicklefish	1		1	3		
Scarus spp.	Parrot fish	1		1	154		
Eleutheronema tetradactylum	Four finger threadfin				1		

MT

															MT
	Tra			Lift		alling Ne		Gill		Trap		Hook and	Push/ Scoop	Shell fish and seaweed	Othoro
AII trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	AII traps	Station- ary trap	Porta- ble trap	Lines	Net	collect- ing gear	others
1,182				17				3,155	34	34					2
86								599							15
20								730							64
3,153								2,865	10	10					
1,449								1,167							34
348				1				361	108	46	63	528	1		
1,809				1				1,410	23	22	1	18	2		28
2,705				2				239	19	18	1	15			1
766								1,250	13	13					620
26,920								16				1			
7,139				18				8,504	162	85	77	2,041	49		220
697								1,399	91	16	75	464	18		314
283				5				2,852	84	59	25	1	21		150
178				8				96	229	17	212	354			18
2,969				5				1,009	1,416	554	1,362	4,052	11	12	26
20,492				4				30	1		1	153			
1,816								749				18			44
17,717								9,920	147	130	17	269	119		294
1,800				37				1,471	390	38	352	2,098	13	1	1
965				11				441	175	26	149	881	4		1
727				5				225	98	13	85	576	1		
1,997								60	209		209	632			
3,210				8				210	256		256	1,286			
29,203								2,545	5,614		5,614	2,968			
1,312								241	388	2	386	64			
1,413				276				484	28	28		3			
722				5				294	111		111	436			
1,544				6				709	54	17	37	646	1		2
524								81	69	3	66	701			
14,207				5				27	133	19	114	91			
586				1				137	30	21	9	155			2
680				5				286	39	16	23	55			2
164				1				176	143	8	135	245		7	13
33								1,052	11	11		248			9

### 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 $3.4.2\ \text{Malaysia}$ (Cont'd)

			Purse Sein	е		Seine Net	
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Polynemus spp.	Thresdfins	23		23	48		
Siganus spp.	Spinefeet (Rabbitfishes) nei	132		132	40		
Abalister stellaris	Starry triggerfish						
Muraenesox spp.	Pike-congers nei						
Trichiurus spp.	Hairetails nei	357	42	315			
Dussumieria spp.	Rainbow sardinells	9,700	22	9,678	16		
Sardinella spp.	Sardinellas nei	20,785	319	20,466			
Stolephorus spp.	Stolephorus anchovies	8,897	8,722	176			
Chirocentrus spp.	Wolf-herring nei	52	1	51			
Auxis thazard, A. rochei	Frigate and bullet tunas	3,280		3,280			
Euthynnus affinis	Kawakawa	16,187		16,187			
Katsuwonus pelamis	Skipjack tuna	3,406		3,406			
Thunnus tonggol	Longtail tuna	21,310	11	21,299	349		
Thunnus alalunga	Albacore tuna						
Thunnus albaca0res	Yellowfin tuna	333		333			
Thunnus obesus	Bigeye tuna						
Istiophorus platyterus	Indo-Pacific sailfish	52		52			
Makaira mazara	Indo-Pacific blue marlin	9		9			
Scomberomorus commerson	Narrow-barred spanish mackerel	696	2	694	16		
Lactarius lactarius	False trevally						
Rachycentron canadum	Cobia	13		13			
Decapterus spp.	Scad nei	71,471		71,471			
Caranx sexfasciatus	Bigeye travally	16		16	3		
Alectis indicus	Indian threadfish	282		282	4		
Gnathanodon speciosus	Golden trevally	16		16			
Carangoides spp.	Horse mackerel	303	1	302			
Atule mate	Yellowtail scad	3,943					
Alepes spp.	Scads	11,869	17	11,852			
Selar boops	Oxeye scad	17,790	1	17,789			
Selarroides leptolepis	Yellowstripe scad	5,946		5,946			
Seriolina nigrofasciata	Blackbanded trevally	5		5			
Parastromateus niger	Black pomfret	1,277		1,277			
Elagastis bipinnulata	Rainbow runner	139		139			

MT

								,	r	-			1	,	MT
	Tra	wl		Lift	F	alling Ne		CH N. A		Trap		Hook	Push/	Shell fish and	
All trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Gill Net	AII traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
1,179								3,300	33	32	1	331	10		45
961				5				213	494	161	332	247			22
778				11				86	32	2	30	184		1	
2,294								523	35		35	1,514			1
8,042				133				1,035	24	24		5			36
518				115				342	4	4		10			
672				791				69	22	20	2	362			
298				6,887				260	64	64					6
2,931								2,726	4		4	24			6
12				19				184				11			
175								1,717	26		26	1,492	6		
57								1,507				175			
1,756				7				4,168	43		43	2,081			
												10			
								7				1,838			
												1,130			
88								221				220			
												78			
4,582				40				8,898	32		32	2,377	9		4
166								135				1			
622								85	23		23	601			
9,352				1,015				133	2		2	829			
79								41	8		8	215			
2,493				6				434	69	9	60	610	3		3
37								76	14		14	64			
1,708				36				1,652	97	45	51	1,505		1	14
3,171				24				625				10	90		
5,458				703				1,522	17	9	8	1,957	3		6
6,228				13				269	1		1	29			
7,814				418				744	106	24	82	464	3		
1,184				3				37	1		1	51			
2,768				108				1,982	21	21		20	101		8
358				64				201				109			3

## 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 $3.4.2\ \text{Malaysia}$ (Cont'd)

			Purse Sein	е		Seine Net	t
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Megalaspis cordyla	Torpedo scad	17,397	3	17,394			
Scomberoides spp.	Queenfish	91	2	89	9		
Rastrelliger brachysoma	Short mackerel	36,583	328	36,255			
Rastrelliger spp.	Indian mackerel nei	59,471	9	59,462			
Pampus argenteus	Silver pomfret	13	1	12	386		
Pampus spp.	Silver pomfret nei						
Caranx spp.	Jacks, crevalles nei						
Pampus spp.	Silver pomfrets nei						
Sphyraena spp.	Barracudas nei	418	7	410	8		
Carcharhinus spp.	Shark	16		16			
Dasyatis spp.	Stingrays nei	4		4	23		
Portunus pelagicus	Blue swimming crab				61		
Scylla serrata	Indo-Pacific swamp crab				1		
Thenus orientalis	Flathead lobster						
Penaeus merguiensis	Banana prawn				533		
Penaeus monodon	Giant tiger prawn				65		
Penaeus indicus	Indian white prawn				135		
Penaeus latisulcatus	Western king prawn						
Metapenaeus affinis	Jinga shrimp						
Metapenaeus brevicornis	Yellow shrimp				115		
Metapenaeus ensis	Greasyback shrimp						
Metapenaeus lysianassa	Bird shrimp	20		20	459		
Metapenaeus spp.	Metapenaeus shrimps nei				2,094		
Parapenaeopsis coromandelica	Coromandel shrimp				1		
Parapenaeopsis hardwickii	Spear shrimp						
Panulirus spp.	Tropical spiny lobster nei						
Parapenaeopsis sculptilis	Rainbow shrimp				246		
Metapenaeopsis stridulans	Fiddler shrimp				445		
Acetes spp.	Paste shrimp	160	160		309		
Crassostrea spp.	Cupped oysters nei						
Perna viridis	Green mussel					•••	
		• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • • • • • • • • • • • •			
Paphia undulata	Undulata venus	200		200	207	•••	
Sepia spp.	Cuttlefish	389		389	286		
Loligo spp.	Common squids nei	2,509	2	2,506	302		

															MT
	Tra			Lift		Falling N		Gill Net		Trap		Hook	Push/	Shell fish and	
AII trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	GIII Net	AII traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
8,252				93				2,766	3		3	899			
1,369				192				1,389	22	20	2	242			49
15,862				638				10,462	54	37	18	1,125			
15,860								46,166				3			
1,871				35				1,786	29	28	1	7			27
403								865				3			90
4,753				291				914	47	28	19	1,229	2		10
3,865								1,954	50	10	40	907			1
8,336				4				2,457	76	44	32	2,784	4		81
5,258								2,544	351	56	295	8	2		808
67								71	29		29	1	8		3,293
504								9							
2,177								6,099	11	9	2		176		200
899								281	4	3	1		8		4
3,543								3,546	27	22	5	5	128		348
2,757								27	4	4		5			656
592								44							
2,079								1,133	48	48			233		256
351															
6,214								4,710	8	8		2	952		1,208
3,709								1,200	1		1		410		207
104															126
3,543								109	2		2		44		130
107								57	43		43			10	
2,311								609					81		183
3,210								146	2		2		59		84
33,249								32	697	202	495		1,702		16,617
								8						6	·
														129	
														51	
21,362				222				473	281	34	247	111	62	43	85
45,228				858				123	83	60	23	999	5	10	4
70,220	L		l	550	L		L	1 120		1 00				I	

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 $3.4.2\ \text{Malaysia}$ (Cont'd)

			Purse Sein	е		Seine Net	t
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Octopus spp.	Octopuses nei						
Squilla mantis	-				335		
-	Sea cucumbers nei						
Platycephalus indicus	Bartail Flatfish				1		
Thachysurus leiotetocephalus	-						
Lagocephalus sceleratus	Silverside bladsop	3		3			
Aluterus monoceros	Unicorn leatherjacket	52		52			
Ablennes hians	Flat needlefish	23		23	50		
Lobotes surinamensis	Atlantic tripletail						
Megalops cyprinoides	Indo-Pacific tarpon	22		22	1		
Septipinna tenuifilis	Common hairfin anchovy						
Coilia macrognathos	Goldspotted grenader anchovy				3,720		
-	Trash fish	30,213	1,961	28,252	13,392		
-	Mixed fish	24,279	208	24,071	91		
Circe scripta	Script venus						
Orbicularia orbiculata	Short-necked clam						
Bivalves/ Gastropods	Other clams	2		2			
Rhopilema spp.	Jellyfish						
-	Others						

