Report

“Seafood Market Supply Chain
– South East Sulawesi”

for

Fisheries and Aquaculture
Department of Primary Industries Victoria


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## EXECUTIVE SUMMARY

Seafood is a major part of Indonesian exports and represented 15% (US$1.6 billion) of agrifood exports in 2006. Indonesia exports a wide range of seafood to a wide range of markets. Overall, Asian countries buy most of the volume and value of Indonesia's seafood exports at 70% and 46% respectively.

Exports of crustaceans were valued at US$1,120.8 million in 2006, mainly shrimp. The main export markets were Japan (38%), USA (36%), EU (15%) and HK/China (5%).

Exports of fresh seafood were valued at US$456.1 million in 2006, mainly tuna. The main export markets were Japan (25%), USA (19%), Singapore (11%) and HK/China (10%). Live lobsters (US$6 million) and other live fish are mainly exported to Hong Kong.

Exports of dried seafood were valued at US$61.6 million in 2006. The main export markets were Japan (69%), HK (10%) and Singapore (7%). Dried Abalone (US$3.7 million) is mainly sent to North America (83%), whereas dried sea cucumber (US$4.9 million) goes mainly to HK (41%) and dried seaweed (US$24.8 million) is exported to a multitude of markets in Asia, Europe and South America.

The two major cities and ports of Indonesia (Jakarta and Surabaya) are the main exporters of seafood, although most of this has been sourced from other provinces, including Sulawesi.

South East Sulawesi, with a population of only 2.1 million people, is a major source of agriculture and fishery products. The volumes of seaweed, sea cucumber and lobsters have all increased in sales over the last year. These products are sold mainly to local traders who sell to buyers in the major cities of Makasssar, Surabaya or Jakarta for export or local consumption. Kendari is not an export port but is a source of seafood for export.

The supply and market chain for live fish is as follows:

- Fishermen catch live fish and sell to other fishermen who own a karumba
- Collector boats pick up fish from karumbas and sell to packers or traders
- Packers are owned by traders or businessmen
- Traders take the fish from packers and send to exporters or bigger traders for Hong Kong

The major problem and challenge facing fishermen and other supply chain participants is to reduce the mortality of live fish.

The supply and market chain for live lobster is as follows:

- The live lobsters are placed in holding tanks at the packing shed for about 24 hours;
- The lobsters are packed in 20 kg polystyrene cartons and are individually wrapped in newspaper;
- Lobsters are sent by airfreight to Surabaya or other major cities;
- The cartons are unpacked in Surabaya and the lobsters are placed in holding tanks to maintain their freshness;

- The lobsters are exported from Surabaya by airfreight to HK or sold to buyers in major cities in Indonesia.

The supply and market chain for processed abalone and sea cucumber is as follows:

- Fishermen catch abalone and sea cucumber and undertake some drying
- Sell to processors and traders
- Traders will undertake further processing and drying
- Product is sold to traders for export

The challenges are: (1) to obtain a continuous supply of good quality abalone, and (2) drying abalone during the wet season. The quality varies due to poor practices by the fishermen; they keep the abalone too long before boiling or salt then boil (reverse order) which impacts on quality.

The supply and market chain for seaweed is as follows:

- Fishermen harvest seaweed and undertake some drying
- Sell to traders
- Traders will undertake further processing and drying
- Product is sold to traders for export

The problem with quality is due to poor cultivation techniques and poor selection of location. Also, seaweed needs 4-5 days to dry but many farmers sell after 2 days of drying. There is no direct export of seaweed from Kendari as: Not enough supply; No established relationship with importers; Facility not suitable for export; difficult to access shipping containers; Chinese traders in Makassar (and other ports) control the export.

South Sulawesi with a population of 8.5 million is considered as a centre for trading. The Makassar port has sea trade responsibility for eastern Indonesia and has a modern port with refrigeration facilities. In Makassar there are 26 different species of seafood exported by 118 registered exporters; seaweed being the most popular.

The central cooperative buys seafood from 18 primary cooperatives located in the districts of South Sulawesi. Each primary cooperative has about 1,500 fishermen.

The central cooperative handles a range of seafood with most sales being frozen fish (35%), seaweed (45%) and sea cucumber (20%). The central cooperative will sort the various seafood products and packs for export or inter island trade. Primary cooperatives do some sorting. Problem is that the primary cooperatives do not have access to air blasters to reduce quickly temperatures of the product; this can result in deterioration.

To increase revenues for the fishermen of SE Sulawesi there is a need to reduce the mortality of live fish through education of improved husbandry practices and separating the unhealthy fish. There is an opportunity to introduce packing facilities in fishing communities so that they can hold and pack fish for the market. This will bring the fishermen closer to the market and improve market signals which could lead to an increase in profit per kg of seafood.

# 1. INTRODUCTION

## 1.1 Background

The Australian Centre for International Agricultural Research (ACIAR) has provided funding to Fisheries and Aquaculture of the Department of Primary Industries Victoria for a scoping study on South East Sulawesi seafood industry entitled: *"Assessing Mariculture Market Constraints and Potential in SE Sulawesi – Stage 1: Stakeholder Engagement & Situation Analysis (#SMAR/2007/225)"*. This project is being managed by Geoff Gooley, Project Manager, Fisheries and Aquaculture of the Department of Primary Industries Victoria.

Geoff Gooley has asked Phillip Morey of Morelink Asia Pacific to undertake a study on Seafood/Mariculture Market Chain Mapping & Analysis for SE Sulawesi, Indonesia. Phillip Morey has a consultancy business in Indonesia to help Australian companies in doing business in Indonesia with a focus on the agrifood sector.

## 1.2 Objectives

The primary objectives of this consultancy were to:

- map the mariculture[1] market chain for SE Sulawesi (emphasis on key post-production components), and characterise supply/demand dynamics, logistics and key chain components/contacts, and to
- collate and analyse key market chain data, including tonnage and value, for determination of major opportunities and constraints for SE Sulawesi.

The context for the consultancy was further defined as follows:

- Market chain components to focus on starting with major traders in Kendari and Bau Bau, through to major buyers in key domestic (Indonesia) and export (Asia-Pacific) markets;
- Key mariculture products of interest to include:
  - Kendari - Marine grouper and spiny lobster (live trade), abalone (processed), sea cucumber (processed/dried) and seaweed (raw/dried), and
  - Bau Bau – as for Kendari but also including pearl oyster.

Specific tasks included:

- Describe and where appropriate quantify the logistics, infrastructure and supply/demand dynamics for mariculture trade:
  - within/between Kendari, Bau Bau and other major domestic ports/market destinations in Indonesia (including Makassar and Surabayia) and
  - key Asian export ports/market destinations (including Singapore, Hong Kong, Shanghai, Taiwan and Australia where appropriate).
- Obtain information on the scale/scope of existing seafood trade along these routes, with emphasis on key species/products of interest;
- Identify potential for tapping into new markets/addressing latent shortfall in demand;
- Identify constraints to accessing new markets and/or limiting access to existing markets;

[1] The word "seafood" is used throughout the report for "mariculture".

- Provide a list of potential key industry contacts (current/potential operators and/or investors) to facilitate the development of the mariculture market chain in SE Sulawesi, with emphasis on post-harvest end of the chain (ie. traders, processors/value adding, freight providers etc).

### 1.3 Approach

There were three stages for this project.

1. Review data, obtain export statistics and market analysis – desk research (mid April)
2. Market Chain research – conducted in-market visit to South East Sulawesi (Kendari) and South Sulawesi (Makassar) for interviews and local export statistics ($1^{st}$ – $6^{th}$ May)
3. Analysis and final report preparation (mid May).

Phillip visited South East Sulawesi with Mr Andrew Winstanley, an Australian businessman based in Jakarta, with many years experience as an owner operator of an aquaculture business in Kendari. Mr Luthfi Fatah, Research Management Adviser ACIAR – SADI, joined the team in Kendari and accompanied Phillip to meetings with Dr Aslan (Dean) and Mr Haris Sarita (Lecturer) from the Fisheries Faculty, University Haluoleo and some traders. Mr Haris assisted by organizing some appointments with traders in Kendari and accompanied Phillip to some of the meetings.

It was planned to visit Bau Bau while in Kendari however it was suggested (given time constraints) that it would be better to allocate more time with traders across a range of mariculture species in Kendari and buyers in Makassar. (A list of traders operating in Bau Bau is provided in Appendix 3.3)

### 1.4 Report

A "meeting notes report" has been prepared as a record of interviews; this has been forwarded to the Project Leader, Geoff Gooley.

In this report an analysis of Indonesian trade statistics (BPS) on export market size, location source and export markets for mariculture products is presented in Section Two.

Section Three provides an overview of South East Sulawesi and the supply market chain for the key seafood species.

Section Four provides information on South Sulawesi as the main port in Eastern Indonesia for the trade of seafood.

A summary of the key issues and conclusions from the research are presented in Section Five.

A copy of the itinerary, questionnaire and contacts are provided in Appendix One, Two and Three respectively. Detailed Indonesian and South East Sulawesi export statistics of the targeted seafood species are provided in Appendix Four and Five respectively.

## 2. INDONESIAN SEAFOOD EXPORTS

Indonesia, with a population of 220 million people (2005), comprises 17,000 islands and as such is a major producer and consumer of seafood. Indonesian people consume on average 18.75 kg per annum (2003) of fish compared to 0.95 kg per annum of red meat. Fish is seen as a cheap source of protein for most Indonesians.

Since Indonesia is a major producer of fish, fish imports are relatively minor with only 25 tons imported in 2005 with Australia supplying about 2% of fish imports. (However, these imports figures appear to be understated.)

