



Marketing Potential and Challenges for Expanding the Production of Sea Cucumber in Southeast Asia

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Outline

- **Characterization of sea cucumber markets in Southeast Asia**
- **Marketing opportunities and challenges**
- **Recommendations**

Presentation Focus

- **Major features of the marketing system for sea cucumber in Southeast Asia.**
- **Opportunities and challenges associated with the system especially in relation to expanding the production of sea cucumber in the region.**
- **Synthesis and recommendations to address challenges and take advantage of opportunities**
- **Information generated from market assessment studies conducted in the Philippines, Vietnam and Hong Kong.**

Marketing System

- **Supply includes all activities/functions related to making sea cucumber products available to consumers;**
- **Demand expressed in terms of the utility derived from consumption;**
- **Characterization in terms of prices limited to analysis of price premium for quality, price spreads and price trends.**

Supply Related Marketing System Characteristics

- ✱ Most countries in the region are major sources of sea cucumber products with Indonesia leading in terms of annual production
- ✱ Species profile is more or less the same since the countries have similar tropical environment.
 - About 135 species with 40 with established commercial value
 - Common high value species include *Holothuria scabra* (sandfish), *Holothuria fuscogilva* (white teatfish), *Holothuria nobilis*, *Thelenota ananas* (prickly redfish) and *Holothuria whitmae* (black teatfish)

Supply Related Marketing System Characteristics

- ✱ **Collection from the wild is generally marginal carried out mostly by low income households in coastal villages.**
- ✱ **Method of collection is inefficient and oftentimes risky for divers**

Supply Related Marketing System Characteristics

- **Primary processing remains traditional and processing techniques are generally the same across the region;**



- **No regard for HACCP and GMP processes and standards**



Supply Related Marketing System Characteristics

- **Overexploitation of high valued species is a common problem with each country embarking on specific initiatives to address the problem.**
 - **Sea ranching**
 - **Restocking**
 - **Legislative measures (banning, seasonal permission)**
- **Almost all countries are also exploring aquaculture as an alternative to meet demand and reduce fishing pressure.**

Nature of Fishery and Fishing Methods

Collection of sea cucumber is seasonal

- **In the Philippines, peak collection is from March to June when fishers can stay longer underwater as the water is relatively warm.**
- **In Indonesia, collection is minimal during the west monsoon season of November to February as the sea condition becomes unfavorable.**
- **In Malaysia, the best months for collection is from May to August with January to March being the worst period due to unfavorable weather**
- **In Myanmar, peak collection is from November to February.**

Table 3 . Step-by-step process involved in collecting sea cucumber, the corresponding resources needed, and associated daily costs, Palawan, 2010 ^a.

STEPS	RESOURCES NEEDED	COSTS (PHP/Day)		
		Average	Minimum	Maximum
1. Travel to the island	• Boat or banca (3-6 hp)	9.03	6.67	11.11
	• Boat fuel (far, 2-3 l)	125.00	100.00	150.00
	• Boat fuel (near, 1-2 l)	75.00	50.00	100.00
	• Lamp or Petromax	2.17	1.85	2.78
	• Gasoline/kerosene (1.0-1.5 l)	44.00	33.00	54.00
2. Hand collect or glean the sea cucumbers and put inside a pail with a little water	• Pail	0.23	0.19	0.28
3. When the pail is filled with 30 pieces of sea cucumber, transfer the contents to a basin filled with water inside the boat	• Knife	0.12	0.06	0.19
	• Basin	0.26	0.19	0.46
4. Go home and start processing the sea cucumbers collected				
TOTAL	Near	130.82	91.96	168.82
	Far	180.82	141.96	218.82

^a Assumption: 12 kg sea cucumber collected per fishing trip.

Distribution System

- **Sea cucumber utilized for both local and export markets.**
- **The significance of local market vis-à-vis export varies considerably by country.**
- **Countries with small local demand include the Philippines, Indonesia, and Cambodia.**
- **Local consumption is almost limited to Chinese residents in these countries.**
- **More significant local markets exist in Vietnam and Malaysia .**