															MT
	Trav			Lift		alling Ne		Gill Net		Trap		Hook	Push/	Shell fish and	
All trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	ı	All	Station- ary trap		and Lines	Scoop Net	seaweed collect- ing gear	Others
1,897								2	1		1	16	1	4	13
3,291								498					31		125
50								1						31	64
883				1				92	5		5	34			1
70								18							91
93								40							
1,896								45	28		28	710			4
7								246	2	2		62	1		
83								17				79	2		
63				3				19	20	20		10			
62								1,764	13	13					355
43								425	12	12					255
254,011				16				2,591	59				1,740		5,417
41,802				485				12,895	339	83	257	1,338	49		664
63														69	
13														546	
668														890	
19									98	98				4,986	
														1,477	

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 3.4.3 Myanmar

			Purse Sein	е	!	Seine Net	t
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Johnius spp.	Croakers nei	598					
llisha elongata	Elongata ilisha	3,982					
Tenualosa ilisha	Hilsa shad	21,503					
Harpodon nehereus	Bombay duck						
Arius spp.	Seacatfishes, Marine catfishes	9,713					
Epinephelus spp.	Groupers nei	3,083					
Chrysochir aureus	Reeve's croaker						
Pseudorhombus spp.	Flounders						
Lutjanua spp.	Snappers nei	202					
Nemipterus spp.	Threadfin breams nei						
Pomadasys spp.	Grunts						
Upeneus spp.	Goatfishes						
Polynemus spp.	Threadfins						
Muraenesox spp.	Pike-congers nei						
Trichiurus lepturus	Largehead hairtail						
Chirocentrus spp.	Wolf-herring nei						
Scomberomorus guttatus	Indo-pacific king mackerel	1,820					
Megalaspis cordyla	Torpedo scad	15,520					
Rastrelliger kanagurta	Indian mackerel	532					
Pampus argenteus	Silver pomfrets	75					
Ostiechthyes	Marine fish nei	418,776					
Cetacean	Marine crustacean nei	4,738					
Loligo spp.	Squids						
Sepia spp.	Cuttlefish	91					

 $\mathsf{MT}$ 

	Tra	wl		Lift	F	alling Ne		Gill		Trap		Hook	Push/	Shell fish and	
AII trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	AII traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
720															
61,611															
33,506					1,536										
												21			
17,099															
42,434															
784					104				8,076						
82,851															
2,772					50,575										
77,437															
					18,133										
6,821					3,618										
2,479									19,204						
9,608					2,694										
9,380					2,907							19			
7,396															
25,958															
2,002					22,976										
708,594					223,965				49,816			70			
19,770															
24,248															
28,773															

# 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 3.4.4 Singapore

			Purse Sein	е	;	Seine Net	
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
Saurida spp.	Lizard fishes						
Arius spp.	Seacatfishes						
Lisa spp.	Mullets						
Caesio spp.	Fusiliers						
Epinephelus spp.	Grouper nei						
Sillago spp.	Sillago whitings						
Mene maculata	Moonfish						
Pennahia spp.	Croakers & drum						
Lutjanus vitta	Russell's snappers						
Lutjanus spp.	Snappers nei						
Nemipterus spp.	Threadfin bream nei						
Leiognathus spp.	Ponyfishes						
Pomydasys spp.	Grunts						
Lethrinus spp.	Emperors (=Scavengers) nei						
Polynemus spp.	Threadfins						
Siganus spp.	Spinefeet						
Trichiurus spp.	Hairtails nei						
Chirocentrus spp.	Wolf-herring nei						
Scomberomorus commerson	Narrow-barred spanish						
Carangoides spp.	Horse mackerel						
Alepes spp.	Scads						
Parastromateus niger	Black pomfret						
Scomberoides spp.	Queenfishes						
Rastrelliger kanagurta	Indian mackerel						
Pampus argenteus	Silver pomfret						
Pampus chinensis	Chinese Silver pomfret						
Sphyraena spp.	Barracudas nei						
Isurus spp.	Mako sharks						
Dasyatis spp.	Stingrays nei						
Portunus pelagicus	Blue swimming crab						
Scylla serrata	Indo-Pacific swamp crab						
Panulirus polyphagus	Mud spiny lobster						
Panulirus spp.	Tropical spiny lobsters nei						

МТ

															MT
	Tra			Lift		alling Ne		Gill		Trap		Hook	Push/	Shell fish and	
All trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	AII traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
1		1													
25		25													
3		3													
1		1													
23		23													
5		5													
18		18													
23		23													
15		15													
11		11													
27		27													
23		23													
18		18													
15		15													
22		22													
1		1													
23		23													
30		30													
31		31													
25		25													
32		32													
29		29													
19		19													
7		7													
12		12													
9		9													
18		18													
8		8													
38		38													
12		12													
1		1													
4		4													
4		4													

### 3.4 Capture Production by Type of Fishing Gear and by Species, 2010 3.4.4 Singapore (Cont'd)

			Purse Sein	е		Seine Net	
Scientific Name	FAO English Name	All purse seines	Anchovy purse seine	Fish purse seine	All seine nets	Boat seine	Beach seine
<i>Sepia</i> spp.	Cuttlefish						
Loligo spp.	Common squids nei						

	Tra	wl		Lift	F	alling Ne	et	Gill		Trap		Hook	Push/	Shell fish and	MT
All trawls	Beam trawl	Otter board trawl	Pair trawl	Net	All falling nets	Anchovy falling net	Squid falling net	Net	All traps	Station- ary trap	Porta- ble trap	and Lines	Scoop Net	seaweed collect- ing gear	Others
32 38		32 38													

### 4. INLAND CAPTURE FISHERY STATISTICS

# 4.1 Inland Capture Fishery Production by Species and by Fishing Area, 2010 4.1.1 In Quantity

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Cyprinus carpio	Common carp	04		
Labiobarbus festivus	Singal carp	04		
Osteochilus haseltii	Nilem carp	04		
Leptobarbus hoeveni	Hoven's carp	04		
Hampala macrolepidota	Hampala barb	04		
Barbichthys laevis	Sucker barb	04		
Puntius bionotatus	Spotted barbs	04		
Barbonymus schwanenfeldii	Tinfoil barb	04		
Barbonymus gonionotus	Silver barb	04		
Barbodes balleroides	-	04		
Cyclochelichthys armatus	-	04		
Cyclochelichthys apogon	Beardless barb	04		
Cyprinidae	Cyprinids nei	04		
Tor soro	-	04		
Tor douronesis	River carp	04		
Macrochirichthys macrochirus	-	04		
Oreochromis (=Tilapia) spp.	Tilapia nei	04		
Oreochromis mossambicus	Mozambique tilapia	04		
Oreochromis niloticus	Nile tilapia	04		
Chitala lopis	Giant featherback	04		
Kryptopterus spp.	Glass catfish	04		
Ompok bimacularus	Butter catfish	04		
Mystus nemurus	Asian redtail catfish	04		
Clarias spp.	Torpedo-shaped catfishes nei	04		
Pangasius djambal	Catfishes	04		
Pangasius spp.	Pangas catfish nei	04		
Anguilla spp.	River eels nei	04		
Monopterus albus	Lai	04		
Anabas testudineus	Climbing perch	04		
Osphronemus goramy	Giant gourami	04		
Trichogaster pectoralis	Snakeskin gourami	04		
Trichogaster trichopterus	Three spot gourami	04		
Helostoma temminckii	Kissing gourami	04		

 $\mathsf{MT}$ 

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
8,941						7,500	
214							
5,328							
4,902							
805							
24							
49							
669							
9,962						35,700	
56							
9							
488							
	4,900			22,236			
99							
919							
13							
				44,896			
14,615							
17,345						38,300	
4,240							
13,592							
5,668							
14,439							
14,259				5,137		10,400	
14,524							
						4,700	
1,149				719			
						400	
14,234				2,022		10,200	
1,689							
22,306				6,153		3,100	
12,716							
12,914							

# 4.1 Inland Capture Fishery Production by Species and by Fishing Area, 2010 4.1.1 In Quantity (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia A
Channa striata	Striped snakehead	04		
Channa micropeltes	Indonesian snakehead	04		
Botia macracanthus	Clown loach	04		
Rasbora argyrotaenio	Silver rasbora	04		
Puntioplites waandersi	-	04		
Pristolepis fascista	Malayan leaffish	04		
Toxotes microlepis	Smallscale archerfish	04		
Thynnichthys vailanti	-	04		
Mastacembelus erythrotaenia	Fire eel	04		
Scleropages formosus	Asian bonytongue	04		
Mystacoleucus padangensis	-	04		
Mystacoleucus marginatus	-	04		
Gobiidae	Freshwater gobies nei	04		
Osteichthyes	Freshwater fishes nei	04		
Chanos chanos	Milkfish	04		
Scatophagus spp.	Scats	04		
Mystus nigriceps	Mystus wyckii	04		
Eleotridae	Gudgeons, sleepers nei	04		
Ariidae	Sea ccatfishes nei	04		
Mugiidae	Mullets nei	04		
Natantia	Natantian decapods nei	04		
Crustacea	Freshwater crustaceans nei	04		
Mollusca	Freshwater molluscs nei	04		
Mollusca	Marine molluscs nei	04		
Macrobrachium rosenbergii	Giant river prawn	04		
Portunus pelagicus	Blue swimming crab	04		
Scylla serrata	Indo-pacific swam crab	04		
Palaemonidae	Freshwater prawns nei	04		
Bivalvia	Clams, etc, nei	04		
Rana spp.	Frogs	04		
Testudinata	River and lake turtle nei	04		
Invertebrate	Aquatic invertebrates nei	04		
Miscellaneous	Miscellaneous	04		405,000

