

# Introduction to market demand and the supply chain

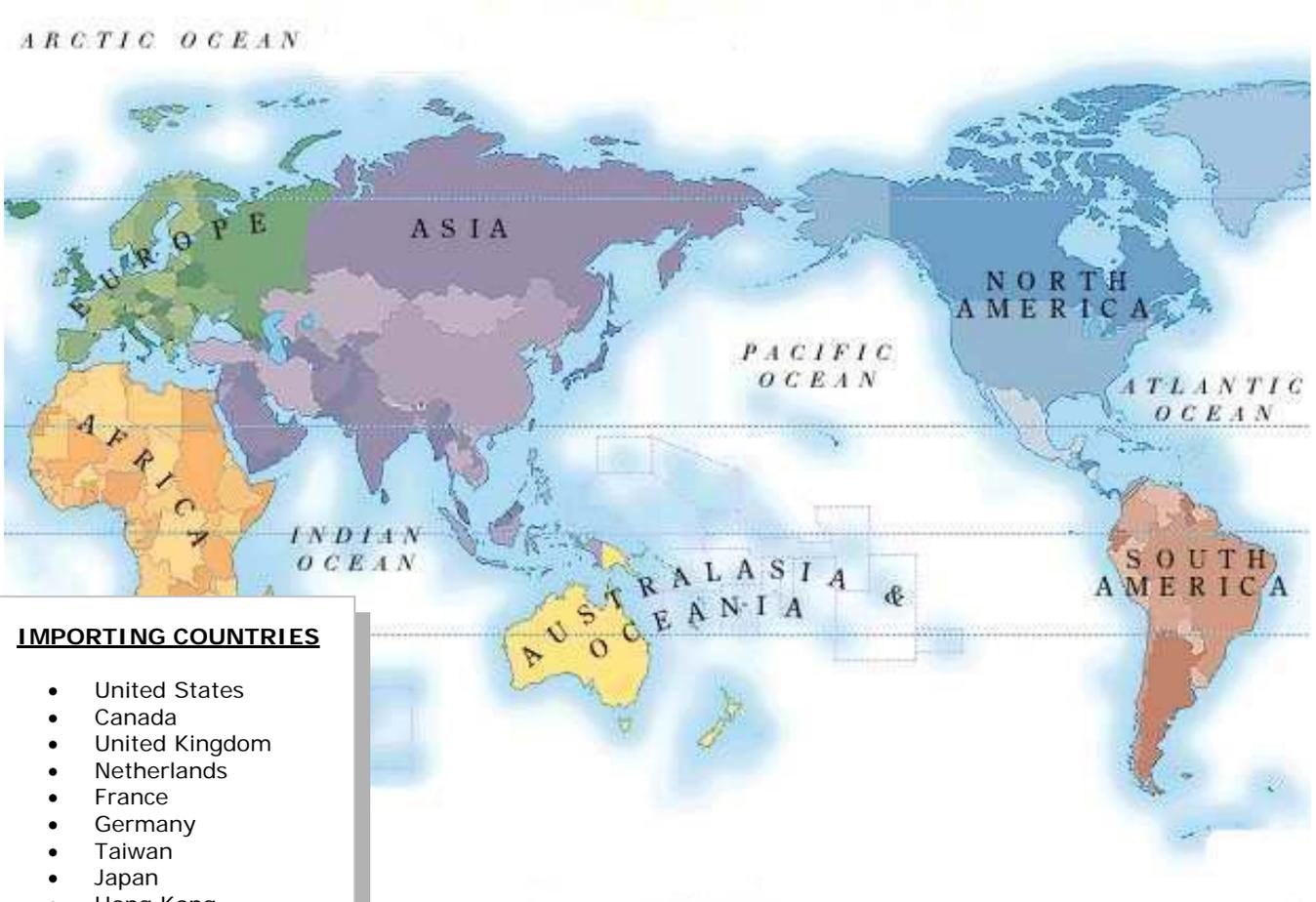
# Module Three



## Handout

### WHO IS THE MARKET AND WHY DOES IT BUY ORNAMENTAL FISH?

*Start by showing the World Atlas and marking the location of Indonesia. Then, identify the importing countries of Marine Aquarium Fish, Corals, and Invertebrates on the same Atlas so that the viewers can correlate their locations and distances.*



#### IMPORTING COUNTRIES

- United States
- Canada
- United Kingdom
- Netherlands
- France
- Germany
- Taiwan
- Japan
- Hong Kong
- China
- Australia
- Singapore

### Demand Distribution

MARINE AQUARIUM MARKET TRANSFORMATION INITIATIVE

**BUSINESS TRAINING**

Training of Trainers (TOT)

Export of ornamental fish is a multibillion dollar industry.