Product Flow

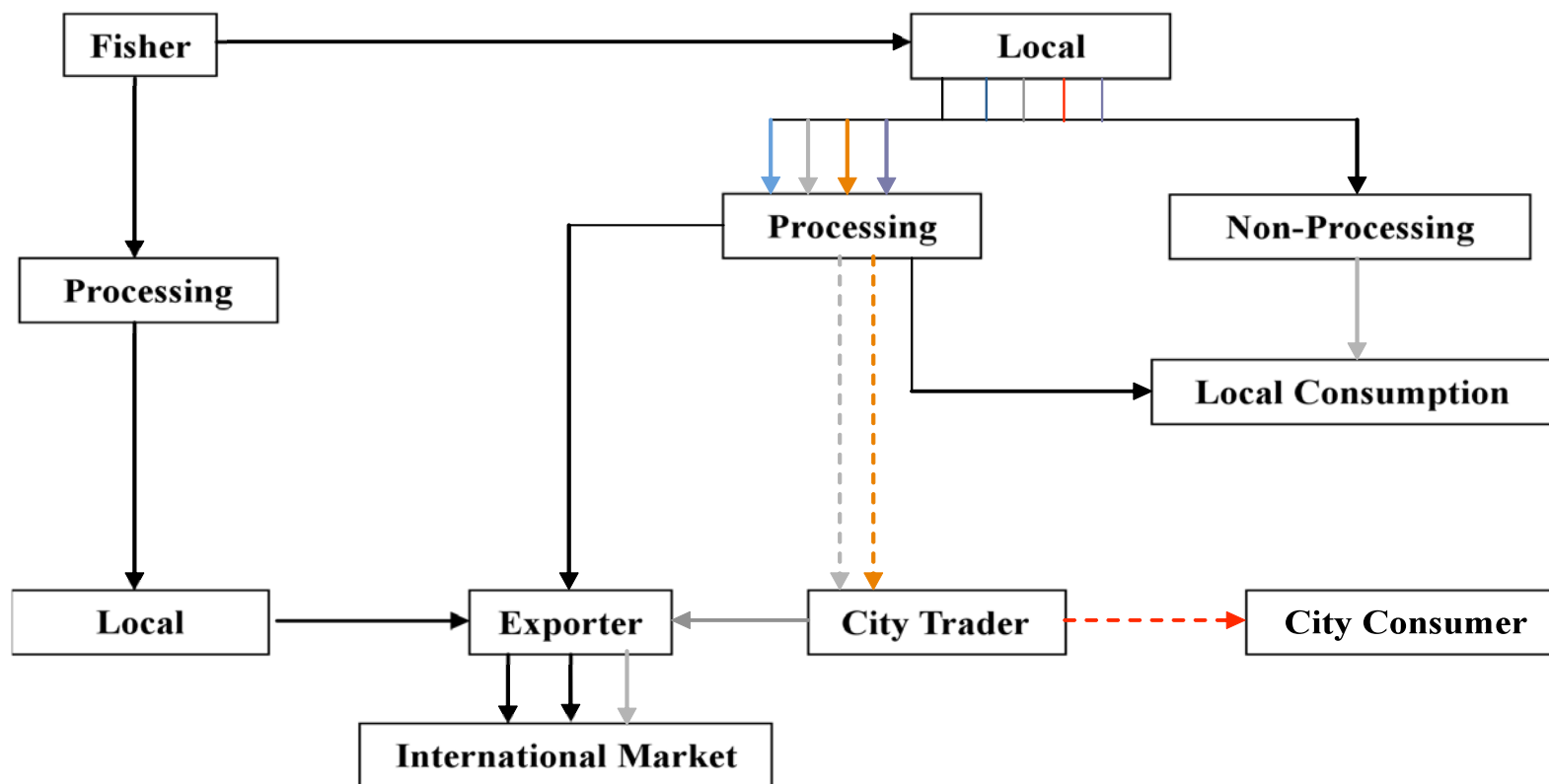


Figure 1. Typical product flow of sea cucumber in Southeast Asian countries

Source: SEAFDEC, 2009

Product Flow Philippines

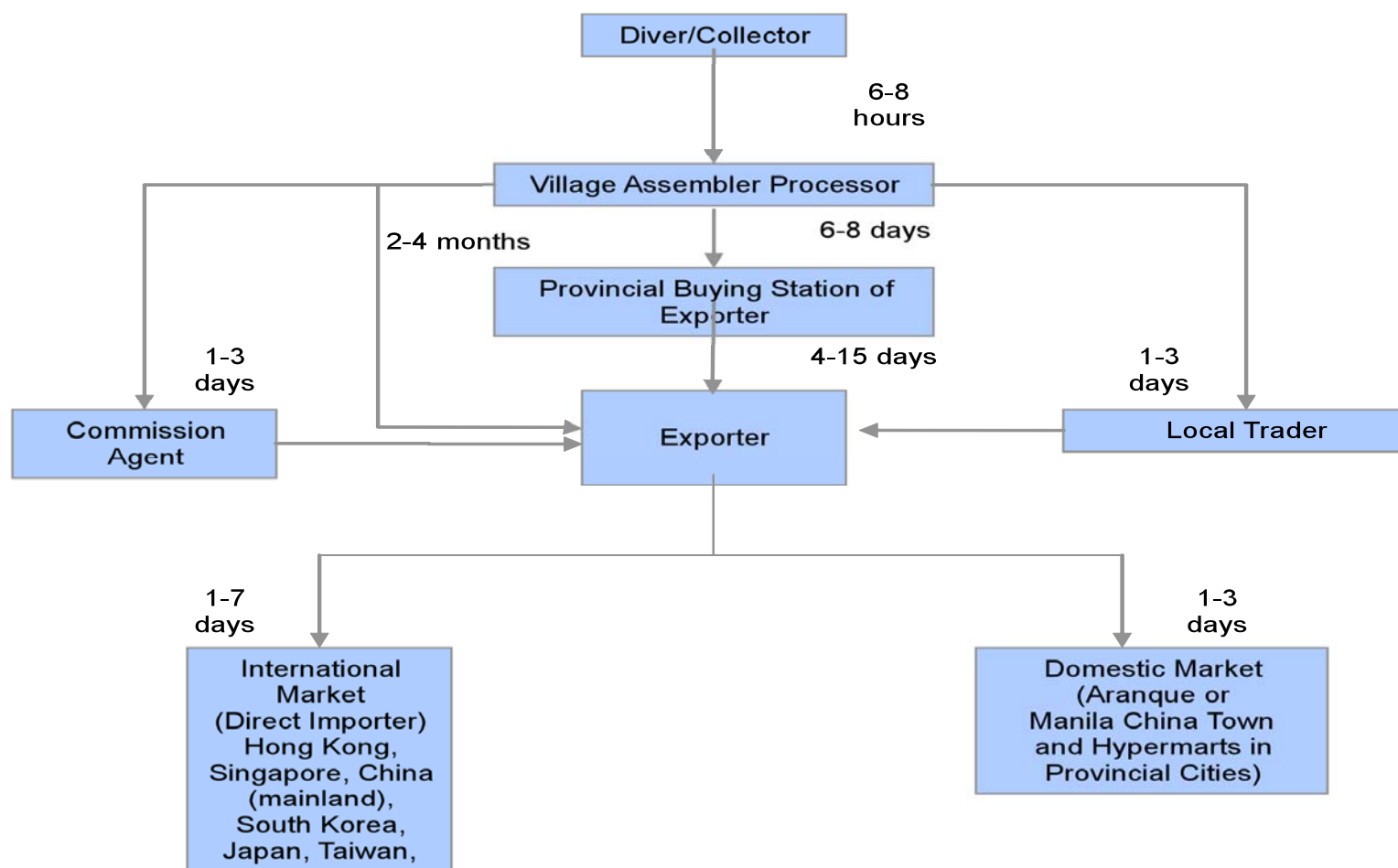


Figure 2. Product flow of sea cucumber in the Philippines

Distribution System

- **There are at least 635 firms involved in supplying sea cucumber products all over the world;**
- **Typically, these firms are also involved in supplying various fishery and other agricultural products;**
- **Indonesia has the largest number of firms (81) supplying sea cucumber products, followed by Malaysia (61), Philippines (50), Vietnam (21) and Thailand (9);**

Distribution System

- ★ The sea cucumber industry is like an **hour-glass** - broad or large at each end and narrow at the middle.
 - ❖ The number of upstream players is very large, considering that collection takes place in so many coastal areas in the country. In contrast, the number of downstream players is fairly small.
 - ❖ In the Philippines, there are only 45 to 50 firms involved in sea cucumber trade/export, out of which four are very large firms.
 - ❖ In Vietnam, it is typical to find two to three large buyers accounting for bulk of the sea cucumber outputs in districts where large volume of sea cucumber is collected.