### 2.1 Overview

In 2006, Indonesia exported over US$11 billion of agrifood products with seafood products representing 15% of exports (US$1,640 million); the second largest category after "oils" (which accounted for 55% of agrifood exports).

The export volume of seafood has increased by 5% in the last year to over 700,000 tonnes in 2006.

An analysis of tables 1 - 2 below show that fresh fish exports dominate the volume of seafood exports with 62% (478,000 tonnes) while crustaceans dominate the value of seafood exports with 57% (US$1,120 million).

### 2.2 Export Markets

Indonesia exports seafood to a wide range of markets depending on the species. Overall, Asian countries buy most of the volume of Indonesia's seafood exports at 70% but only 46% of the value. While USA and EU countries bought 21% of the volume and 47% of the value of Indonesian seafood exports in 2006. (See tables 1 and 2 below.)

Exports of crustaceans were worth US$1,120.8 million in 2006 with the main markets being Japan, USA and EU. Indonesian exports of crustaceans by value are mainly sent to non Asian countries which accounted for 54% of the value of exports in 2006 with USA at 36% and EU at 15%. Exports to Asian countries are mainly sent to Japan (38%) and HK/China (5%).

In 2006, Indonesia exported 169,581 tons of shrimp worth about $1 billion, an increase from 153,906 tons in 2005. Indonesia is now the largest shrimp exporter to Japan and the second largest to the USA. The target of Indonesia's shrimp production set by the government is at 410,000 tons until the end of 2007, which maybe difficult to meet as shrimp breeding has not been at optimal levels. [2]

Exports of fresh seafood were worth US$456.1 million in 2006 with the main markets being Japan, USA and Singapore. Exports by value to Asian countries are mainly sent to Japan (25%), Singapore (11%), HK/China (10%) and Thailand (8%) whereas other non Asian countries account for 35% of the value of exports with USA at 19%.

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[2] CIC Monthly Reports

Indonesia's tuna production increased to 125,325 tons in 2006 and was projected to increase by at least 5 percent in 2007. About 30% of the tuna imported by Japan, which consumes about 70% of the world's total tuna production, comes from Indonesia.[3]

**Table 1: Indonesia Fish Exports by Market 2006, Volume (Tonnes)**

| Country | Fresh (034) | Dried (035) | Crustaceans (036) | Other (037) | Total | % |
|---|---|---|---|---|---|---|
| Australia | 2,826 | 158 | 1,933 | 73 | 4,990 | 0.6 |
| China | 55,159 | 1,335 | 11,389 | 25 | 67,907 | 8.8 |
| HK | 13,099 | 836 | 9,344 | 176 | 23,454 | 3.0 |
| Japan | 39,735 | 11,460 | 51,775 | 10,301 | 113,272 | 14.6 |
| Malaysia | 26,599 | 2,406 | 6,218 | 1,212 | 36,435 | 4.7 |
| Singapore | 38,662 | 2,473 | 7,886 | 94 | 49,115 | 6.3 |
| Taiwan | 21,571 | 511 | 2,577 | 77 | 24,736 | 3.2 |
| Thailand | 212,858 | 163 | 7,573 | 4,068 | 224,662 | 29.0 |
| USA | 23,557 | 65 | 55,621 | 34,810 | 114,053 | 14.7 |
| European Union *) | 10,439 | 77 | 29,297 | 11,504 | 51,317 | 6.6 |
| Other | 33,360 | 5,638 | 11,173 | 15,730 | 65,901 | 8.5 |
| **TOTAL** | **477,865** | **25,122** | **194,785** | **78,070** | **775,842** | **100.0** |

*Note: *) UK, Nederland, Germany, Belgium, Italy and France*
*Source: The Indonesian Bureau of Statistics (BPS)*

**Table 2: Indonesia Fish Exports by Market 2006, Value (US$ 1,000)**

| Country | Fresh (034) | Dried (035) | Crustaceans (036) | Other (037) | Total | % |
|---|---|---|---|---|---|---|
| Australia | 6,345 | 271 | 9,031 | 1,911 | 17,558 | 0.9 |
| China | 20,084 | 1,285 | 18,994 | 376 | 40,739 | 2.1 |
| HK | 27,845 | 6,182 | 32,709 | 848 | 67,585 | 3.5 |
| Japan | 113,905 | 42,339 | 422,411 | 38,695 | 617,350 | 31.6 |
| Malaysia | 21,053 | 564 | 8,284 | 1,761 | 31,663 | 1.6 |
| Singapore | 49,287 | 4,524 | 12,371 | 257 | 66,438 | 3.4 |
| Taiwan | 18,467 | 648 | 4,546 | 176 | 23,837 | 1.2 |
| Thailand | 35,954 | 372 | 5,382 | 69 | 41,777 | 2.1 |
| USA | 87,772 | 180 | 402,899 | 190,513 | 681,364 | 34.8 |
| European Union *) | 27,564 | 98 | 163,219 | 41,887 | 232,768 | 11.9 |
| Other | 47,844 | 5,153 | 40,999 | 40,378 | 134,374 | 6.9 |
| **TOTAL** | **456,120** | **61,616** | **1,120,845** | **316,871** | **1,955,453** | **100.0** |

*Note: *) UK, Nederland, Germany, Belgium, Italy and France*
*Source: The Indonesian Bureau of Statistics (BPS)*

Exports of dried seafood were worth US$61.6 million in 2006. Exports of dried seafood by value to Asian countries are mainly sent to Japan (69%), HK (10%) and Singapore (7%) whereas other non Asian countries account for only 8% of the value of exports.

[3] CIC Monthly Reports

The total production of seaweed in 2005 reached 910,636 tons and was expected to climb to 1 million tons in 2006. Indonesia is the second largest seaweed exporter in the world after the Philippines.[4]

Appendix Four provides detailed export statistics by country for the targeted seafood species – dried abalone, live lobsters, dried sea cucumber, oysters and seaweed. A summary of the export data for 2006 is provided below and in Table 3.

- Dried Abalone – US$3.7 million with the main markets being USA (54%) and Canada (29%).
- Live Lobsters (not including rock lobsters) – US$6.0 million with the main markets being HK (92%).
- Dried sea cucumber – US$4.9 million with the main markets being HK (41%), Vietnam (13%) and Singapore (12%).
- Seaweed – US$24.8 million with the main markets being China (23%), HK (14%) and Philippines (12%).

**Table 3: Indonesian Selected Seafood Exports by Value and Volume, 2006**

| HS | Commodity | Weight (kg) | Value (US$) |
|---|---|---|---|
| 1605901000 | Abalone, Prepared or Preserved | 1,395,307 | 3,691,565 |
| 0306212000 | Rock Lobsters and Other Sea Crawfish, Live | 417,602 | 1,811,718 |
| 030621300 | Rock Lobsters and Other Sea Crawfish, Fresh or Chilled | 469,294 | 749,520 |
| 0306222000 | Lobsters, Live | 1,140,374 | 6,049,254 |
| 0306223000 | Lobsters, Fresh or Chilled | 21,563 | 60,670 |
| 0307101000 | Oysters, Live | 59,524 | 83,085 |
| 0307102000 | Oysters, Fresh, Chilled or Frozen | 108,078 | 179,044 |
| 0307103000 | Oysters, Dried, Salted or in Brine | 37,569 | 73,078 |
| 0307992000 | Beche-De-Mer (Sea cucumber / Trepang), Dried, Salted or in Brine | 1,748,218 | 4,946,060 |
| 1212201000 | Seaweeds & Oth Algae Fresh, Chilled or Dried | 58,525,446 | 24,708,811 |
| 1212202000 | Seaweeds & Oth Algae, Fresh, Chilled or Dried; Not for Human consumption | 8,347,233 | 4,011,800 |

*Source: The Indonesian Bureau of Statistic (BPS Book, 2006)*

### 2.3 Provinces

The two major cities and ports of Indonesia (Jakarta near West Java and Surabaya in East Java) are the main provinces that export seafood accounting together for 38% and 57% of the volume and value of Indonesia's seafood exports respectively. Most of this has been transshipped from other provinces due to better logistics and shipping frequencies from Jakarta and Surabaya.

Jakarta, the capital of Indonesia, is a small province on the northwest coast of the island of Java. Jakarta has a population of 8.7 million people in 2005 (ranked 6th in population size in

[4] CIC Monthly Reports

Indonesia). Jakarta has the largest economy in Indonesia with a GDP of Rp. 436 trillion and a GDP per capita of Rp. 50 million (2nd largest). Jakarta is the "gateway" to business in Indonesia and has the largest port. It is the major link to the provinces in western Indonesia (Sumatra).

Surabaya, the capital of East Java, is located on the eastern part of the island of Java. East Java covers an area of 48,000 km² with a population of 35.6 million in 2005 (2nd largest in Indonesia). East Java has the 2nd highest GDP in Indonesia of Rp. 403 trillion and a GDP per capita of Rp. 11.3 million (ranking it 5th). East Java is a major industrial region and a trading hub linking with provinces in Eastern Indonesia.

South Sulawesi (port of Makassar) is the third largest exporter of seafood (in terms of value), mainly with fresh fish and crustaceans.