Notes: A Figures from Ministry of Agriculture, Forestry and Fisheries of Cambodia Website

МТ

	· · ·			<u> </u>			MT
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam B
34,017				9,906		18,100	
7,811							
41							
1,347							
2,923							
141							
29							
1,727							
86							
213							
19,205							
582							
				5,619			
54,937	26,000	4,150	1,002,430	7,847		79,200	•••
				8,487			•••
				207			
1,121							
1,996							
				1,973			
				1,013			
4,538				5,793			
312						800	•••
599				60,898			
75							•••
9,398				1,400			
	•••	•••	•••	279		•••	•••
	•••	•••	• • • • • • • • • • • • • • • • • • • •	821	•••	•••	• •
4,088	•••	395				1,400	••
79	• • • • • • • • • • • • • • • • • • • •				•••		
2,022	•••			•••	•••	•••	•••
12		•••		•••	•••	***	••
1,475		•••		•••	•••	•••	•••
		•••					104 200
1,475							194,200

Notes: B Figures from General Statistics Office of Vietnam Website

## 4.1 Inland Fishery Production by Species and by Fishing Area, 2010 $4.1.2\ \mbox{In Value}$

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Cyprinus carpio	Common carp	04		
Osteochilus haseltii	Nilem carp	04		
Leptobarbus hoeveni	Hoven's carp	04		
Hampala macrolepidota	Hampala barb	04		
Cyprinidae	Cyprinids nei	04		
Barbonymus schwanenfeldii	Tinfoil barb	04		
Barbonymus gonionotus	Silver barb	04		
Macrochirichthys macrochirus	-	04		
Oreochromis (=Tilapia) spp.	Tilapia nei	04		
Oreochromis mossambicus	Mozambique tilapia	04		
Oreochromis niloticus	Nile tilapia	04		
Chitala lopis	Giant featherback	04		
Kryptopterus spp.	Glass catfish	04		
Ompok bimacularus	Butter catfish	04		
Mystus nemurus	Asian redtail catfish	04		
Clarias spp.	Torpedo-shaped catfishes nei	04		
Pangasius djambal	Catfishes	04		
Pangasius spp.	Pangas catfish nei	04		
Anguilla spp.	River eels nei	04		
Monopterus albus	Lai	04		
Anabas testudineus	Climbing perch	04		
Osphronemus gouramy	Giant gourami	04		
Trichogaster pectoralis	Snakeskin gourami	04		
Trichogaster trichopterus	Three spot gourami	04		
Helostoma temminckii	Kissing gourami	04		
Channa striata	Striped snakehead	04		
Channa micropeltes	Indonesian snakehead	04		
Mastacembelus erythrotaenia	Fire eel	04		
Pristolepis fasciata	Malayan leaffish	04		
Barbodes balleroides	-	04		
Barbichthys laevis	Sucker barb	04		
Labiobarbus festivus	Signal carp	04		
Puntius bionotatus	Spotted barbs	04		
Botia macracanthus	Clown loach	04		

US\$ 1.000

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
			.,	11	3-11		
14,873						8,857	
5,067							
11,319							
1,254							
		• • • •		19,432			
861		• • • •					
11,842		***				41,003	
11		***					
		• • •		53,324			
17,007		• • •					
24,264						49,034	
15,359							
28,281							
8,203							
32,948							
18,140				8,030		19,551	
31,138		• • •					
						5,336	
2,003				1,491			
						1,119	
29,879				2,428		12,554	
2,956							
23,399				5,158		3,848	
11,564							
24,942							
62,486				16,863		42,736	
14,429							
101							
184							
41							
37							
386							
55							
71							

# 4.1 Inland Capture Fishery Production by Species and by Fishing Area, 2010 4.1.2 In Value (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Rasbora argyrotaenio	Silver rasbora	04		
Puntioplites waandersi	-	04		
Cyclochelichthys armatus	-	04		
Cyclochelichthys apogon	Beardless barb	04		
Tor soro	-	04		
Tor douronesis	River carp	04		
Toxotes microlepis	Smallscale archerfish	04		
Thynnichthys vailanti	-	04		
Scleropages formosus	Asian bonytongue	04		
Mystacoleucus marginatus	-	04		
Mystacoleucus padangensis	-	04		
Mystus nigriceps	Mystus wyckii	04		
Osteichthyes	Freshwater fishes nei	04		
Chanos chanos	Milkfish	04		
Scatophagus spp.	Scats	04		
Ariidae	Sea ccatfishes nei	04		
Mugiidae	Mullets nei	04		
Gobiidae	Freshwater gobies nei	04		
Natantia	Natantian decapods nei	04		
Mollusca	Freshwater molluscs nei	04		
Mollusca	Marine molluscs nei	04		
Eleotridae	Gudgeons, sleepers nei	04		
Macrobrachium rosenbergii	Giant river prawn	04		
Portunus pelagicus	Blue swimming crab	04		
Scylla serrata	Indo-pacific swam crab	04		
Palaemonidae	Freshwater prawns nei	04		
Crustacea	Freshwater crustaceans nei	04		
Bivalvia	Clams, etc, nei	04		
Rana spp.	Frogs	04		
Testudinata	River and lake turtle nei	04		
Invertebrate	Aquatic invertebrates nei	04		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singpaore	Thailand	Vietnam
2,334							
3,219							
10							
436							
256							
1,674							
27							
1,613							
324							
1,316							
5,890							
1,219							
56,591		9,468	1,503,645	10,289		91,357	
				8,538			
				609			
				1,433			
				1,604			
				7,634			
8,969				9,387			
189				5,799			
43							
7,571							
46,416				4,784			
				658			
				2,942			
10,033		3,593				11,284	
885						1,598	
58							
3,035							
31							
1,724							

# 4.2 Inland Fishery Production by Type of Water Bodies 4.2.1 In Quantiy

 $\mathsf{MT}$ 

Water Bodies	Brunei Darussalam	Cambodia	Indonesia	Lao PDR
Total		40,500	344,972	30,900
Lakes			46,776	
Rivers			221,904	
Floodplain/rice fields			51,768	
Reservoirs			20,597	
Others			3,927	

### 4.2.2 In Value

Water Bodies	Brunei Darussalam	Cambodia	Indonesia	Lao PDR
Total			546,963	
Lakes		• • •	56,390	
Rivers		•••	384,054	
Floodplain/rice fields			77,082	
Reservoirs		•••	24,109	
Others			5,327	

MT

Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
4,545	1,002,430	185,406		209,800	
226					
2,684	764,970				
611					
484					
540	237,460				

Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
13,061	1,503,645	160,403		288,277	
556					
9,067	1,147,455				
1,302					
1,121					
1,016	356,190				

### 5. AQUACULTURE STATISTICS

# 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.1 In Quantity

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Cyprinus carpio	Common carp	04	0.03	
Labeo rohita	Roho labeo	04		
Cirrhinus mrigala	Mrigal carp	04		
Ctenopharyngodon idellus	Grass carp	04		
Hypophthalmichthys molitrix	Silver carp	04		
Hypophthalmichthys nobilis	Bighead carp	04		
Leptobarbus hoeveni	Hoven's carp	04		
Cyprinidae	Cyprinids nei	04		
Osteochilus hasselti	Nilem carp	04		
Barbonymus gonionotus	Silver barb	04		
Catla catla	Catla	04		
Oreochromis (=Tilapia) spp.	Tilapia nei	04		
Oreochromis (=Tilapia) spp.	Tilapia nei	71		
Oreochromis mossambicus	Mozambique tilapia	04		
Oreochromis niloticus	Nile tilapia	04	2.2	
Oreochromis niloticus	Nile tilapia	71	3.69	
Piaractus brachypomus	Pirapatinga	04		
Notopterus spp.	Knifefishes	04		
Mystus nemurus	Asian redtail catfish	04		
Clarias gariepinus	African catfish	04	11.37	
Clarias batrachus	Philippine catfish	04		
Clarias spp.	Torpedo-shaped catfishes nei	04		
Pangasius pangasius	Pangas catfish	04		
Pangasius hypophthalmus	Striped catfish	04		
Pangasius spp.	Pangas catfish nei	04	1.53	
Pangasius spp.	Pangas catfish nei	57		
Monopterus albus	Lai	04		
Anabas testudineus	Climbing perch	04		
Osphronemus gouramy	Giant gourami	04		
Trichogaster spp.	Gouramis	04		
Trichogaster pectoralis	Snakeskin gourami	04		
Puntius jarvanicus	Java barb	04		
Aristichthys nobilis	-	04		
Helostoma temminckii	Kissing gourami	04		

МТ

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
282,695		675	23,412			3,232	
			546,309				
			31,218			727	
		873	15,609				
			9,365			215	
		2,053					
3,186		976					
21,266				16,714		1,970	
13,039		903	15,609			43,911	
			46,826				
29,699		29,257	39,022	90,432			
				7			
		9,629				115	
412,367				168,199	21	179,240	
16,686					19		
			7,804				
						3	
3,204		1,656					
					36		
242,811		63,206	7,804	2,972			
		37,884					
					49	17,978	
127,668			15,609				
			1,561			11	
218						714	
56,889				183		3,764	
						92	
3,337						22,376	
6,057							
			20,926				
5,281							