Value Chain, Philippines

DIVER/COLLECTOR			PROCESSOR				TRADER/EXPORTER			FORWARDER/ SHIPPER	EXPORT MARKET
Pre-Collection	Collection	Delivery	Receiving	Processing	Storing	Delivery	Receiving	Classifying /Packing	Storing	Shipping	
<ul style="list-style-type: none"> Preparation of: <ul style="list-style-type: none"> banca food other fishing implements 	<ul style="list-style-type: none"> Travel to fishing site Fin-fishing/ Sea cucumber collection Travel back to fish landing site 	<ul style="list-style-type: none"> Bring collected sea cucumber to assembler for processing 	<ul style="list-style-type: none"> Count the number of sea cucumbers Pay gatherer per piece of sea cucumbers collected 	<ul style="list-style-type: none"> Gutting at the mounth Parboiling Mixing with papaya leaves Boiling with salt Brushing to remove outer layer Smoking 	<ul style="list-style-type: none"> Packaging in plastic 	<ul style="list-style-type: none"> Transport to trader, buying station, or exporter 	<ul style="list-style-type: none"> Weigh the sea cucumbers Further dry sea cucumbers that are not yet stone-dry 	<ul style="list-style-type: none"> Sort sea cucumbers according to species Sort according to size 	<ul style="list-style-type: none"> Pack in sacks lined with plastic cellophane or as required by clients 	<ul style="list-style-type: none"> Secure minimum volume of sea cucumbers for shipment Process required permits Pay necessary transport/customs fees 	<ul style="list-style-type: none"> Hongkong Singapore China Mainland Korea Taiwan Japan etc.
COST (PHP/kg)			15				21			9	
BUYING PRICE PhP/kg)							300			4,200	
SELLING PRICE PhP/kg)			300				4,200			5,364	
NET INCOME PhP/kg)			285				1,179			1,155	
TIME (days)			0.3				6			15	