**Table 4 : Indonesia Fish Exports by Province 2006, Volume (Tonnes)**

| Province | Fresh (034) | Dried (035) | Crustaceans (036) | Other (037) | Total | % |
|---|---|---|---|---|---|---|
| North Sulawesi | 21,785 | 1,103 | 75 | 6,656 | 29,619 | 3.8 |
| S.E Sulawesi | 402 | - | - | - | 402 | 0.1 |
| South Sulawesi | 6,709 | 313 | 8,397 | 26 | 15,444 | 2.0 |
| Bali | 13,374 | 7 | 892 | 3 | 14,277 | 1.8 |
| East Java | 75,621 | 13,782 | 59,599 | 51,182 | 200,184 | 25.8 |
| Jakarta | 56,959 | 5,224 | 26,433 | 8,457 | 97,072 | 12.5 |
| Other | 303,015 | 4,693 | 99,390 | 11,746 | 418,844 | 54.0 |
| **TOTAL** | **477,865** | **25,122** | **194,785** | **78,070** | **775,842** | **100.0** |

*Source: The Indonesian Bureau of Statistics (BPS) Catalogue 8102*

**Table 5 : Indonesia Fish Exports by Province 2006, Value (US$ 1,000)**

| Province | Fresh (034) | Dried (035) | Crustaceans (036) | Other (037) | Total | % |
|---|---|---|---|---|---|---|
| North Sulawesi | 12,473 | 4,344 | 517 | 13,178 | 30,512 | 1.6 |
| S.E Sulawesi | 578 | - | - | - | 578 | 0.0 |
| South Sulawesi | 31,442 | 1,122 | 59,361 | 336 | 92,261 | 4.7 |
| Bali | 52,893 | 90 | 2,967 | 25 | 55,974 | 2.9 |
| East Java | 93,791 | 42,248 | 416,719 | 218,409 | 771,167 | 39.4 |
| Jakarta | 151,872 | 9,995 | 142,335 | 31,502 | 335,703 | 17.2 |
| Other | 113,072 | 3,818 | 498,947 | 53,422 | 669,258 | 34.2 |
| **TOTAL** | **456,120** | **61,616** | **1,120,845** | **316,871** | **1,955,453** | **100.0** |

*Source: The Indonesian Bureau of Statistics (BPS) Catalogue 8102*

# 3. SOUTH EAST SULAWESI

## 3.1 Population

South East Sulawesi is one of the most remote regions of Sulawesi with no highway connecting it to the other provinces on the island of Sulawesi. The main transportation link is a ferry across the Bone Sea between Watampone (Bone) in South Sulawesi and the port of Kolaka in South East Sulawesi. The population of the province is 2.1 million people, mostly centered on Buton island, off the south coast of South East Sulawesi and in and around Kendari (the capital).

## 3.2 Economy and Transport

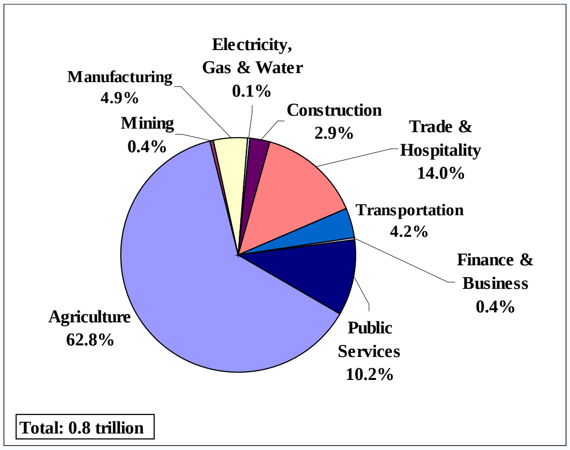
Agriculture[5] activity dominates the economy of South East Sulawesi producing 40% of its GDP and employing 64% of the workforce. The other important industry sector is trade and hospitality with 14% of GDP and employment.

The main container shipping line servicing South East Sulawesi is Meratus Line. There is no cold storage or refrigerated containers at the main cargo port in Kendari. The ships go via Raha then to Bau Bau – which is a main transit port to Eastern Indonesia (Ambon, Papua). Bau Bau is a deep sea port and is also one of the main distribution channels to send seafood to Surabaya.

**Figure 1a. SE Sulawesi Economic Activity**

*Source: BPS (Catalogue No. 9203)*

**Figure 1b. SE Sulawesi Employment by Sector**




*Source: BPS (Catalogue No. 2117.35)*

[5] Includes fisheries

### 3.3 Seafood Supply and Market Chain Linkages - Overview

There are three options to send seafood to the main ports on the island of Java from South East Sulawesi (1) by truck overland to Makassar (capital of South Sulawesi) then by ship/air, (2) by ship from Buta Buta port or (3) by air from Kendari airport.

All seafood that is sent for export must be inspected by Quarantine, if required by the importing country. There are 461 fish traders in Kendari on the registry with Quarantine; however many of these are individuals and have only exported small amounts in the past.

Seaweed, sea cucumber and lobsters are sold mainly to local traders who sell to buyers in the major cities of Makasssar, Surabaya or Jakarta for export or local consumption. Kendari is not considered as an export port but is a source of seafood for export.

### 3.4 Live Fish Supply and Market Chain

Many fishermen bring their live fish catch back to their village and store in a karumba (fish holding tank in the sea water). The fish may be kept for up to 2 months to improve their growth or their health and to build up stock. Collectors in boats will buy live fish from the karumba to sell to traders.

The supply market chain is as follows:

- Fishermen catch live fish and sell to other fishermen who own a karumba
- Collector boats pick up fish from karumbas and sell to packers or traders
- Packers are owned by traders or businessmen
- Traders take the fish from packers and send to exporters or bigger traders

The major problem and challenge facing fishermen and other supply chain participants is to reduce the mortality of live fish.

There are only two main traders in Kendari of live fish for export by air.

<u>Case Study - Mr Ramland (packer and trader of live fish)</u>

Mr Ramland is the manager of a packing/trading business in Kendari which is owned by a Chinese Indonesian man from Jakarta (Mr Paulus from PT Perlin). Mr Paulus also owns four of the fishing boats which supply the live fish to the packing complex at Kendari.

The marketing chain for live fish from Kendari to HK is as follows:

- late afternoon (5pm) fish arrive by boat at the packing shed in Kendari;
- unloaded and placed into holding tanks to refreshen;
- start packing into boxes at 2am;
- by 4am the boxes of live fish are sent to the airport; Lion Air departs at 6.30am; arrives in Jakarta at 9.00am;
- fish are collected and unpacked into holding tanks in Jakarta (near airport) to refreshen;
- quality checks and repacked in early morning;
- sent to HK on morning flight.

During the high season (September) Mr Ramland will sell 5-7 tonnes per month of live fish to Jakarta for export to Hong Kong via airplane. He sends about 200 kg of live fish per air shipment. The live fish are packed in plastic bags inside polystyrene boxes.

The HK market prefers fish with a red colour and the preferred size is for one portion / plate size (0.5 – 0.7 kg each). The trader's fob[6] airfreight selling price to HK is about Rp1.5 million per kg. The main fish species include: Sunu, Kepapa tika, Saixing, Cappay and Kerac.

The live fish business has many challenges as follows:

- supply is inconsistent
- up to 70% of fish received at the packing shed may not be suitable to export. The fishermen do not know how to keep the fish fresh, alive and in a healthy condition.
- 10% of fish sent to Jakarta are not suitable (dead) to export to HK

Distribution costs for live fish from Kendari to Jakarta are as follows:

- Airfreight – Rp12,000 per kg
- Quarantine – Rp50,000 per inspection
- Local transport – Rp300 per kg
- Airport charges – Rp1,700 per kg

The cheaper and larger sized live fish species are sold to HK boat traders that visit many ports in Sulawesi and Kalimantan over a one month journey. These fish species are mainly black in colour and the Kendari selling price to the HK traders is from Rp75,000 per kg. The main fish species include Kergan Tiger and Kergan Lumpan (up to 5kg).

<u>Case Study – Mr Bobby (trader of live fish / consultant)</u>
Mr Bobby trades in live fish and coordinates live fish exports for some of the boat traders from HK. Every month (on average) there are about eight boats (9 – 20 tons of live fish capacity) that come to Indonesia from HK to buy live fish. This equates to about 1,000 tonnes per year with each HK boat carrying about US$250,000 of live fish (10 tonnes).

The challenge for Bobby is to find enough live fish to meet the capacity of the boat. Hence he will buy live fish from many Indonesian ports and provinces including Sulawesi, Lampung and Kalimantan. HK buyers prefer to buy wild caught fish (garoupa) and will discount by 15% - 20% for similar farmed fish species. About 5% to 15% of live fish may die on the voyage back to HK.

One of the challenges for the fishing industry is to change some of the fishing practices. For example, some Indonesian fishermen may use poison to stun the live fish. This does result in a high level of unhealthy and dead fish and can lead to 50% of coral trout dying and up to 30% of tiger garoupa dying, according to Bobby.

[6] FOB is "free on board" - Price quoted at the port of shipment

### 3.5 Live Lobster Supply and Market Chain

Case Study – Mr Edi (packer/trader of live lobster)
Mr Edi is a partner in a live lobster export business with head office in Surabaya, East Java

The marketing chain for live lobster from Kendari to Asian markets is as follows:

- The live lobsters are placed in holding tanks at the packing shed for about 24 hours;
- The lobsters are packed in 20 kg polystyrene cartons and are individually wrapped in newspaper;
- Lobsters are sent by airfreight to Surabaya;
- The cartons are unpacked in Surabaya and the lobsters are placed in holding tanks to maintain their freshness;
- The lobsters are exported from Surabaya by airfreight to HK or sold to buyers in major cities in Indonesia.

Mr Edi supplies about 5 tonnes per month to Surabaya. Dead lobsters are sold at a discount of 50% of the price. While the local price is about Rp30,000 per kg higher than export it takes longer (by 2 weeks) to receive payment. The price for lobster varies depending on species and size.