Fifty-five percent of all marine ornamental species exported around the world are fishes. Corals represent approximately 25% and invertebrates other than corals represent 20%. By value, fish make up about 85% of the trade.

The biggest importer of marine ornamentals is the USA, representing approximately 60% of the global demand.

### The Local Market Structure:



#### EXPORTER LOCATIONS:

- Bali
- Jakarta
- Medan
- Manado

#### SUPPLIER LOCATIONS:

- Banyuwangi
- Bali
- Makassar
- Pulau Seribu
- Lampung
- Padang
- Manado
- Biak
- Ambon
- Maumere
- Kupang

Exporters are located near a well-connected international airport, and as close as possible to the supply.

Suppliers are located the close to the fishing ground and near infrastructures needed to transport the fish to the exporters.

Supply in Indonesia is highly segmented, with the fish passing through many hands before reaching the exporter. This has a strong negative impact on fish survival, quality, and income, as profits must be divided among many players.

### Who are the buyers?

Hobbyists represent 99% of the market, with the remaining 1% being public aquaria and educational organizations. A very small percentage are used in scientific studies.

Fish kept by hobbyists are contained in small home aquariums. In a confined space, the hobbyist attempts to simulate the natural habitat of the fish. Such “natural” aquaria are pleasing to the eye as biotope displays, and also help the fish adapt to captivity. The greatest challenge and triumph of the hobbyist is keeping the fishes alive, healthy, and happy. A dead fish is very frustrating for the hobbyist.

*Show pictures of different aquarium set-ups.*



## **Aquarium Set up**

There are two basic types of aquarium set-ups. Eighty percent are **Reef Aquaria**, which include as many marine species as possible that can coexist in the small space. In such set-ups, one must avoid introducing both prey and their predators. Butterfly fish, for instance, have become less popular because they prey on corals.

Reef aquaria are time consuming and expensive. They require attention and patience, as it takes one month for initial set up and years to finish completely. These set-ups are like miniature Bonsai gardens; a small mistake can have terrible repercussions later on.

*At this stage, trainers should let trainees interact, ask questions about species that can be combined in reef set-ups, and discuss reasons that some can be combined and some cannot.*



**Including:**

Live Rock, Sand, Snails, Hermit crabs, Shrimp, Algae, Soft Coral, Hard Coral, Fish

✓ What else?

The other type of aquarium set-up is the **Old Style Marine Aquarium**, or the **Fish-Only** tank. This type is much simpler to create, easier to care for, and frequently set up in public places, like restaurants.

The tank can still have ornamental “corals”, which are made from rubber. These require minimal maintenance to clean of algae.

This kind of aquarium is getting less and less popular.



- ✓ NO Live Rock
- ✓ NO Snails
- ✓ NO Shrimp
- ✓ NO Algae
- ✓ NO Live Coral
- ✓ Artificial Coral
- ✓ Sand

### WHAT DO BUYERS REQUIRE FROM THE ORNAMENTAL FISH THEY BUY?

The market demands value, variety, and quality. These are the customer expectations that we have to fill so they continue buying from us. These terms are defined below:

- **VALUE.** The fish prices must be reasonable enough to be within reach by the average hobbyist, thereby allowing the hobby to grow. If the fish are too expensive, the hobbyist might not be able to maintain the hobby.
- **VARIETY.** The hobbyist also looks for assortment. It is more interesting for him to look and buy from a store with a diverse selection of fish rather than one with a limited selection.
- **QUALITY.** The fish need to be in good condition and healthy. They should suffer few, if any, mortalities. Recurring losses of fish will increase costs for