## 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.1 In Quantity (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Channa striata	Striped snakedhead	04		
Channa micropeltes	Indonesian snakehead	04		
Channa spp.	Snakeheads (=Murrels) nei	04		
Oxyeleotris mamoratus	Marble goby	04		
C. gariepinus x C. macropha	Catfishes, hybrid	04		
Anguilla spp.	River eels nei	04		
Pisodonophis boro	Rice-paddy eel	04		
Osteichthyes	Freshwater fishes nei	04	3.74	
Chanos chanos	Milkfish	04		
Chanos chanos	Milkfish	71		
Lates calcarifer	Giant seaperch (=Barramundi)	04		
Lates calcarifer	Giant seaperch (=Barramundi)	57		
Lates calcarifer	Giant seaperch (=Barramundi)	71	63.7	
Mugil cephalus	Flathead grey mullet	71		
Mugilidae	Mullets nei	04		
Epinephelus malabaricus	Malabar grouper	71		
Epinephelus coioides	Orange-spotted grouper	71		
Epinephelus fuscoguttatus	Brown-marbled grouper	71		
Epinephelus tauvina	Greasy grouper	57		
Epinephelus tauvina	Greasy grouper	71		
Epinephelus spp.	Groupers nei	04		
Epinephelus spp.	Groupers nei	57		
Epinephelus spp.	Groupers nei	71	4.77	
Cromileptes altivelis	Humpback grouper	71		
Plectropomus maculatus	Spotted coral grouper	71		
Schuettea scalaripinnis	Eastern pomfred	04		
Lutjanus argentimaculatus	Mangroves red snapper	57		
Lutjanus argentimaculatus	Mangroves red snapper	71		
Lutjanus johnii	John's snapper	57		
Lutjanus johnii	John's snapper	71		
Lutjanus spp.	Snapperd nei	71	9.77	
Siganus spp.	Spinefeet (=Rabbitfishes) nei	04		
Siganus spp.	Spinefeet (=Rabbitfishes) nei	71		
Serranidae	Groupers, seabasses nei	04		
Serranidae	Groupers, seabasses nei	71		

MT							
Vietnam	Thailand	Singapore	Philippines	Myanmar	Malaysia	Lao PDR	Indonesia
	6,911		828				
	207	271.52			2,504		17,407
							5,603
	105				9		980
	116,875						
							2,914
		9.60					
	5,190	15.60	93		5,397	82,100	181,029
			262,233				421,757
		1,312	87,199				311
					12,577		3,427
	1,540			80			
	11,894	508.82			7,445		2,311
		519.42					
							8,822
		111.80					
		1.80					
		79.58					
					3,188		
					1,382		
			70				2,741
	2,207			145			
	569	1.50					7,657
		14.18					
		33.82					
• • •							34,123
					3,233		
		7.40			1,735		
					2,547		
		38			345		
		23.15	9				
			103				
			90				
			70				
			1,125				

## 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.1 In Quantity (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Caranx spp.	Jacks, crevalles nei	71	16.09	
Trachinotos blochii	Snubnose pompano	71		
Osteichthyes	Marine fishes nei	57		
Osteichthyes	Marine fishes nei	71	10.84	
Macrobrachium rosenbergii	Giant rive prawn	04		
Cherax destructor	Yabby crayfish	04		
Portunus spp.	Portunus swimcrabs nei	04		
Scylla serrata	Indo-Pacific swamp crab	04		
Scylla serrata	Indo-Pacific swamp crab	57		
Scylla serrata	Indo-Pacific swamp crab	71	0.59	
Penaeus merguiensis	Banana prawn	04		
Penaeus merguiensis	Banana prawn	57		
Penaeus merguiensis	Banana prawn	71		
Penaeus vannamei	Whiteleg shrimp	04		
Penaeus vannamei	Whiteleg shrimp	57		
Penaeus vannamei	Whiteleg shrimp	71		
Penaeus monodon	Giant tiger prawn	04		
Penaeus monodon	Giant tiger prawn	57		
Penaeus monodon	Giant tiger prawn	71	18.75	
Penaeus spp.	Penaeus shrimps nei	71		
Metapenaeus spp.	Metapenaeus shrimps nei	04		
Metapenaeus spp.	Metapenaeus shrimps nei	71		
Panulirus polyphagus	Mud spiny lobster	71		
Panulirus spp.	Tropical spiny lobsters nei	71		
Thenus orientalis	Flathead lobster	71		
Crassostrea gigas	Pacific cupped oyster	71		
Crassostrea iredalei	Slipper cupped oyster	71		
Crassostrea spp.	Cupped oysters nei	57		
Crassostrea spp.	Cupped oysters nei	71		
Pteris penguin	Penguin wing oyster	71		
Anadara granosa	Blood cockle	57		
Anadara granosa	Blood cockle	71		
Perna viridis	Green mussel	57		
Perna viridis	Green mussel	71		
Rana spp.	Frogs	04		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
				39			
		•••	•••		4.37		
	•••	1,081	 27,349				• •
•••				 E 222	100 22		• •
1 227		7,401	2 001	5,322	108.22	60	• ·
1,327		619	2,881	18	•••	25,606	• ·
8		•••			•••		•
335		•••			•••		• •
9,557		•••		14,436			
		7	1,500		•••		
		1		1	25.82	45	
16,424							
		34,310					•
		34,774		2,077		320	
206,578							
						133,110	
						427,965	
125,519							
		4,787	46,105			622	
		13,331		48,162		4,629	
					7	150	
30,804							
				690			
					8.53		
311				89			
				2			
					5.56		
				22,526			
		34		,		902	
		778				27,188	
58,079							
		77,979				818	• •
		46	•••	•••	•••	74,793	• •
		50	•••		•••	2,752	
•••	•••	10,479	•••	 20,877	267.80	164,175	• •
2		10,77	• • • •	16	207.00	1,186	•

## 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.1 In Quantity (Cont'd)

eds nei eeds eeds ess ss	04 71 71 71 71 71 57 71 71 -		
eds nei eeds eeds ess ss	71 71 71 71 57 71		
eds nei eeds eds ss ss	71 71 71 57 71 71		
eeds eds ss ss ss	71 71 57 71 71		
eds :	71 57 71 71	  274	
ss s	57 71 71	 274 	
es :	71 71	 274 	
-	71	274	
nei	71		
			60,000

 	   261.76  	 1,497,719 125,691  2,025 4,309  171,528 	 1,950	2,706,80
 	   261.76 	125,691  2,025 4,309  171,528 	 	
 	  261.76  	 2,025 4,309  171,528 	 	
 	 261.76  	2,025 4,309  171,528 	    	
 	 261.76  	4,309  171,528 	 	
 	261.76  	 171,528 	     	
 		171,528 	 	
 			 	2,706,80

# 5.1 Aquaculture Production by Species and by Fishing Area, 2010 $5.1.2\ \text{In Value}$

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Cyprinus carpio	Common carp	04	0.25	
Labeo rohita	Roho labeo	04		
Cirrhinus mrigala	Mrigal carp	04		
Ctenopharyngodon idellus	Grass carp	04		
Hypophthalmichthys molitrix	Silver carp	04		
Hypophthalmichthys nobilis	Bighead carp	04		
Leptobarbus hoeveni	Hoven's carp	04		
Osteochilus hasselti	Nilem carp	04		
Barbonymus gonionotus	Silver barb	04		
Catla catla	Catla	04		
Oreochromis (=Tilapia) spp.	Tilapia nei	04	7.11	
Oreochromis (=Tilapia) spp.	Tilapia nei	71	31.22	
Oreochromis mossambicus	Mozambique tilapia	04		
Oreochromis niloticus	Nile tilapia	04		
Oreochromis niloticus	Nile tilapia	71		
Piaractus brachypomus	Pirapatinga	04		
Notopterus spp.	Knifefishes	04		
Mystus nemurus	Asian redtail catfish	04		
Clarias batrachus	Philippine catfish	04		
Clarias gariepinus	African catfish	04	142.68	
C. gariepinus x C. macrocephalus	Catfish, hybrid	04		
Clarias spp.	Torpedo-shaped catfishes nei	04		
Pangasius pangasius	Pangus catfish	04		
Pangasius hypophthalmus	Striped catfish	04		
Pangasius spp.	Pangas catfish nei	04		
Monopterus albus	Lai	04		
Anabas testudineus	Climbing perch	04		
Osphronemus goramy	Giant gourami	04		
Trichogaster spp.	Gouramis	04		
Trichogaster pectoralis	Snakeskin gourami	04		
Helostoma temminckii	Kissing gourami	04		
Channa striata	Striped snakehead	04		
Channa micropeltes	Indonesian snakehead	04		
Channa spp.	Snakeheads (=Murrels) nei	04		
Oxyeleotris mamoratus	Marble goby	04		
Anguilla spp.	River eels nei	04		