**Table 6: Lobster Selling Prices, 2nd May 2008**

| No | Lobster Species | Size (grams) | Price (Rp) / kg |
|---|---|---|---|
| 1 | MUTIARA | 2400 UP | 300,000 |
| | | 2000 / 2400 | 315,000 |
| | | 1000 / 2000 | 395,000 |
| | | 600 / 1000 | 340,000 |
| | | 300 / 600 | 275,000 |
| | | 200 / 300 | 270,000 |
| | | 100 / 200 | 295,000 |
| | | 60 / 100 | 150,000 |
| 2 | WARNA | 500 UP | 240,000 |
| | | 300 / 500 | 200,000 |
| | | 200 / 300 | 190,000 |
| | | 100 / 200 | 225,000 |
| | | 60 / 100 | 150,000 |
| 3 | PASIR | 500 UP | 290,000 |
| | | 300 / 500 | 290,000 |
| | | 200 / 300 | 290,000 |
| | | 100 / 200 | 340,000 |
| | | 60 / 100 | 200,000 |
| 4 | BATU | 1500 UP | 150,000 |
| | | 500 / 1500 | 200,000 |
| | | 300 / 500 | 190,000 |
| | | 200 / 300 | 190,000 |
| | | 100 / 200 | 225,000 |

| | | | |
|---|---|---|---|
| | | 60 / 100 | 150,000 |
| 5 | PAKISTAN | 500 UP | 240,000 |
| | | 300 / 500 | 200,000 |
| | | 200 / 300 | 235,000 |
| | | 100 / 200 | 300,000 |
| | | 60 / 100 | 150,000 |
| 6 | KIPAS MERAH | 200 UP | 260,000 |
| 7 | KIPAS MERAH T. | 200 UP | 160,000 |
| 8 | KIPAS HITAM | 200 UP | 150,000 |

*Source: Mr Edi - trader*

### 3.6 Processed Abalone and Sea Cucumber Supply and Market Chain

There are many small processors and traders of dried abalone and sea cucumber operating on the bay of Kendari. They mainly sell to other larger traders or small shops in Kendari and Makassar.

Fresh abalone is bought form local fishermen. The buying price for fresh abalone is Rp50,000 per kg and after drying it is sold for Rp300,000 per kg. The volume of sales depends on the season from 10 kg per month during the wet season and up to 30 kg per day during the dry (peak) season (May to September).

Sea cucumber is bought from local fishermen at a price of Rp5,000 per large piece (30cm); about 500grams. The selling price after drying is Rp500,000 per kg. There is a large weight (water) loss of 85% reduction; 500grams of fresh = 75 grams of dry product.

<u>Case Study – Mr Welly (abalone processor / trader)</u>
Mr Welly buys most of his wet abalone from Central Sulawesi and some from SE Sulawesi. He buys wet abalone from collector where the product has already been boiled and salted. He gives an advance of money to the collector who manages the 10-15 fishermen that supply him; the collector provides money or equipment to the fishermen as a down payment.

He sends the dried abalone to Makassar in second hand boxes by bus or airplane for export.

The challenges are: (1) to obtain a continuous supply of good quality abalone, and (2) drying abalone during the wet season. The quality varies due to poor practices by the fishermen; they keep the abalone too long before boiling or salt then boil (reverse order) which impacts on quality.

The buying price varies based on size and quality; inferior quality is discounted by up to 50%.

Buying prices paid to collectors for "wet"[7] abalone are as follows:

- A class: 25-30 pieces per kg = Rp205,000 per kg
- B class: 30-60 pieces per kg = Rp160,000 per kg
- C class: 60-90 pieces per kg = Rp150,000 per kg
- D class: > 90 pieces per kg = Rp120,000 per kg

---

[7] 1 kg of wet abalone equates to about 500 grams of dried abalone.

The selling prices received for dried abalone are as follows:

- A class: Rp590,000 per kg
- B class: Rp500,000 per kg
- C class: Rp430,000 per kg
- D class: Rp370,000 per kg

**3.7 Seaweed Supply and Market Chain**

There are many seaweed suppliers operating in SE Sulawesi.

<u>Case Study – Mr Hasan (seaweed processor / trader)</u>

Mr Hasan is a medium size trader and sells about 1,000 to 2,000 tonnes per year. He gives an advance of money to the collector (or head of farmer group) who manages the supply; the collector provides money or equipment to the fishermen.

The seaweed quality target is based on 38% moisture content on arrival. The price paid to farmers is discounted by up to 30% if the water content of the seaweed is too high.

The seaweed is packed into 60 – 80 kg sacks and sent to Surabaya or Makassar. In Surabaya the sacks are opened and inspected for quality (moisture content) and repacked for export.

There is no direct export of seaweed from Kendari as:

- Not enough supply
- No established relationship with importers
- Facility not suitable for export; difficult to access shipping containers
- Chinese traders in Makassar (and other ports) control the export

The problem with quality is due to poor cultivation techniques and poor selection of location. Also, seaweed needs 4-5 days to dry but many farmers sell after 2 days of drying.

The buying price varies from Rp5,000 per kg (August) to Rp8,000 per kg (May). The selling price is about Rp9,500 per kg. Mr Hasan will sell some seaweed by contract to Makassar, depending on price movements.

# 4. SOUTH SULAWESI

## 4.1 Population

The population of the province is 8.5 million people. This is the seventh largest (in terms of population) province in Indonesia and the largest outside of the islands of Java and Sumatra. South Sulawesi has a land area of 62,482 km² and the provincial capital is Makassar.

## 4.2 Economy

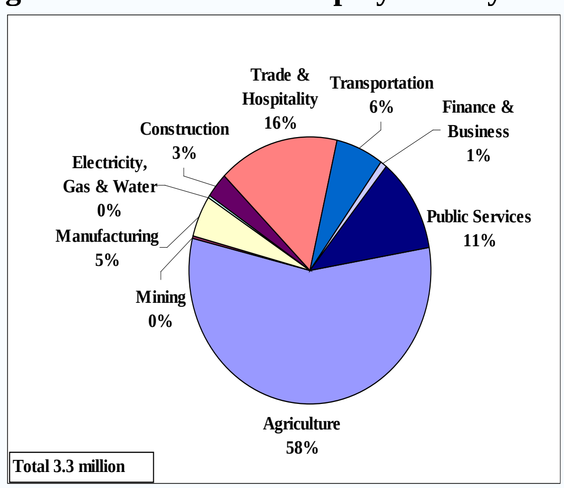
Agriculture[8] is the most important industry for the economy of South Sulawesi with 31% of its GDP and employing 58% of the workforce. The other important industry sectors (in contribution to GDP) are trade and hospitality and manufacturing with 18% and 14% respectively.

Makassar is considered as a centre for trading and hence many of the major businesses now based in South Sulawesi were originally traders. Makassar has a modern port with refrigeration facilities.

**Figure 2a. S. Sulawesi Economic Activity**

*Source : BPS (Catalogue No. 9203)*

**Figure 2b. S. Sulawesi Employment by Sector**




*Source : BPS (Catalogue No. 2117.35)*

[8] Includes fisheries

### 4.3 Makassar Port and Seafood Exports

Makassar is one of four port authorities in Indonesia under the control of the Central Government (Medan, Jakarta, Surabaya and Makassar). Makassar port has sea trade responsibility for eastern Indonesia (from eastern Kalimantan) and covers 18 sea ports.

In 2006, the Makassar Port handled 12,283 twenty foot containers for export, up from 7,671 containers in 2002. Seafood is number six in volume of export traded through Makassar Port after clinker, cocoa, marble, cement and wood/plywood. Seafood is also ranked sixth in domestic trade after cement, rice, clinker, wheat flour and wood.

Seafood products are exported from Makassar Port to a wide range of markets as follows:

- USA – seaweed and sea products
- Netherland – fish and seaweed
- Belgium – shrimp and seaweed
- France, Germany, Italy, Spain and England – seaweed
- Singapore and Hong Kong – seaweed and sea product
- China – seaweed, shrimp and fish
- Japan – seaweed and sea product
- Australia - shrimp

In 2007 there wee 281 registered exporters with the Makassar Port; 118 (42%) were involved in seafood exports as per the table below.

**Table 7: Number of Seafood Exporters from Makassar Port by Fish Type**

| Number | Fish Type (Bahasa) | English |
|---|---|---|
| 2 | Belahan Ikan, Kepiting | Cut Fish, Crab |
| 1 | Daging Ikan Putih | White Fish Fillet |
| 1 | Daging Ikan Tanpa Tulang | Fish Fillet |
| 2 | Daging Kepiting Beku | Frozen Crab Fillet |
| 1 | Gurita Beku | Frozen Octopus |
| 9 | Hasil Laut | Marine Produce |
| 6 | Ikan Beku | Frozen Fish |
| 2 | Ikan Fillet Beku | Frozen Fish Fillet |
| 1 | Ikan Layang | Flying Fish |
| 1 | Telur Ikan Terbang Kering | Dried Flying Fish Roe |
| 1 | Ikan Kerapu | The grouper |
| 1 | Ikan Kuning Beku | Frozen Yellow Fish |
| 3 | Ikan Segar | Fresh Fish |
| 1 | Ikan Sunu Beku | Frozen Sunu Fish |
| 1 | Ikan Tenggiri Beku | Frozen Mackerel |
| 4 | Ikan Tuna Beku | Frozen Tuna |
| 1 | Ikan Trout Beku | Frozen Trout Fish |
| 3 | Kerang Laut | Sea Shells |
| 41 | Rumput Laut | Sea Weed |
| 2 | Taripang Kering | Dried Sea Cucumber |

| | | |
|---|---|---|
| 3 | Telur Ikan | Fish Roe |
| 9 | Telur Ikan Terbang | Flying Fish Roe |
| 2 | Tuna Segar | Fresh Tuna |
| 10 | Udang Beku | Frozen Shrimp |
| 5 | Udang Segar | Fresh Shrimp |
| 4 | Udang Segar Beku | Frozen Fresh Shrimp |

*Source: Makassar Port Authority*

**4.4 Shipping Costs**

Details of shipping costs from Makassar to various markets in reefer and dry containers are summarized in table 10 below, while in table 11 below information is provided on the cost of shipping from Jakarta to various overseas ports. A comparison of the data highlights the large cost saving from shipping from Jakarta compared to Makassar; more than half the cost to some of the major seafood markets like China.