Value Chain, Philippines

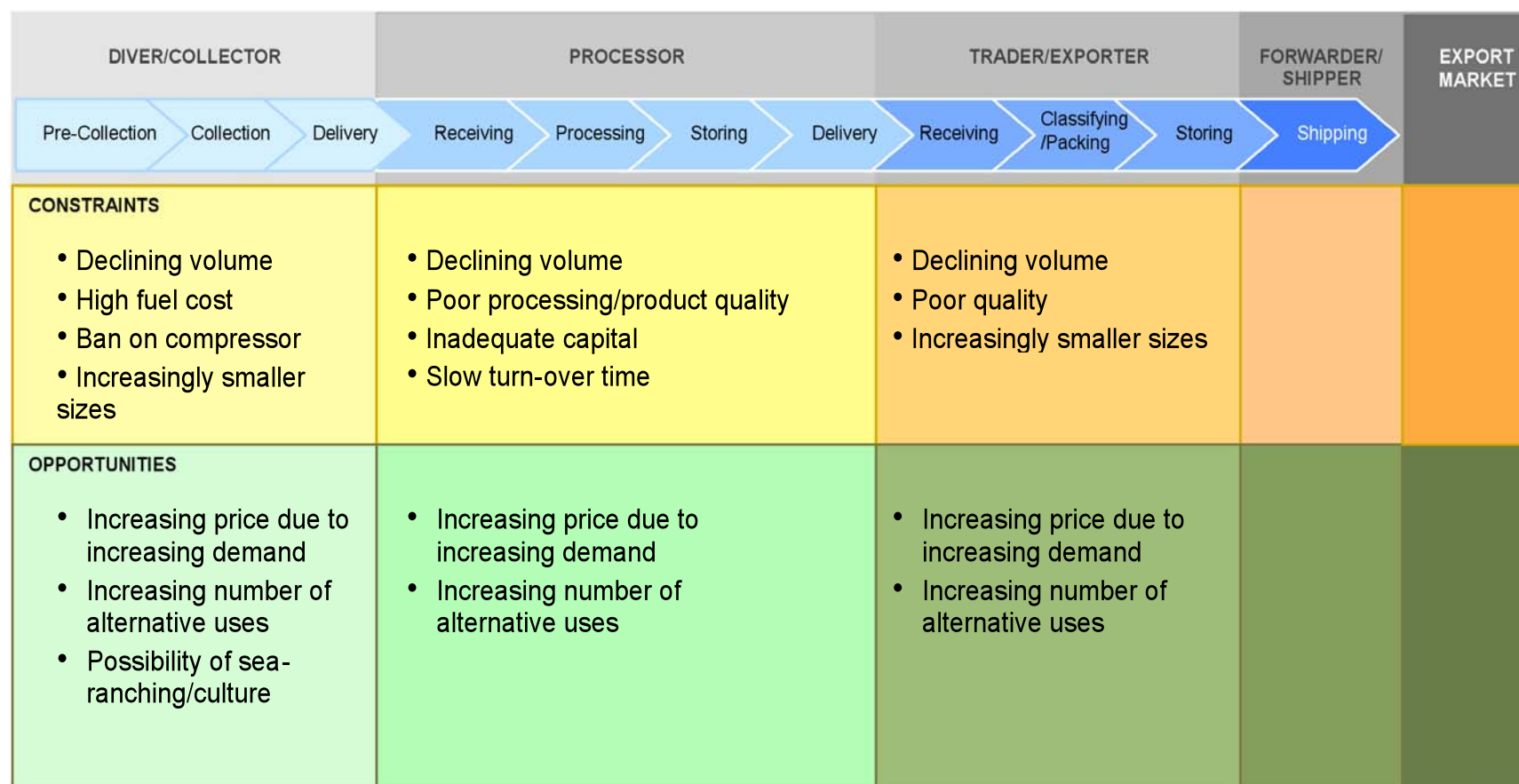


Figure 3. Value chain mapping of exported sea cucumber, Philip pines.

Source: Brown, et.al,2010.

Demand-Related Characteristics

- Demand for sea cucumber mainly comes from the middle and upper classes (generally Chinese descent) in Asia;
 - International trade is therefore dominated by the Chinese.
 - Chinese preference for sea cucumber:
 - High nutrition content;
 - Health giving properties.

Chinese philosophy that food and medicine are one entity - primary reason why they derive much utility in consuming sea cucumber products.

Global Trade

Table 7. Global trade of sea cucumber.

PRODUCT FORM	YEAR		
	2005	2006	2007
Live, Fresh, Chilled			
Volume (MT)	56	34	67
Value (USD '000)	375	392	424
Dried, Salted in Brine			
Volume (MT)	6,463	4,883	5,734
Value (USD '000)	46,342	42,021	55,852

Source: Brown, et.al,2010.

Demand-Related Characteristics

- **Demand remains vibrant;**
- **The principal consuming country (China) is the fastest growing economy in the world;**
- **Number of Chinese residents in other countries have increased considerably over the years thus the demand is increasingly becoming global.**

Hongkong Market

- Proliferation of herbs and medicine stores.



Figure 6. Sea cucumber on display in an herbs and medicine store, Hong Kong.



Figure 7. *H. scabra* on display in an herbs and medicine store, Hong Kong

Hong Kong Market

- Prices range from 1200 to 1500 \$HK/kg in retailer stores;
- Low value species, especially those sold in the wet market are priced less than HK\$ 100 per 600 grams;
- Evident preference for product origin – Japan;
- Size and quality preference is remarkable resulting to wide price variation;
- Prices have remained stable if not increasing during the last five years.

Price-Related Characteristics

- **Stability and viability** – in the Philippines prices received by fishers 3 – 4 X higher in 2007 than in 2000;
- In Indonesia, *H. scabra*, *H. fuscogilva* and *H. nobilis* are bought by local traders for about US\$ 70/kg . Price of similar species in Malaysia was reported at US\$ 79/kg.

Marketing Opportunities

1. Increasing demand not only as food, but as food **and** medicine.
2. Global trend towards health foods and alternative medicine potentially increasing popularity to other races;
3. Increasing purchasing power of the major consumers (Chinese).
4. Well established collection and distribution system enhancing consumer access;
5. Exploring more direct marketing linkages between producers and exporters

Marketing Challenges

1. Absence of reliable production and market information/statistics;
 - ❖ Information asymmetry
 - ❖ Multi layers in the distribution system – market inefficiencies.
2. Improvement of primary processing procedures
3. Development of product standards and grades



Marketing Challenges

- 4. Achieving economies of scale in production for improved product processing, mobilization and movement;**
- 5. Buyers' market – control rests in a few large firms;**
- 6. Existence of redundant players due to information gaps;**
- 7. Value adding thru appropriate packaging;**
- 8. Toll services for processing to improve quality especially for community based production systems?**

Recommendations

- **Promotion of aquaculture involving technically established protocols; .**
- **Further research to develop culture protocols for other high value species;**
- **Support efforts designed to generate new products from sea cucumber;**
- **Explore new export destinations;**
- **Enhance direct market linkages between producers and exporters;**

Recommendations

- **Establish regularly updated statistics and information system for sea cucumber;**
- **Formulation and implementation of official Grades and Standards;**
- **Improvement of village level small-scale primary processing;**
- **Strategies to achieve economies of scale in large-scale modern processing methods which observe international standards for processed food products.**

THANK YOU!