494,716.43        958.50       18,730.58       8,219.79        3,956.50           491,677.81        2,167.94           56,191.73        815.53          1,981.71       12,487.06            3,141.09         236.81          3,141.09            10,354.37       5,280.16             21,097.12               17,471.75        1,489.95       9,365.29         47,941.10 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>US\$ 1,000</th>								US\$ 1,000
491,677.81        2,167.94           56,191.73        815.53          1,981.71       12,487.06             6,555.71        236.81           3,141.09           21,097.12             21,097.12              1,489.95       9,365.29        47,941.10                  55,871.76       27,315.44       126,763.90  <	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
56,191.73        815.53          1,981.71       12,487.06             6,555.71        236.81           3,141.09           21,097.12             17,471.75        1,489.95       9,365.29         47,941.10            53,871.76       27,315.44       126,763.90                   45,143.09        15,406.40          126.59         729,391.12	494,716.43		958.50	18,730.58	8,219.79		3,956.50	
1,981.71       12,487.06          236.81          3,141.09              10,354.37        5,280.16             21,097.12                17,471.75        1,489.95       9,365.29         47,941.10            53,871.76       27,315.44       126,763.90              12.78                      729,391.12				491,677.81			2,167.94	
6,555.71        236.81          3,141.09            21,097.12             17,471.75        1,489.95       9,365.29        47,941.10            56,191.74              53,871.76       27,315.44       126,763.90               12.78            45,143.09        15,406.40          126.59         729,391.12           53.33   <				56,191.73			815.53	
3,141.09			1,981.71	12,487.06				
10,354.37        5,280.16				6,555.71			236.81	
21,097.12        1,489.95       9,365.29        47,941.10           56,191.74              53,871.76       27,315.44       126,763.90              12.78                       233,119.60       83.69       238,910.68			3,141.09					
17,471.75        1,489.95       9,365.29         47,941.10           56,191.74              53,871.76       27,315.44       126,763.90              12.78                 126.59         729,391.12            123,3119.60       83.69       238,910.68  .	10,354.37		5,280.16					
56,191.74               53,871.76       27,315.44       126,763.90              12.78                    729,391.12 </td <td>21,097.12</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	21,097.12							
53,871.76       27,315.44       126,763.90            45,143.09        15,406.40          126.59         729,391.12           233,119.60       83.69       238,910.68   .	17,471.75		1,489.95	9,365.29			47,941.10	
12.78           45,143.09        15,406.40          126.59         729,391.12          233,119.60       83.69       238,910.68 <td< td=""><td></td><td></td><td></td><td>56,191.74</td><td></td><td></td><td></td><td></td></td<>				56,191.74				
45,143.09        15,406.40         126.59         729,391.12          233,119.60       83.69       238,910.68  .			53,871.76	27,315.44	126,763.90			
729,391.12          233,119.60       83.69       238,910.68                                  10,157.73        6,392.16 </td <td></td> <td></td> <td></td> <td></td> <td>12.78</td> <td></td> <td></td> <td></td>					12.78			
53.33            4,682.65                 1.1         10,157.73        6,392.16	45,143.09		15,406.40				126.59	
4,682.65                1.1         10,157.73        6,392.16  <	729,391.12				233,119.60	83.69	238,910.68	
1.1         10,157.73        6,392.16   303,513.50        72,054.84       14,047.94       5,454.24               71,600.76               231,079.62         12,487.06						53.33		
10,157.73        6,392.16				4,682.65				
.							1.1	
	10,157.73		6,392.16					
<td></td> <td></td> <td></td> <td></td> <td></td> <td>62.86</td> <td></td> <td></td>						62.86		
303,513.50      72,054.84     14,047.94     5,454.24          71,600.76                230.65     16,148.76       231,079.62       12,487.06								
71,600.76							157,010.14	
230.65 16,148.76 231,079.62 12,487.06	303,513.50		72,054.84	14,047.94	5,454.24			
231,079.62 12,487.06			71,600.76					
						230.65	16,148.76	
	231,079.62			12,487.06				
24.48							24.48	
							1,311.08	
159,288.78 164.19 8,192.24	159,288.78				164.19		8,192.24	
58.51							58.51	
2,169.24	2,169.24						34,606.32	
	9,610.51						1	
1,465.62 16,480.92					1,465.62		16,480.92	
26,458.93 4,256.80 1,043.22 362	26,458.93		4,256.80			1,043.22	362	
			108				1,018.28	
8,012.68	8,012.68							

# 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.2 In Value (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Pisodonophis boro	Rice-paddy eel	04		
Puntius javanicus	Java barb	04		
Osteichthyes	Freshwater fishes nei	04		
Chanos chanos	Milkfish	04		
Chanos chanos	Milkfish	71		
Lates calcarifer	Giant seaperch (=Barramundi)	04		
Lates calcarifer	Giant seaperch (=Barramundi)	57		
Lates calcarifer	Giant seaperch (=Barramundi)	71	898.17	
Mugil cephalus	Flathead grey mullet	71		
Mugilidae	Mullets nei	04		
Epinephelus tauvina	Greasy grouper	57		
Epinephelus tauvina	Greasy grouper	71		
Epinephelus malabaricus	Malabar grouper	71		
Epinephelus coioides	Orange-spotted grouper	71		
Epinephelus fuscoguttatus	Brown-marbled grouper	71		
Epinephelus spp.	Groupers nei	04		
Epinephelus spp.	Groupers nei	57	•••	
Epinephelus spp.	Groupers nei	71	80.71	•••
	·	71		•••
Cromileptes altivelis	Humpback grouper	71	• • • • • • • • • • • • • • • • • • • •	
Plectropomus maculatus	Spotted coralgrouper			•••
Schuettea scalaripinnis	Eastern pomfred	04	•••	•••
Lutjanus argentimaculatus Lutjanus argentimaculatus	Mangroves red snapper	57		•••
Lutjanus johnii	Mangroves red snapper John's snapper	57	•••	•••
Lutjanus johnii	John's snapper	71		•••
Lutjanus spp.	Snappers nei	71	137.73	•••
Siganus spp.	Spinefeet (=Rabbitfishes) nei	04	137.73	
Siganus spp.	Spinefeet (=Rabbitfishes) nei	71		
Serranidae	Groupers, seabasses nei	04		
Serranidae	Groupers, seabasses nei	71		
Siganus spp.	Spinefeet (=Rabbitfishes) nei	04		
Siganus spp.	Spinefeet (=Rabbitfishes) nei	71		
Caranx spp.	Jacks, crevalles nei	71	226.87	
Trachinotus blochii	Snubnose pompano	71		
Osteichthyes	Marine fishes nei	57		
Osteichthyes	Marine fishes nei	71		

			·				US\$ 1,000
Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
					83.81		
8,116.38							
90,514.50		10,632.09		814.67	156.43	6,973.91	
539,849.47				436,661.06			
398.08				178,293.73	2,301.09		
20,046.25							
		46,031.82	240			5,970.50	
13,519.96		30,450.05			2,259.62	42,538.54	
					1,636.71		
10,057.50							
		21,678.4					
		14,220.78					
					1,855.73		
					23.41		
					1,337.45		
41,797.66				681.33			
			580			14,972.51	
116,776.27					22.38	4,048.31	
					96.36		
					1,352.7		
45,383.18							
		13,416.95					
		8,553.55			48.09		
		11,919.96					
		1,393.80			356.07		
				37.34	165.88		
				418.90			• • •
				241.57			
• • •				653.61			
				39,794.85			•••
•••	•••	•••		• • • • • • • • • • • • • • • • • • • •	•••		•••
				116.79			
					43.59		
3,015.99		•••					•••
		20,352.75		23,143.47	519.72	91.57	

# 5.1 Aquaculture Production by Species and by Fishing Area, 2010 5.1.2 In Value (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Macrobrachium rosenbergii	Giant river prawn	04		
Cherax destructor	Yabby crayfish	04		
Portunus spp.	Portunus swimcrabs nei	04		
Scylla serrata	Indo-Pacific swamp crab	04		
Scylla serrata	Indo-Pacific swamp crab	57		
Scylla serrata	Indo-Pacific swamp crab	71	4.16	
Penaeus merguiensis	Banana prawn	04		
Penaeus merguiensis	Banana prawn	57		
Penaeus merguiensis	Banana prawn	71		
Penaeus vannamei	Whiteleg shrimp	04		
Penaeus vannamei	Whiteleg shrimp	57		
Penaeus vannamei	Whiteleg shrimp	71		
Penaeus monodon	Giant tiger prawn	04		
Penaeus monodon	Giant tiger prawn	57		
Penaeus monodon	Giant tiger prawn	71	284.25	
Penaeus stylirostris	Blue shrimp	71	3,136.5	
Penaeus spp.	Penaeus shrimps nei	71	3,130.3	
Metapenaeus spp.	Metapenaeus shrimps nei	04		•••
Metapenaeus spp.	Metapenaeus shrimps nei	71	• • • •	•••
Panulirus polyphagus	Mud spiny lobster	71		•••
	Tropical spiny lobsters nei	71	• • • •	•••
Panulirus spp. Thenus orientalis	Flathead lobster	71		•••
Crassostrea gigas	Pacific cupped oysters nei	71		•••
Crassostrea yiyas Crassostrea spp.	Cupped oysters nei	57		•••
Crassostrea spp.	Cupped oysters nei	71		
Pteria penguin	Penguin wing oyster	71		
Anadara granosa	Blood cockle	57		
Anadara granosa	Blood cockle	71		
Perna viridis	Green mussel	57		
Perna viridis	Green mussel	71		
Rana spp.	Frogs	04		
Trionyx simensis	Soft-shell turtle	04		
Euchema cottonii	Zanzibar wees	71		
Euchema denticulatum	Spiny euchema	71		
Euchema spp.	Euchema seaweeds nei	71		
Gracilaria spp.	Gracilaria seaweeds	71		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
8,916.7		5,471.96	14,404.95	71.23		115,613.7	
11.95		•••			•••		
1,775.95							
29,245.13		• • •		86,670.03			
		30.38	8,250				
		4.93		9.82	233.32	257.55	
65,203.4							
		107,390.3					
		118,231.6		6,461.61		2,289.35	
902,743.68							
						474,032.43	
						1,496,856.9	
793,280.08							
		29,392.18	184,419.88			3,006.17	
•••				404 077 7	•••		• • •
		79,986		404,977.7		21,930.72	
5.79							
					98.41	333.86	
85,020.23							
				3,034.26			
					345.32		
4,298.87				3,899.66			
				16.43			
					63.43		
		9.86				1,166.15	
		1,135.88		3,513.98		20,540.12	
820,654							
		25,733.07				787.05	
		28.06				56,053.13	
		22.5					
		7,440.09		4,351.65	391.06	19,001.49	
17.5				68.04		2,262.64	
						11,780.6	
				230,315.83			
				5,949.37			
1,127,273.4							
168,053.98				223.20			