**Table 8: Makassar Shipping Costs to Various Ports**

| No | Country | Port | Reefer | | Time (weeks) |
|---|---|---|---|---|---|
| | | | 20’ | 40’ | |
| | | | US$ | US$ | |
| 1 | Australia | Brisbane | 3,150 | 6,300 | 3 |
| 2 | China | Shanghai | 2,550 | 3,400 | 2 |
| 3 | Japan | Tokyo | 2,750 | 5,500 | 2 |
| 4 | Malaysia | Port Klang | 2,400 | 4,800 | 1 |
| 5 | Singapore | Singapore | 2,400 | 4,800 | 1 |
| 6 | Thailand | Bangkok | 2,650 | 3,450 | 1 |

*Source: Freight Express Makassar Indonesia, Sept. 2007*

**Table 9: Jakarta Shipping Costs to Various Ports**

| No | Country | Port | Reefer | | Time |
|---|---|---|---|---|---|
| | | | 20’ US$ | 40’ US$ | |
| 1 | China | Shanghai | 1,000 | 1,500 | 14 days |
| 2 | Hong Kong | Hong Kong | 1,100 | 1,700 | 7 days |
| 3 | South Korea | Busan | 1,550 | 2,250 | 10 days |
| 4 | Japan | Tokyo | 1,950 | 3,400 | 7 days |

*Source: Freight Express Jakarta Indonesia, Sept. 2007*

The cost to send a reefer container from Makassar to Surabaya is Rp 11.5 million for a 20 foot container and Rp 17.5 million for a 40 foot reefer container. It is only marginally more expensive to send a reefer container to Jakarta from Makassar at a cost of Rp.12 million and Rp 19.5 million for a 20 foot and 40 foot reefer container respectively. The container ship from Makassar to Surabaya will take 2 days and an extra day to Jakarta.

**4.5 Seafood Supply and Market Chain**

The Indonesian Chamber of Commerce (Kadin) has over 4,000 members in South Sulawesi; 17 members are involved in mariculture export – fish, shrimp, seaweed, sea cucumber.

Case Study – Mr Adam (Fishing cooperative PUSKOPIN)

The central cooperative buys seafood from 18 primary cooperatives located in the districts of South Sulawesi. Each primary cooperative has about 1,500 fishermen.

The central cooperative handles a range of seafood with most sales being frozen fish (35%), seaweed (45%) and sea cucumber (20%). The central cooperative will sort the various seafood products and packs for export or inter island trade. The cooperative has coolroom capacity for chilled (80 tonnes) and frozen (4 tonnes). It has 2 airblasters for the chiller rooms and uses outside freezer storage.

Primary cooperatives do some sorting but the problem is that they do not have access to airblasters to reduce quickly the temperatures of the seafood; this can result in deterioration.

There are about 9 main traders in Makassar of frozen fish sending to Java customers. Frozen fish (small) are sent mostly to Java wholesalers (sold to pasars) and some is exported to China via Surabaya to HK (in the past it was exported direct from Makassar to HK); 3-5 containers per month are sent to China. Other frozen fish is exported to Singapore, Taiwan and Korea. For frozen fish the rejection is low; only 1% - 2%.

Seaweed is exported to many markets with most going to China; total demand is about 1,500 tonnes per month for 2 varieties. China buys seaweed at 25% water content. Seaweed to Korea is 15 x 40 foot containers per month; demand is strong (300 tonnes per month). Seaweed has also been exported to Chile (one time) and Argentina (for 3 years) at 18% water content. The cooperative will pay Rp3,000 per kg for good quality seaweed but if it is not dried according to their advice they pay only Rp1,800 per kg. The PUSKOPIN needs to source sea weed outside its cooperative members to meet contracted demand. Seaweed is bought at an agreed water content (38%) and will need to be repacked if the product does not meet the customer specifications.

They have undertaken some training programs in different districts with some success depending on the “culture” of the district; fishermen want the money quickly and are inpatient so will only dry the seaweed partially so they receive less money but quicker.

The problem for the cooperative is a shortage of financial capital to source and pay for seafood for export. Importers pay on “letters of credit” (LC) after 45 days from shipment so the PUSKOPIN has to mange the capital gap; banks are reluctant to lend to the cooperative for export. If PUSKOPIN does not have the finances to buy the seafood from the primary cooperative they will act as a broker and link them to buyers.

Sea cucumber is sold to Taiwan, Korea and HK with the buying price (BP) paid to the fishermen collector and the selling price (SP) from cooperative (PUSKOPIN) to the trader depending on sizes as follows:

- Small size: BP = Rp280,000 per kg (70% dry); SP = Rp500,000 per kg fob
- Medium: BP = Rp750,000 per kg (60% dry); SP = Rp1.2 m per kg fob
- Large: BP = Rp450,000 per kg (60% dry); SP = Rp750,000 per kg fob

## 5. SUMMARY OF KEY ISSUES AND CONCLUSIONS

The study has identified a range of opportunities and constraints affecting the growth of the SE Sulawesi seafood industry. These are summarized below.

<u>a. Export demand for seafood is strong.</u> Indonesia is a major producer of a wide range of seafood for export to markets in Asia, USA and EU. Seafood (live fish, lobsters, dried abalone, dried sea cucumber and seaweed) is an important part of the economy of SE Sulawesi as the waters of SE Sulawesi provide fertile ground and a large supply base for wild catch seafood and further potential for farmed seafood.

*There are good opportunities to expand the practice of "farmed" seafood as supply of "wild catch" seafood diminishes. There is also an opportunity to introduce regional branding (based on QA standards) to promote the Kendari seafood industry. This could be done through the establishment of a local trading cooperative.*

<u>b. Fishermen are not market focused.</u> Fishermen supply to a collector what they catch or produce rather than what the buyer wants. This leads to lower or discounted returns to the fishermen if the seafood doesn't meet specifications on size, freshness or water content.

*There is a need for training of fishermen to reduce the mortality of live fish through improved husbandry practices.*

<u>c. Traders have the market power.</u> City based traders (from Jakarta, Surabaya or Makassar) control the buying and selling (for export or domestic markets) of seafood from Kendari seafood suppliers. Fishermen from Kendari are then price takers and lack the knowledge of market requirements. In Makassar there is a major fishing cooperative (PUSKOPIN) which provides a vehicle for exchange of information and trade.

*There is a need for better communication between traders and fishermen on market requirements.*

<u>d. Limited infrastructure.</u> The Kendari port does not have reefer containers or coldstorage facilities unlike the port of Makassar. There is ice making facilities in Kendari for fishermen. Also, traders in Kendari of live fish have holding tanks and packing facilities.

*There is an opportunity to introduce packing facilities in fishing communities so that they can hold and pack fish for the market. This will bring the fishermen closer to the market and improve market signals which could lead to an increase in profit per kg of seafood.*

<u>e. Involve all Strategic Allies.</u> There are a few local Government departments that provide a service role in the seafood industry in SE Sulawesi.

*There is a need to involve all allies in training and market development programs, including Quarantine, the Department of Fisheries and the University.*

## REFERENCES


Capricorn Indonesia Consult Inc., PT (CIC) Business report, http://www.cic.co.id

Data from Haris Sarita, Lecturer at the Haleuleo University, Kendari

Department of Fisheries and Marine, South East Sulawesi Province

Freight Express Jakarta Indonesia, Sept. 2007

Freight Express Makassar Indonesia, Sept. 2007

Indonesia Bureau of Statistics (BPS)

Interviews with private traders in Kendari (Ramlan, Ali Topan, Edi, Hendra and Haji Hasan)

Quarantine Department in Kendari, South East Sulawesi

**APPENDIX ONE - ITINERARY**

## Visit Program

**Phillip Morey**

**Morelink Asia Pacific**

30th April to 6th May 2008

Kendari and Makassar, Indonesia

# ACCOMMODATION & FLIGHT DETAILS

***Kendari, Indonesia***

| | |
|---|---|
| **Hotel Name:** | **Imperial Hotel** |
| **Street Address:** | Jl. Ahmad Yani No. 77 |
| **Telephone:** | (+62 401) 391 222 |
| **Facsimile:** | (+62 401) |
| **Check in:** | Wednesday, 30th April 2008 |
| **Flight Detail:** | JT 788 at 18.00 |
| **Check out:** | Sunday, 4th May 2008 |
| **Flight Detail:** | JT 789 at 06.30 a.m. |

## SCHEDULE / ITINERARY

***Kendari*** ***Wednesday, 30th April 2008***

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| 18.00 p.m. | | Depart Jakarta to Kendari by JT788 |

| | | |
|---|---|---|
| 22.40 p.m. | | Arrives Kendari |
| Overnight | | Imperial Hotel, Jl. Ahmad Yani No. 77, Kendari.<br>Ph. 0401 - 391222 |

**_Kendari_** **_Thursday, 1st May 2008_**

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| | Visited fishing villages surrounding the bay of Kendari with Mr Andrew Winstanley. | |
| | | |

**_Kendari_** **_Friday, 2nd May 2008_**

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| 09.00 a.m. | Dr. Laode M. Aslan<br>Mr Haris<br>Faculty of Fisheries and Marine Science<br>**Haluoleo University**<br>Kendari 93232, Indonesia<br>Mob. +62 813 4151 4869<br>Email. aslaod66@yahoo.com | |
| 10.30 a.m. | Mr Hamsah, Quarantine | |
| 13.00 p.m. | Visit to the fish wholesale market - Tempat Pelelangan Ikan (TPI) | |
| 14.30 p.m. | Meeting with packer/trader of live fish – Mr Ramland | |
| 16.00 p.m. | Meeting with small abalone and sea cucumber processor / trader | |
| 17.00 p.m. | Meeting with abalone processor / trader – Mr Welly | |

**_Kendari_** **_Saturday, 3rd May 2008_**

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| 9.00 a.m. | Meeting with abalone processor / trader – Mr Welly | |
| 11.00 a.m. | meeting with seaweed processor / trader – Mr Hasan | |

| | | |
|---|---|---|
| 13.00 p.m. | Meeting with packer/trader of live lobster – Mr Edi | |
| 16.00 p.m. | Meeting with trader of live fish / consultant – Mr Bobby | |

***Kendari*** ***Sunday, 4th May 2008***

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| | | |
| | | |

***Makassar*** ***Monday, 5th May 2008***

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| 06.30 a.m. | | Depart Kendari to Makassar by JT 789 |
| 07.20 a.m. | | Arrives Makassar |
| 08.00 a.m. | Mr. Adam & Mr. Bora<br>**Pusat Koperasi Pengrajin Ikan (PUSKOPIN) Sulawesi Selatan**<br>Kawasan Industri Makassar (KIMA) VIII No. 9, Makassar (only 10 minutes from the airport)<br>Mob. 0811444199 / Ph. 0411 - 4723189 | |
| 11.00 a.m. | Meeting with Kadin (chamber of commerce) – Mr Syahrir and Mr Gazali | |
| 15.00 p.m. | Meeting with exporter of dried abalone – Mr Harry | |

***Makassar*** ***Tuesday, 6th May 2008***

| TIME | CONTACT/LOCATION | COMMENTS |
|---|---|---|
| 11.30 a.m. | Meeting with packer / exporter of sea cucumber and seaweed – Mr Ecky | |
| 19.40 p.m. | | Depart Makassar to Jakarta by JT 783 |
| 21.00 p.m. | | Arrives Jakarta |

## APPENDIX TWO – SEAFOOD QUESTIONNAIRE

**Mariculture Survey of Traders in South East Sulawesi (Kendari and Bau Bau)**

Name :
Company :
Address :
Phone / Fax :
Email :

Q.1 Which of the following seafood products do you trade?

1. Marine grouper,
2. Spiny Lobster (live)
3. Abalone (processed)
4. Sea Cucumber (processed / dried)
5. Seaweed
6. Pearl Oyster
7. Other

Q.2 What volume of each container (tonnes) do you sell each month? (average per year)

________________________________________

Q.3 Which markets / outlets do you sell seafood products to?

a. Domestic (eg Makassar or Surabaya or Bali or Jakarta or others?)

________________________________________

b. Export (eg Singapore or Japan or others?)

________________________________________

Q.4 Who are your key customers? (Contact Details)

________________________________________

Q5 What are the major problems facing traders in selling seafood?

________________________________________

Q. 6 What are the major problems facing traders in sourcing / buying seafood?

________________________________________

Q.7 Who do you buy your seafood from?

________________________________________

Q. 8 Where are the opportunities for expanding trade in seafood? Which markets? Which products?

________________________________________

Q.9 Do you have coldstorage facilities? What is the capacity (tonnes) for frozen and chilled?

________________________________________

## APPENDIX THREE – SUMMARY OF SEAFOOD CONTACTS

- Andrew Winstanley, fisheries business consultant; HP = 081318105800

### South East Sulawesi

- Johnny Eco (guide to Bau Bau island); HP = 081341884278
- Munsir (guide to Kendari and fisheries); HP = 085241685877
- Ramland (trader in live fish from Kendari to Jakarta to HK); HP = 085241554777
- Dr Aslan, Fisheries Faculty at University Haluoleo (dean); HP = 081341514869
- Haris Sarita, Fisheries Faculty at University Haluoleo (lecturer); HP = 085696074913
- Hamsah, Ministry of Quarantine; HP = 081348507376; TLP = 0401-396383; ski_kdi@yahoo.com
- Welly and Hendra Hamindo, Toko Hendrajaya (abalone and sea cucumber trader); HP = 085921497179
- Edi Topan, UD Sumber Laut (packer and trader of live lobsters); HP = 081341530111
- Hasan Harisah, UD Sumber Makmur (trader of sea weed); HP = 0811408298
- Bobby (live fish trader); HP = 081341883968
- Marwiyah Tombili, foreign aid consultant (good english skills); HP = 0811402264

### South Sulawesi

- Ecky Marjuti, CV Sumber Laut (packer / exporter of dried sea cucumber and seaweed); HP = 08124160296
- Harry (export of dried abalone); HP = 0811412288
- Syahrir Nur, Executive Director South Sulawesi Kadin (business association); HP = 08124268073
- Gazali Kahar, Business Information South Sulawesi Kadin (business association); HP = 081543242206
- Sukardy, Black Earth Resources (organic fertilizer/feed); HP = 08152515889
- Bora, manager of Fishing Cooperative SE Sulawesi(Puskopin); HP = 08194100039
- Adam, chief of Fishing Cooperative SE Sulawesi(Puskopin); HP = 0811444199

## 3.1 Kendari (South East Sulawesi) Business Cards

DEPERTEMEN PENDIDIKAN NASIONAL
UNIVERSITAS HALUOLEO
**FAKULTAS PERTANIAN**

**Dr. Ir. H. Gusti R. Sadimantara, M.Agr.**
Pembantu Dekan I

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**H. HASAN HARISAH**
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Beli : Rumput Laut,
Kerang - kerang,
Macam - macam Hasil Laut

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**Dr. Ir. La Ode M. Aslan, M.Sc**
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Rumah :
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Telp. 0401 - 393 738
Hp. 081 341 514 869

**PT. ARAHON INDAH**
ARAHON INDAH

Tirta Fernandy

factory:
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Kecamatan Betoambari
Kodya Bau - Bau
Sulawesi Tenggara

office:
Jl. Yos Sudarso No. 31 - 33
Bau - Bau 93711
Sulawesi Tenggara
Phone: 62-402-21785, 21593
Fax. 62-402-21486
e-mail: tirta_arahonindah@hotmail.com

home:
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Surabaya 60117
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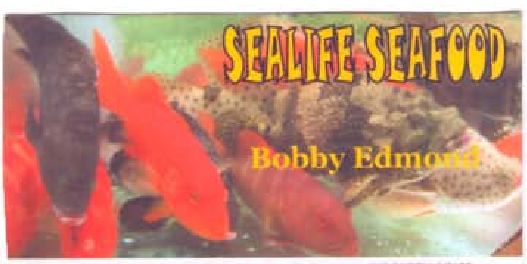
Fax. 62-31-593 0039
Mobile: 62-81-331 88 7777

**UD. SUMBER LAUT**
EXPORTIR LIVE / FRESH LOBSTER & FISH

***EDI TOPAN***
HP. 0813 4153 0111

OFFICE :
GARDEN DIAN REGENCY
JL. TAMAN CAMELIA 1/6
TLP. 031 8674651
SURABAYA - INDONESIA

FACTORY :
JL. JEND. SUDIRMAN 132
TLP. 0401 328564
FAX. 0401 322168
KENDARI - SULAWESI TENGGARA




Perumahan Kedamaian Indah Blok L-11 Bandar Lampung,INDONESIA 35122
Phone : 62-721-264934
Fax : 62-721-264934
Mobile : 62-81140-9188
Mobile Fax: 62-81140-5355

Toko **HENDRAJAYA**
0859-2149-7179
*Welly Hamindo*

Alamat :
Jl. W. Monginsidi No. 31 Telp. (0401) 321098
KENDARI

## 3.2 Makassar (South Sulawesi) Business Cards

Kamar Dagang dan Industri (KADIN) Sulawesi Selatan
South Sulawesi Chamber of Commerce and Industry

GAZALI KAHAR
Business Information & SME's Services

Office:
Jl. Jend A.Yani No.23 Makassar
Telp. 0411-321704 Fax. 326553
Website: www.kadinsulsel.or.id
Email: kadin@kadinsulsel.or.id

Residence:
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CV. SUMBER LAUT
EXPORTERS