### 118 AQUACULTURE STATISTICS

## 5.1 Aquaculture Production by Species and by Fishing Area, 20105.1.2 In Value (Cont'd)

Scientific Name	FAO English Name	Fishing Area	Brunei Darussalam	Cambodia
Caulerpa spp.	Caulerpa seaweeds	71		
Kappaphycus alvarezii	Elkhorn sea moss	57		
Kappaphycus alvarezii	Elkhorn sea moss	71		
Holothuroidea	Sea cucumbers nei	71		

Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	• • • •	•••	70.52	2,547.86			
		•••	78.53				
 4 722 F0	• • • •	•••		27,139.6			
6,723.58							•

# **5.2** Aquaculture Production by Species of Ornamental Fishes, 2010 5.2.1 In Quantity

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Cyprinus carpio	Common carp	10		182,858.3
Cyprinidae	Carps, barbels and cyprinids			5,56.49
Carassius auratus	Gold fish			
Pterophyllum scalar	Angel fish			
Symphysodon spp.	Discus			11,380.55
Ancistrus spp.	Sucker			
Cichlasoma spp.	Flower horn			
Astronotus ocellatus	Oscar			15,700.67
Peocilia reticulata	Guppy	4,750		18,131.56
Peocilia sphenops	Mollies			12,077.8
Osteoglossum bicirrhosum	Silver arowana			203.46
Osteoglossum ferrerai	Black arowana			275.71
Scleropages legendrei	Super red arowana			906.96
Puntius spp.	Barbus			591.51
Botia macracantha	Clown loach			15.24
Corydoras aeneus	Bronze corydoras			10,311.78
Betta splendens	Siamese fighting fish			83,497.88
Peprillus triacanthus	Atlantic butterfish			7,481.7
Apteronotus albifrons	Black ghost knifefish			12,700.57
Danio rerio	Zebrafish			24.4
Paracheirodon axelrodi	Cardinal tetra			11,150.97
Paracheirodon innesi	Neon tetra			26,974
Hyphessobrycon sweglesi	Red phantom tetra			435
Xiphophorus maculatus	Platy			10,301
Chilaterina spp.	Rainbow			2,940.24
Hemigrammus bleheri	Rummy nose tetra			23,069.81
Puntius tetrazona	Tiger sumatra			1,907.54
Hippocampus erectus				1.2
Anabantids	-			
Poeciliids	-			
Characins	-			
Cichlid	-			
Osteoglossids	-			
Callichthyids	-			
Cobitids	-			
Loricariidae	-			
Osteichthyes	Freshwater fishes nei			

1,000							
Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	
		120,000					
	993,535,509	200,000					
		1,000,000					
		150,000					
		20,000				• • •	
		80,000					
		70,000					
		10,000					
	12,771,122						
	133,639,757						
	13,655,056						
	6,661,637						
	355,740						
	87,723						
	278,337						
	68,743						
	74,866,030						

### 122 AQUACULTURE STATISTICS

### **5.2** Aquaculture Production by Species of Ornamental Fishes, 2010 5.2.2 In Value

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Cyprinus carpio	Common carp	63.45		
Cyprinidae	Carps, barbels and cyprinids			
Carassius auratus	Gold fish			
Pterophyllum scalar	Angel fish			
Symphysodon aequifaciatus	Blue discus			
Ancistrus spp.	Sucker			
Cichlasoma spp.	Flower horn			
Astronotus ocellatus	Oscar			
Peocilia reticulata	Guppy	3,348.75		
Anabantids	-			
Poeciliids	-			
Characins	-			
Cichlid	-			
Osteoglossids	-			
Callichthyids	-			
Cobitids	-			
Loricariidae	-			
Osteichthyes	-			

US\$ 1.000

Lao PDR	Malaysia	Myanmar	Philippines	Singpaore	Thailand	Vietnam
		5.05				
	34,803.79	16.84				
		105.26				
		9.47				
		6.32				
		2.95				
		7.37				
		0.42				
	2,944.99					
	24,271.64					
	2,289.23					
	7,353.46					
	44,469.88					
	12.9					
	24.56			38,872.72		
	23.04					
	10,353.78					

## **5.3 Seed Production from Aquaculture, 2010** 5.3.1 Indonesia

Scientific Name	FAO English Name	Total (million pcs.)	Wild Stock (million pcs.)	Aquaculture Practices (million pcs.)	No. of operational units or facilities
Chanos chanos	Milkfishes	116,472		116,472	
Lates calcarifer	Giant seaperch (=Barramundi)	1.6		1.6	
Penaeus monodon	Giant tiger prawn	6,825		6,825	
Penaeus merguensis	Banana prawn	189		189	
Lithhopenaeus venamei	Whiteleg shrimp	6,356		6,356	
Cyprinus carpio	Common carp	28,246		28,246	
Barbonymus gonionotus	Silver barb	808		808	
Oreochromis niloticus	Nile tilapia	50,727		50,727	
Osteochillus hasselti	Nilem carp	662		662	
Osphronemus gouramy	Giant Gourami	11,402		11,402	
Helostoma temminckii	Kissing gourami	135		135	
Mystus nemurus	Asian redtail catfish	0.12		0.12	
Pangasius spp.	Pangas catfish nei	117,273		117,273	
Schuettea scalaripinnis	Eastern pomfred	563		563	
Clarias spp.	Torpedo-shaped catfishes nei	4,147		4,147	
Ophicephalus micropeltis	-	0.96		0.96	
Channa micropeltis	Indonesian snakehead	12.55		12.55	
Leptobarbus hoeveni	Hoven's carp	1.32		1.32	
Oreochromis mossambicus	Mozambique tilapia	119.68		119.68	
Macrobachium resenbergii	Giant rive prawn	51.43		51.43	
Anguilla spp.	River eels nei	340.21		340.21	
Ephinepelus spp.	Groupers nei	1,042		1,042	
Euchema spp.	Euchema seaweeds nei	5.97		5.97	

## **5.3 Seed Production from Aquaculture, 2010** 5.3.2 Malaysia

Scientific Name FAO English Name		Total (million pcs.)	Wild Stock (million pcs.)	Aquaculture Practices (million pcs.)	No. of operational units or facilities
Puntius gonionotus	Javanese carp	4.49	105,302	4.39	
Cyprinus carpio	Common carp	7.86		7.86	
Trichogaster pectoralis	Snakeskin gouramy	0.14		0.14	
Puntius schwanenfeldo	Schwanefeldi's Tinfoil Barb	0.79	60,000	0.73	
Oreochromis niloticus	Tilapia nilotica	0.42		0.42	
Oreochromis spp.	Red tilapia	97.34		97.34	
Anabas testudineus	Climbing perch	0.59		0.59	
Leptobarbus ocellatus	Hoeveni's slender carp	0.77		0.77	
Clarias macrocephalus	Walking catfish	823.46		823.46	
Mystus spp.	River catfish	24.06	44,500	24.02	
Pangasius sutchi	Striped catfish	27.42		27.42	
Epinephelus spp.	Grouper	48.40		48.40	565
Lates calcarifer	Barramundi	717.08		717.08	
Lutjanus argentimaculatus	Mangrove red snapper	1.59		1.59	
Lutjanus johni	John's snapper	5.49		5.49	
Lutjanus malabaricus	Red snapper	0.15		0.15	
Perna viridis	Green mussel	0.19		0.19	
Crassostrea spp.	Oysters	32		32	
Penaeus monodon	Tiger prawn	1,229.18		1,229.18	
Macrobrachium rosenbergii	Giant freshwater prawn	45	799,100	44.20	
Penaeus vannamei	White shrimp	12,262.85		12,262.85	
Miscellaneous	Miscellaneous	61.64	1,530,670	60.11	

### 5.3 Seed Production from Aquaculture, 2010

### 5.3.3 Myanmar

Scientific Name	FAO English Name	Total (million pcs.)	Wild Stock (million pcs.)	Aquaculture Practices (million pcs.)	No. of operational units or facilities
Labeo rohita	Roho labeo	679.787	171.722	508.064	26
Cyprinus carpio	Common carp	65.95	29.7	36.25	26
Catla catla	Catla	15.115	0.005	15.11	26
Cirrhinus mrigala	Mrigal	40.409	16.039	24.369	26
Ctenopharyngodon idellus	Grass carp	172.647	48.882	123.765	26
Hypophthalmichthys molitrix	Silver carp	873.205	247.097	626.108	26
Hypophthalmichthys nobilis	Bighead carp	212.519	68.227	144.293	
Tilapia spp.	Tilapia	51.993	13.668	38.325	26
Puntius gonionotus	Barb	171.787	44.353	127.436	26
Macrobrachium rosenbergii	Giant river prawn	118.7	0.2	118.5	20
Penaeus monodon	Giant tiger shrimp	4.35	4.3		37