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MAKASSAR

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Tlp. 0411 - 319977
MAKASSAR

PUSAT KOPERSI PENGRAJIN IKAN (PUSKOPIN) SULAWESI SELATAN INDONESIA

*As. Adam*
Ketua

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### 3.3 Bau Bau Seafood Traders

| | | | |
|---|---|---|---|
| 1. | Name | : | Yanto |
| | Location | : | Bau Bau |
| | Export to | : | Bali, China |
| | Species | : | Seaweed, Sea Cucumber, Lobster and Grouper |
| 2. | Name | : | Sahirun |
| | Location | : | Wangi – Wangi (Wanci) |
| | Species | : | Mix (Mr. Sahirun as a coordinate person to collect /buying seafood product in Wanci |
| 3. | Name | : | H. Abubakar<br>CV. Jaya Makmur (Bau-Bau branch office) |
| | Export to | : | Hong Kong and Korea (by seafreight) |
| | Species | : | Grouper (from several fishermen). 300 – 500 kg per sending |
| 4. | Name | : | Ma'ruf (operator with Hong Kong's vessel |
| | Location | : | Bau – Bau, Batara Guru |
| 5. | Name | : | H. Latula |
| | Location | : | Tiworo Island |
| | Species | : | Mix |
| 6. | Name | : | H. Hardin (CV. Artha Bahari, Bau Bau) |
| | Species | : | Seaweed |
| 7. | Name | : | Governor's Founder |
| | Location | : | Tapi Tapi (Muna), Perigi District |
| | Species | : | Grouper |
| 8. | Name | : | Gusrin |
| | Location | : | North Buton |
| | Species | : | Grouper |
| 9. | Name | : | L.D. Karimmas |
| | Locaton | : | North Buton |
| | Species | : | Seaweed |

**APPENDIX FOUR - SEAFOOD EXPORTS BY COMMODITY AND COUNTRY, 2006**

| HS | Commodity | Country | Weight (kg) | Value (US$) |
|---|---|---|---|---|
| 1605901000 | Abalone, Prepared or Preserved | Japan | 10 | 1 |
| | | Hongkong | 19,665 | 48,280 |
| | | Korea | 10,560 | 3,696 |
| | | Singapore | 9,098 | 24,258 |
| | | Philippines | 8,806 | 34,845 |
| | | Morocco | 2,447 | 2,631 |
| | | Australia | 897 | 1,638 |
| | | Timor Leste | 30 | 10 |
| | | USA | 760,438 | 1,992,857 |
| | | Canada | 421,665 | 1,065,730 |
| | | Mexico | 14,942 | 37,400 |
| | | United Kingdom | 56,857 | 134,458 |
| | | Netherlands | 24,078 | 69,841 |
| | | Belgium | 17,264 | 49,750 |
| | | Spain | 48,539 | 226,119 |
| | | **Total** | **1,395,307** | **3,691,565** |
| 0306212000 | Rock Lobsters and Other Sea Crawfish, Live | Japan | 338 | 4,257 |
| | | Hongkong | 190,211 | 859,492 |
| | | Taiwan | 211,729 | 867,069 |
| | | China | 1,926 | 7,120 |
| | | Thailand | 81 | 750 |
| | | Singapore | 11,896 | 58,980 |
| | | Malaysia | 358 | 9,060 |
| | | Vietnam | 6 | 600 |
| | | Trinidad and Tobago | 1,057 | 4,390 |
| | | **Total** | **417,602** | **1,811,718** |
| 030621300 | Rock Lobsters and Other Sea Crawfish, Fresh or Chilled | Taiwan | 160 | 1,600 |
| | | Singapore | 107,982 | 201,825 |
| | | Malaysia | 360,847 | 545,570 |
| | | Australia | 305 | 525 |
| | | **Total** | **469,294** | **749,520** |
| 0306222000 | Lobsters, Live | Japan | 2 | 10 |
| | | Hongkong | 805,855 | 5,597,132 |
| | | Taiwan | 308,084 | 345,227 |
| | | China | 3,763 | 57,613 |
| | | Singapore | 19,426 | 44,877 |
| | | Malaysia | 110 | 1,180 |
| | | Vietnam | 2,944 | 2,186 |
| | | Nigeria | 126 | 190 |
| | | Australia | 64 | 839 |
| | | **Total** | **1,140,374** | **6,049,254** |
| 0306223000 | Lobsters, Fresh or | Japan | 75 | 1,080 |

| | | | | |
|---|---|---|---|---|
| | Chilled | Hongkong | 5,599 | 22,051 |
| | | Korea | 1,162 | 8,581 |
| | | Taiwan | 276 | 750 |
| | | China | 700 | 2,100 |
| | | Singapore | 10,376 | 21,435 |
| | | Malaysia | 3,375 | 4,673 |
| | | **Total** | **21,563** | **60,670** |
| 0307101000 | Oysters, Live | Japan | 4 | 38 |
| | | Hongkong | 1,170 | 2,524 |
| | | Korea | 7,538 | 34,418 |
| | | Taiwan | 1,050 | 2,100 |
| | | China | 35,174 | 8,188 |
| | | Singapore | 12,430 | 25,512 |
| | | Vietnam | 281 | 1,053 |
| | | South Africa | 23 | 200 |
| | | USA | 742 | 2,563 |
| | | Canada | 374 | 2,245 |
| | | United Kingdom | 490 | 3,295 |
| | | France | 138 | 724 |
| | | Germany | 110 | 225 |
| | | **Total** | **59,524** | **83,085** |
| 0307102000 | Oysters, Fresh, Chilled or Frozen | Japan | 39,366 | 76,905 |
| | | Malaysia | 900 | 4,500 |
| | | Iran | 26,290 | 24,975 |
| | | USA | 41,522 | 72,664 |
| | | **Total** | **108,078** | **179,044** |
| 0307103000 | Oysters, Dried, Salted or in Brine | Hongkong | 27,756 | 58,567 |
| | | China | 44 | 144 |
| | | Singapore | 3,824 | 3,934 |
| | | Malaysia | 376 | 1,128 |
| | | Vietnam | 2,545 | 6,971 |
| | | Canada | 280 | 480 |
| | | France | 450 | 90 |
| | | Switzerland | 2,000 | 1,668 |
| | | Italy | 294 | 96 |
| | | **Total** | **37,569** | **73,078** |
| 0307992000 | Beche-De-Mer (Sea cucumber / Trepang), Dried, Salted or in Brine | Japan | 1,063 | 3,730 |
| | | Hongkong | 665,583 | 2,033,678 |
| | | Korea | 178,865 | 974,262 |
| | | Taiwan | 4,382 | 16,668 |
| | | China | 75,881 | 202,385 |
| | | Thailand | 519 | 1,030 |
| | | Singapore | 301,850 | 595,479 |
| | | Malaysia | 38,149 | 150,074 |
| | | Vietnam | 353,927 | 631,307 |

| | | | | |
|---|---|---|---|---|
| | | India | 100 | 1,040 |
| | | Cyprus | 286 | 375 |
| | | Australia | 291 | 2,600 |
| | | USA | 60,348 | 170,440 |
| | | Canada | 50,319 | 118,133 |
| | | Brazil | 85 | 60 |
| | | Belgium | 15,059 | 44,153 |
| | | Italy | 1,511 | 646 |
| | | **Total** | **1,748,218** | **4,946,060** |
| 1212201000 | Seaweeds & Oth Algae Fresh, Chilled or Dried Used in Dyeing, Tanning | Japan | 351,891 | 694,486 |
| | | Hongkong | 13,189,691 | 3,380,329 |
| | | Korea | 989,911 | 611,068 |
| | | Taiwan | 356,450 | 106,145 |
| | | China | 17,594,022 | 5,784,580 |
| | | Thailand | 70,700 | 46,931 |
| | | Phillipines | 6,109,239 | 3,063,196 |
| | | Malaysia | 234,855 | 543,441 |
| | | Vietnam | 3,505,303 | 790,735 |
| | | United Arab Emirates | 137 | 328 |
| | | Morocco | 60,000 | 20,000 |
| | | Tunisia | 305,150 | 167,825 |
| | | Ghana | 1,552 | 1,900 |
| | | Australia | 268,000 | 341,150 |
| | | USA | 3,538,509 | 1,645,326 |
| | | Canada | 147,000 | 82,075 |
| | | Mexico | 40,000 | 26,000 |
| | | Panama | 68,000 | 44,200 |
| | | Chile | 2,200,599 | 1,069,258 |
| | | Venezuela | 10,000 | 6,500 |
| | | Argentina | 1,215,000 | 673,750 |
| | | Brazil | 311,150 | 185,633 |
| | | Malvinas | 147,900 | 86,521 |
| | | United Kingdom | 622,100 | 1,676,990 |
| | | Netherlands | 40,000 | 148,000 |
| | | France | 603,800 | 549,100 |
| | | Germany | 292,350 | 370,710 |
| | | Belgium | 104,000 | 84,600 |
| | | Denmark | 1,532,874 | 644,126 |
| | | Italy | 55,867 | 9,226 |
| | | Spain | 4,234,996 | 1,638,802 |
| | | Portugal | 261,000 | 118,770 |
| | | Poland | 21,000 | 13,650 |
| | | Lithuania / Russia | 42,400 | 83,460 |
| | | **Total** | **58,525,446** | **24,708,811** |

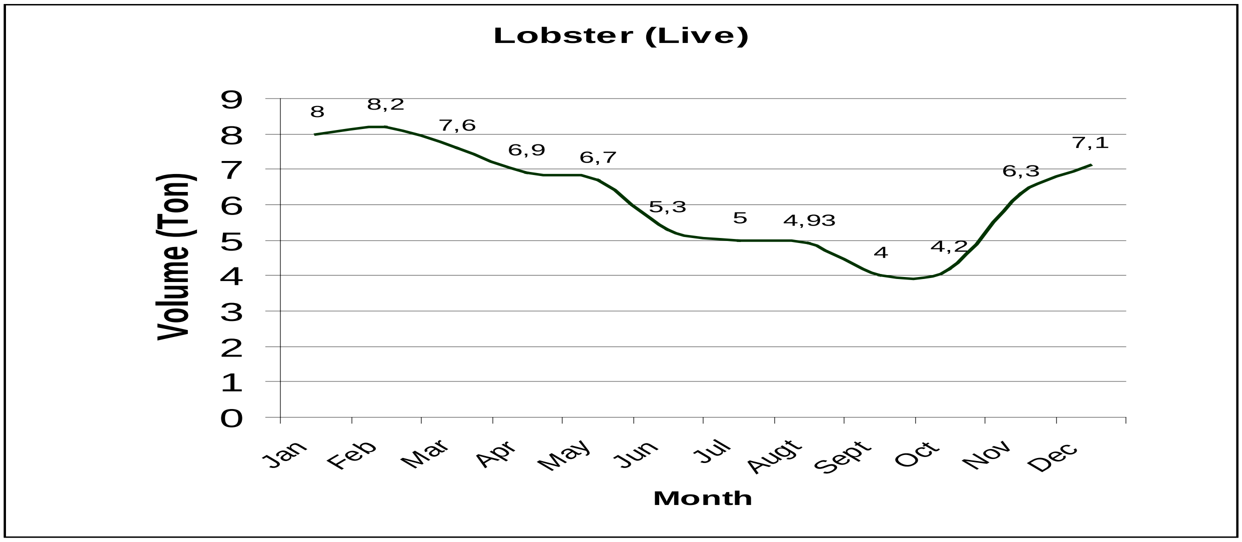
*Source: The Indonesian Bureau of Statistic (BPS Book, 2006)*

## APPENDIX FIVE – SOUTH EAST SULAWESI DATA[9]

**A5.1 Live Lobster**

In 2007, Mr Topan (a trader from Kendari) exported (via Surabaya) 74.2 tonnes of live lobster (See figure below) with 50% to Hong Kong and 50% to Taiwan.

**Figure 7: Live Lobster Exports by Mr Topan by Month, 2007**

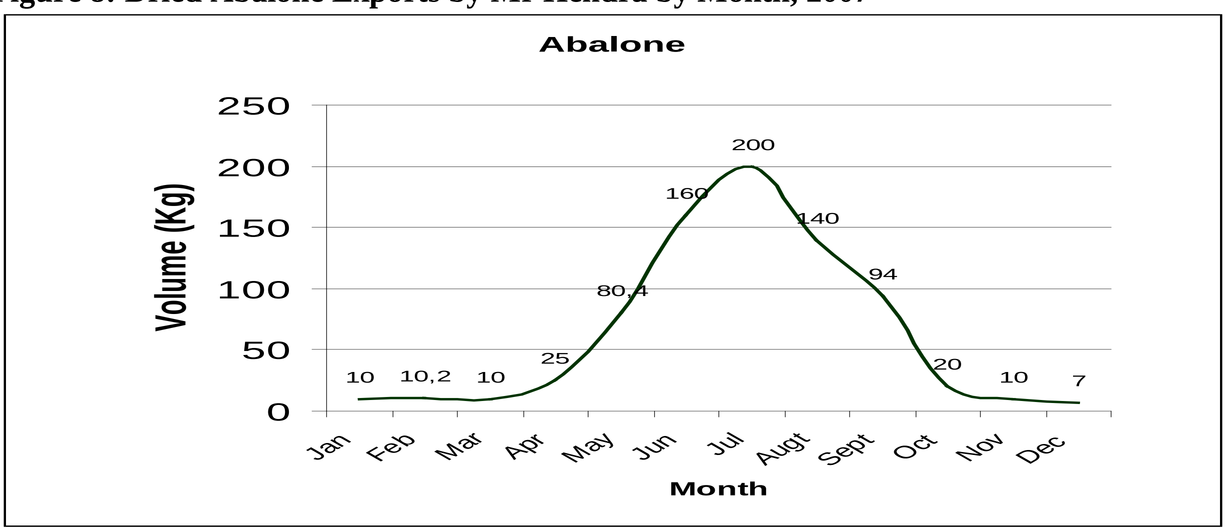



*Source: Mr Ali Topan (trader in Kendari)*

**A5.2 Dried Abalone**

In 2007, Mr Herndra exported (via Surabaya and Makassar) 774.6 kilograms of dried abalone (See figure below) with 80% to Hong Kong, 10% to Taiwan and 10% to China.

**Figure 8: Dried Abalone Exports by Mr Hendra by Month, 2007**



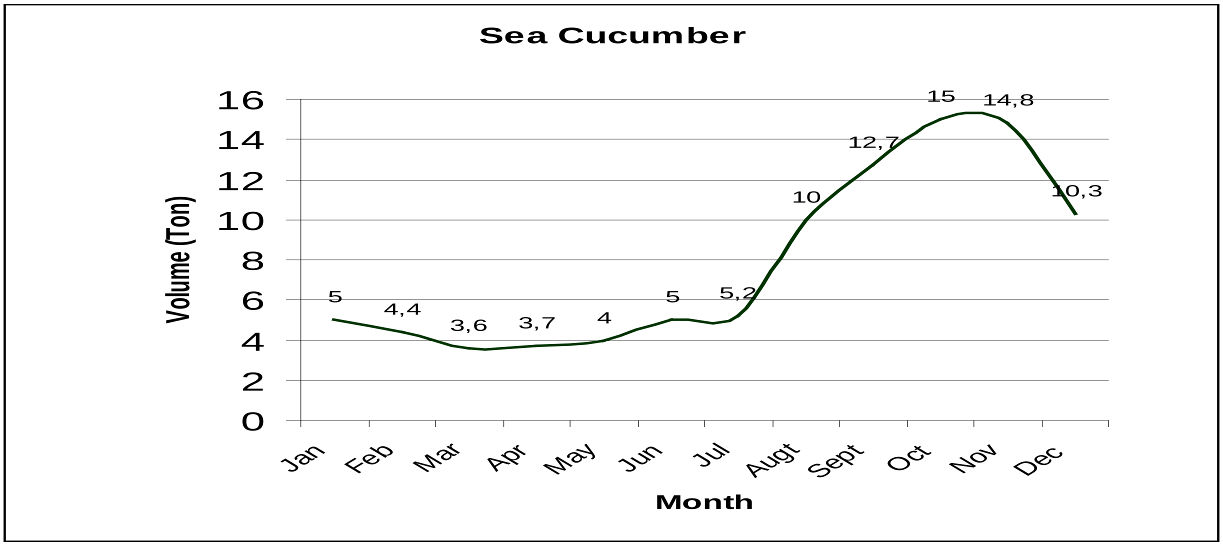

*Source: Mr Hendra (trader)*

[9] Data collected and analyzed by Haris Sarita, Lecturer from Haleuleo University, Kendari, based on interviews with traders

### A5.3 Dried Sea Cucumber

In 2007, Mr Hasan exported 93.7 tonnes of dried sea cucumber (See figure below).

**Figure 10: Dried sea cucumber exports from Mr Hasan by month, 2006**

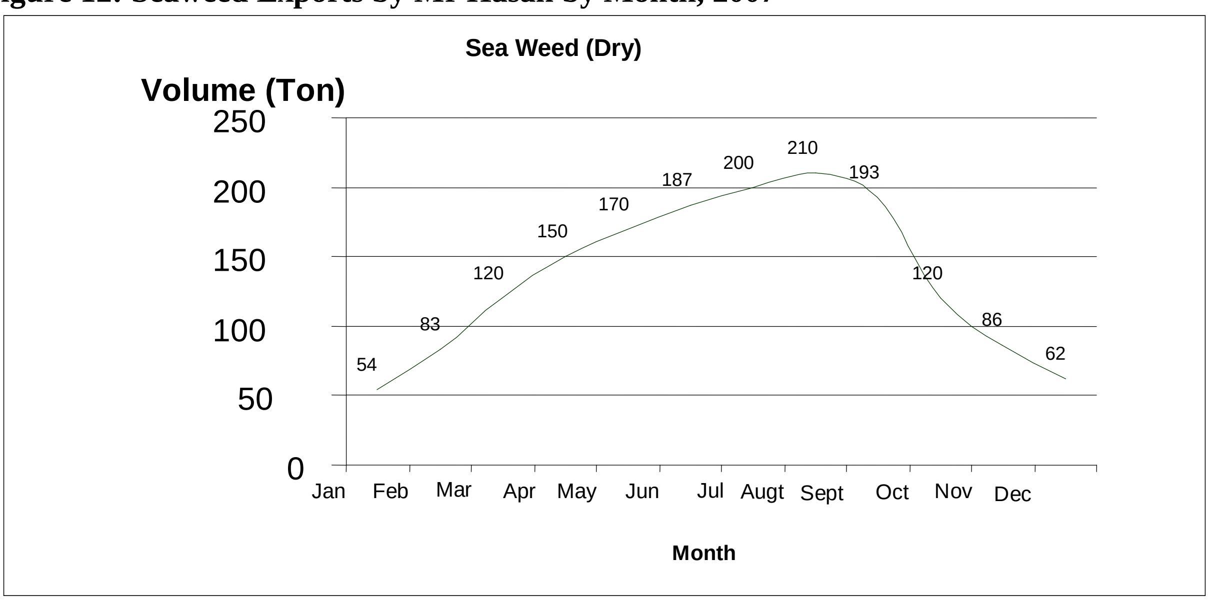



*Source: Mr Haji Hasan (trader in Kendari)*

### A5.4 Seaweed

In 2007, Mr Hasan exported (via Surabaya and Jakarta) 1,636 tonnes of dried seaweed (See figure below) with 50% to Hong Kong, 30% to Philippines and 20% to Europe.

**Figure 12: Seaweed Exports by Mr Hasan by Month, 2007**




*Source: Mr Haji Hasan (trader in Kendari)*