## **5.3 Seed Production from Aquaculture, 2010** 5.3.4 Singapore

Scientific Name	FAO English Name	Total (million pcs.)	Wild Stock (million pcs.)	Aquaculture Practices (million pcs.)	No. of operational units or facilities
Lutjanus erythroterus	Crimson snapper	158,761,512		1,604.22	6
Lates calcarifer	Asian seabass	1,079,430,420			
Gnathanodon speciosus	Golden trevally	32,643,650			
Epinephelus fuscoguttatus	Tiger grouper	216,460,410			
Elutheronema tetradactylum	Four finger threadfin	7,940,797			
Caranx ignobilis	Giant trevally	80,887,870			
Epinephelus lanceolatus	Giant grouper	3,500			
	Hybrid grouper	96,055			
Oreochromis niloticus	Tilapia	4,000			
Oxyeleotris marmorata	Marble goby	1,000			
Lutjanus johnii	John's snapper	19,500,000			
Caranx sexfasciatus	Bigeye travelly	8,500,000			

### 6. PRICE OF FRESH FISH

### 6.1 Producer Price for Capture Fishery Production by Species, 2010

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia	
Cyprinus carpio	Common carp			1.66	
Labeo rohita	Roho labeo				
Cirrhinus mrigala	Mrigal carp				
Ctenopharyngodon idellus	Grass carp				
Hypophthalmichthys nobilis	Bighead carp				
Hypophthalmichthys molitrix	Silver carp				
Osteochilus haseltii	Nilem carp			0.95	
Leptobarbus hoeveni	Hoven's carp			2.31	
Macrochirichthys macrochirus				0.82	
Barbonymus gonionotus	Silver barb			1.19	
Barbonymus schwanenfeldii	Tinfoil barb			1.23	
Puntius binotatus	Spotted barb			1.12	
Catla catla	Catla				
Cyclocheilichthys apogon	Breadless barb			0.89	
Cyclocheilichthys armatus	-			1.07	
Hampala macrolepidota	Hampala barb			1.56	
Labiobarbus festivus	Singal carp			1.8	
Rasbora argyrotaenia	Silver rasbora			1.73	
Thynnichtys vaillanti	-			0.93	
Tor soro	-			2.59	
Tor douronensis	River carp			1.82	
Barbichthys laevis	Sucker barb			1.54	
Barbodes balleroides	-			0.74	
Mystacoleucus marginatus	-			2.26	
Mystacoleusus padangensis	-			0.31	
Puntioplites waandersi	-			1.1	
Oreochromis mossambicus	Mozambique tilapia			1.16	
Oreochromis niloticus	Nile tilapia			1.4	
Piaractus brachypomus	Pirapatinga				
Chitala lopis	Giant featherback			3.62	
Chitala ornata	Spotted featherback				
Notopterus notopterus	Grey featherback				
Mystus nigriceps	-			1.09	

US\$/kg.

<u> </u>	1	1	r	Π		US\$/kg.
Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	1.42	0.8	1.22		0.95	
		0.9			0.79	
		1.8				
	2.27	0.8				
	1.53		0.44			
		0.7				
	5.41					
		0.7			1.2	
		1.2				
		0.7				
	1.61				0.91	
		0.6				
					2.21	
					1.89	

# 6.1 Producer Price for Capture Fishery Production by Species, 2009 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia	
Mystus nemurus	Asian restail catfish			2.28	
Clarias spp.	Torpedo-shaped catfishes nei			1.27	
Pangasius djambal	-			2.14	
Pangasius spp.	Pangas catfishes nei				
Anguilla bicolor	River eel			1.74	
Anguilla spp.	River eel nei				
Monopterus albus	Swam eel				
Anabas testudineus	Climbing perch			2.1	
Osphronemus gourami	Giant gourami			1.75	
Trichogaster pectoralis	Snakeskin gourami			1.05	
Trichogaster trichopterus	Three spot gourami			0.91	
Helostoma temminckii	Kissing gourami			1.93	
Channa striata	Striped snakehead			1.84	
Channa micropeltes	Indonesian snakehead			1.85	
Oxyeleotris mamoratus	Marble goby				
Cirrhinus microlepis	Small scale mud carp				
Macrognathus siamensis	Spotfinned spinyeel				
Mastacembelus erythrotaenia	Fire eel			1.18	
Pristolepis fasciata	Malayan leaffish			1.31	
Chromobotia macrocanthus	Clown loach			0.33	
Micronema bleekri	Whisker sheatfish				
Osteichthyes	Freshwater fishes nei			1.03	
Toxotes microlepis	Smallscale archerfish			0.93	
Anodontostoma chacunda	Chacunda gizzard shad	3		0.73	
Hilsa kelee	Kelee shad				
Tennulosa toli	Toli shad			1	
Lates calcarifer	Giant seaperch	8.51		2.56	
Pleuronectiformes	Flatfishes nei			1.08	
Psettodes erumei	Indian halibut			0.84	
Harpodon nehereus	Bombay-duck			0.7	
Saurida tumbil	Grester lizardfish	0.71		0.67	
Saurida spp.	Lizard fishes	0.71			
Synodontidae	Lizardfishes nei				
Trachinocephalus myops	Snakefish	0.71			
Arius spp.	Sea catfishes	2.13			

US\$/ka

						US\$/kg.
Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	1.13	1.8	1.56			
	1.89					
		0.8			0.63	• • • •
	2.88		2.07		3.61	
					2.14	
					1.77	
					1.54	
			1.7		2.96	
	11.51					
					0.63	
					1.58	
					4.98	
	0.87					
	3.59					
					4.51	
	3.89	3	1.01	6.55	3.31	
					1.42	
	0.9					
	0.54					
					0.88	
				6.55		
	1.16				1.13	

# 6.1 Producer Price for Capture Fishery Production by Species, 2010 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Ariidae	Sea catfishes nei			1.26
Mugilidae	Mullets nei			1.09
Caesio caerulaurea	Blue and gold fusiller	1.77		0.43
Caesio cuning	Redbelly yellowtail fusiller	1.77		0.94
Caesio spp.	Fusillers caesio nei	1.77		
Anyperodon leucogrammicus	Slender grouper	4.26		
Epinephelus merra	Honeycomb grouper	4.26		2.36
Epinephelus tauvina	Greasy grouper	4.26		1.7
Epinephelus guttatus	Red hind	4.26		
Epinephelus malabaricus	Malabar grouper	4.26		
Epinephelus spp.	Groupers nei	4.26		
Cephalopholis boenak	Chocolate hind			3.12
Cephalopholis spp.	Grouper			
Cromileptes altivelis	Humpback grouper	21.28		4.15
Plectropomus maculatus	Spotted coral grouper	4.26		
Plectropomus leopardus	Leopard coral grouper	4.26		3
Plectropomus spp.	Groupers	4.26		
Priacanthus macracanthus	Red bigeye			0.48
Priacanthus spp.	Bigeye nei			0.77
Sillago sihama	Silver sillago			0.5
Sillaginidae	Sillago-whitings			
Mene maculata	Moonfish			
Sciaenidae	Croakers, drums nei			0.79
Lutjanus spp.	Snappers nei			1.95
Lutjanidae	Snapper, jobfishes nei			
Pristipomoides spp.	Jobfishes nei			0.65
Nemipterus hexodon	Ornate threadfin bream	2.13		
Nemipterus spp.	Threadfin breams nei	2.13		0.99
Leiognathus spp.	Ponyfishes	2.13		0.58
Haemulidae (=Pomadasydae)	Grunts, sweetlips nei			0.9
Lethrinidae	Emperors (=Scavengers) nei			0.83
Upeneus sulphureus	Sulphur goatfish			1.1
Upeneus vittatus	Yellowstriped goatfishes			0.78
Upeneus spp.	Indian goatfish			0.76
Cheilinus undulatus	Humphead wrasse			2.32

US\$/kg.

Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
				6.55		
				6.55	3.78	
• • • •	•••	•••				
	•••					
	1.54	•••	 1.27	6.55		
		•••			•••	
		•••				
	•••	•••		•••	•••	
	•••					
	•••	•••				
	5.03	4		6.55	 5.26	
	•••	•••	2.31			
	•••					
	•••	•••				
	•••	•••			• • • •	
	•••				• • • •	
	•••				• • • •	
	•••					
	•••				0.95	
		•••				
				6.55	1.58	
				6.55		
				6.55	0.88	
				6.55		
					4.03	
		•••				
	1.8		1.58	6.55	1.26	
	0.94		0.98	6.55		
				6.55		
				6.55		

## 6.1 Producer Price for Capture Fishery Production by Species, 2010 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Eleutheronema tetradactylum	Four finger threadfin			0.81
Polynemus spp.	Threadfins			1.71
Polynemidae	Threadfins, tasselfishes nei			
Siganus virgatus	Barhead spinefoot			0.43
Siganus spp.	Spinefeet nei			1.06
Siganus stellatus	Orange-spotted spinefoot			1.33
Trichiurus lepturus	Largehead hairtail			
Trichiurus spp.	Hairtails nei			
Trichiuridae	Hairtails, scabbardfishes nei			1.12
Amblygaster sirm	Spotted sardinella	0.71		0.38
Sardinella brachysoma	Deepbody sardinella	0.71		
Sardinella gibbosa	Goldstripe sardinella	0.71		0.68
Sardinella fimbriata	Fringescale sardine	0.71		
Sardinella lemuru	Bali sardinella			0.47
Sardinella spp.	Sardinellas nei	0.71		
Dussumieria acuta	Rainbow sardinella	0.71		0.6
Dussumieria spp.	Rainbow sardinella nei			
Stolephorus spp.	Stolephorus anchovies	1.42		1.35
Chirocentrus dorab	Dorab wolf-herring			
Chirocentrus spp.	Wolf-herrings nei			1.04
Auxis thazard	Frigate tuna			0.93
Auxis rochei	Bullet tuna			1.27
Euthynnus affinis	Kawakawa			1.13
Katsuwonus pelamis	Skipjack tuna			1.08
Thunnus tonggol	Longtail tuna			1.16
Thunnus alalunga	Albacore tuna			1.38
Thunnus maccoyii	Southern bluefin tuna			4.41
Thunnus obesus	Bigeye tuna			2.31
Thunnus albacares	Yellowfiin tuna	3.55		1.62
Istiophorus platypterus	Indo-pacific sailfish			1.28
Makaira indica	Black marlin			1.51
Makaira nigricans	Atlantic blue marlin			2.07
Tetrapturus audax	Striped marlin			1.45
Xiphias gladius	Swordfish			1.54
Scomberomorus commerson	Narrow-barred Spanish mackerel			1.86

US\$/kg.

Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Lao PDR	Maiaysia	Myanınar	Philippines	Singapore	mananu	vietnan
		•••		6.55		
		•••			2.84	
		•••				
		•••		6.55		
		•••				
		• • • •			1.36	
				6.55		
	0.79					
	0.98					
	1.23		0.9			
					1.2	
				6.55		
					0.95	
				6.55		
					1.8	
	2.12		1.86			

# 6.1 Producer Price for Capture Fishery Production by Species, 2010 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Scomberomorus guttatus	Indo-Pacific king mackerel			2.11
Scomberomorus spp.	Seerfishes nei			
Sarda orientalis	Striped bonito			0.67
Tylosurus spp.	Needlefishes nei			0.63
Hemiramphus spp.	Halfbeaks nei			0.5
Exocoetidae	Flyingfishes nei			0.72
Lactarius lactarius	Flase trevally			0.82
Rachycentroon canadum	Cobia			
Decapterus macrosoma	Shortfin scad	1.77		
Decapterus russelli	Indian scad	1.42		
Decapterus spp.	Scads nei			0.78
Caranx sexfasciatus	Bigeye travally	3.55		2.92
Caranx tille	Tille travally	3.55		
Caranx spp.	Jacks, crevalles nei	3.55		1.57
Carangidae	Carangids nei			
Clupeoidei	Clupeoids nei			
Alectis indicus	Indian threadfish	3.55		
Carangoides spp.	Horse mackerel	3.55		
Gnathanodon speciosus	Golden trevally	3.55		
Uraspis uraspis	Whitemouth jack	2.84		
Alepes djeddaba	Shrimp scad	2.84		
Atule mate	Yellowtail scad	2.84		
Alepes spp.	Scads	2.84		
Selar crumenophthalmus	Bigeye scad	1.42		1.1
Selar boops	Oxeye scad			
Selaroides leptolepis	Yellowstripe scad	2.84		1.16
Seriolina nigrofasciata	Blackbanded trevally	2.84		
Parastromatus niger	Black pomfret			1.66
Elagatis bipinnulata	Rainbpw runner			0.91
Megalaspis cordyla	Hardtail scad			0.77
Scomberoides spp.	Queenfishes			1.3
Coryphaena hippurus	Common dolphinfish			1
Scomber australasicus	Blue mackerel			0.99
Rastrelliger brachysoma	Short mackerel			1.35
Rastrelliger kanagurta	Indian mackerel	2.84		1.25
Rastrelliger spp.	Indian mackerel nei			

US\$/kg.

US\$/kg.	U.						
Vietnam	Thailand	Singapore	Philippines	Myanmar	Malaysia	Lao PDR	
	4.19	6.55				• • •	
		•••				• • •	
		•••				• • •	
		•••				•••	
		•••				• • •	
	4.82						
	2.99						
		6.55	1.11		1.23	•••	
						•••	
		6.55			4.66		
	1.2	6.55				•••	
		6.55				• • •	
					2.72	• • •	
					2.83		
		• • •			2.69	•••	
		•••				• • •	
		•••			1.56	• • •	
					1.89		
			1.26				
					1.32		
					1.29		
	4.35				2.52		
	3.72						
	0.79						
	1.73		1.26		1.96		
	1.73	6.55					

# 6.1 Producer Price for Capture Fishery Production by Species, 2010 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia
Stromateidae	Butterfishes, pomfrets nei			
Pampus argenteus	Silver pomfret			2.14
Sphyraena jello	Pickhandle barracuda			1.01
Sphyraena barracuda	Great barracuda			0.88
Sphyraena spp.	Barracudas nei			
Cynoglossus spp.	Tongue soles nei			
Pterocaesio spp.	Fusilier			
Terapon spp.	Terapon perches nei			0.88
Congridae	Conger eels			
Alopias spp.	Thresher sharks nei			0.858
Carcharhinidae	Requiem sharks nei			1.01
Sphyrnidae	Hammerhead shark			1.12
Squalidae	Dogfish shark nei			0.91
Lamnidae	Shark			2.89
Pristidae	Sawfishes			0.77
Elasmobranchii	Sharks, rays, skates, etc. nei			
Rhynchobatus australiae	Whitespotted wedgefish			0.73
Rhinobatidae	Guitarfishes, etc. nei			0.68
Myliobatidae	Eagle rays nei			1.03
Mobulidae	Mantas, devil rays nei			0.87
Dasyatidae	Rays, stingrays			0.92
-	Spotted jawfishes			
-	Yellow tailed fusiliar			
Osteichthyes	Marine fishes nei			0.99
Penaeus merguiensis	Banana prawn	4.96		3
Penaeus monodon	Giant tiger prawn	11.35		5.65
Penaeus semisulcatus	Green tiger prawn	8.51		
Penaeus indicus	Indian white prawn	4.26		
Penaeus latisulcatus	Western king prawn	4.26		
Penaeus spp.	Penaeus shrimps nei	4.26		
Macrobrachium rosenbergii	Giant river prawn			4.94
Portunus pelagicus	Blue swimming crab			2.36
Scylla serrata	Indo-Pacific swamp crab	3.55		2.35
Loligo spp.	Common squids nei	2.13		
Palaemonidae	Freshwater prawns			2.45

US\$/kg.

					1	U3\$/Ky.
Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
				6.55		
					11.03	
				6.55	1.36	
					1.29	
					1.39	
					0.95	
				6.55	0.79	
					3.15	
					1.58	
				6.55		
	8.11				6.24	
		4				
					7.41	
	4.11					
	2.39				4.89	
		5				
	3.17		2.08		4.63	
	3.79	5.5			4.03	•••
	2.5		1.72	6.55	2.84	
					11.03	

## 6.1 Producer Price for Capture Fishery Production by Species, 2010 (Cont'd)

Scientific Name	FAO English Name	Brunei Darussalam	Cambodia	Indonesia	
Crustacea	Freshwater crustaceans nei			2.84	
Panulirus spp.	Tropical spiny lobsters nei			7.68	
Thenus orientalis	Flathead lobster				
Metapenaeus spp.	Metapenaeus shrimps nei			2.81	
Sepioteuthis lessonina	Bigfin reef squid				
Natantia	Natantia decapods nei			2.28	
Cruatacea	Marine crustacean nei			0.74	
Mollusca	Freshwater molluscs nei			0.31	
Mollusca	Marine molluscs nei			3.45	
Octopodidae	Octopuses nei			1.26	
Brachyura	Marine crabs nei				
Scyllaridae	Slipper lobsters nei				
Crassostrea spp.	Cupped oysters nei			1.08	
Perna viridis	Green mussel			0.41	
Pectinidae	Scallops nei			0.64	
Paphia spp.	Short neck clams nei				
Anadara granosa	Blood cockle			0.83	
Meretix spp.	Hard clams nei			0.26	
Sepiidae/Sepiolodae	Cuttlefish, squids nei			1.56	
Bivalvia	Clams nei			0.73	
Scleropages formosus	Asian bonytongue			1.52	
Pristis spp.	Sweetlips			1.01	
Eleotridae	Gudgeons, sleepers nei			3.79	
Rana spp.	Frogs			1.5	
Testudinata	River and lake turtles nei			2.54	
Testudinata	Marine turtles nei			1.56	
Holothurioidae	Sea cucumbers nei			4.77	
Rhopilema spp.	Jelly fishes			0.32	
Invertebrata	Aquatic invertebrates nei			2.93	

US\$/kg.

US\$/Kg.	1	Т				T
Vietnam	Thailand	Singapore	Philippines	Myanmar	Malaysia	Lao PDR
		6.55				
	3.78					
	4.1					
	3.56					
		6.55				
						• • •
	1.7					
		6.55				
		6.55				
	3.4					
	1.26					
	1.04					
	3.31	6.55				
	2.99					
	1.36					

### 7. FISHERS

### 7.1 Number of Fishers by Working Status, 2010

	Brunei Darussalam	Cambodia A	Indonesia	Lao PDR
Total	298	1,038,873	5,971,725	
Marine Fishery	298	156,302	2,162,442	
Full-time	298		1,084,304	
Part-time			772,595	
Occasional			305,543	
Status Unspecified				
Inland Fishery		821,701	457,835	
Full-time			167,253	
Part-time			193,668	
Occasional			96,914	
Status Unspecified				•••
Aquaculture		60,870	3,351,448	
Full-time				
Part-time				
Occasional				
Status Unspecified			3,351,448	

A Figures from Fishery Statistical Bulletin in 2009

Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
155,913	3,160,070		503		
129,622	1,384,430		21		
129,622	219,430		21		• • •
	250,000				• • •
	915,000				
	1,564,125		42		
	486,125		42		
	298,000				
	780,000				
26,291	211,515		440		
26,291	122,974		358		
	88,541		82		