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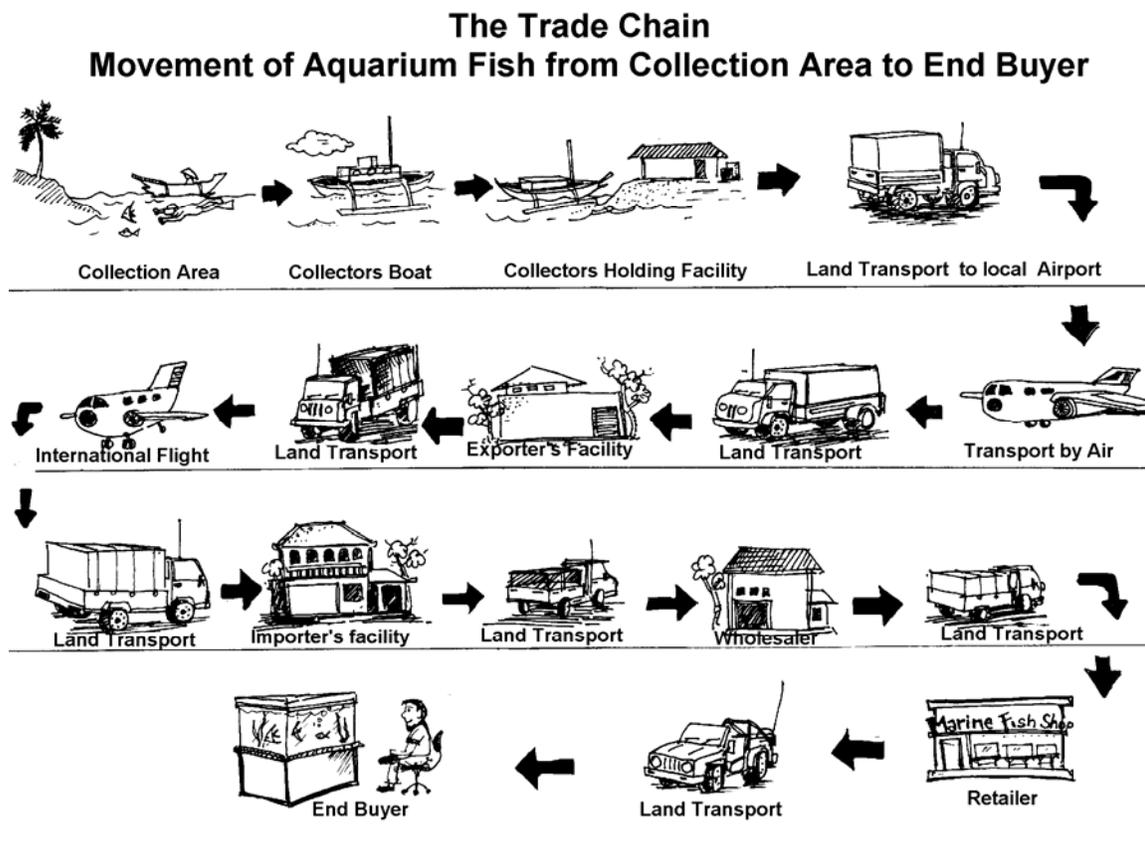
Training of Trainers (TOT)

hobbyists to maintain their collections. These losses could drive the hobbyist to give up. So, good quality means fewer losses and added value.

Professionalism and good services from the supplier also add to a good quality product. The supplier should comply with the customer's order. He should not send what was not ordered, and his deliveries should be predictable in time, quantity, and quality.

## WHAT IS MY ROLE AND IMPORTANCE IN THE SUPPLY CHAIN?

Show the diagram of the supply chain (below) so that the trainees can visualize the number of stages the fish go through before they reach the end customer. Explain the responsibilities or jobs of each segment. Demonstrate how mistakes at the lower part of the chain create problems and losses at every succeeding segment of the chain. This will help trainees to understand the importance of the role they play in delivering the value, variety, and quality demanded by the market.



**Examples the trainer can use in the discussion:**

Fish that are exposed to **cyanide** experience liver problems. The fish may eat, but cannot absorb nutrients from the food into their bodies. The fish essentially starve to death. This process can take months to occur, depending on the concentration of the exposure.

When too little water is used in packing bags, **ammonia** becomes concentrated in the water and can poison the fish. If the fish arrive at their destination alive, their skins and gills are burned, their fins are tattered, and the animals are close to death. If they recover, they are highly susceptible to infections and may have suffered damage to their internal organs.

Normal **water acidity** for marine fish is 8.2. While the fish are in bags, acidity increases. When the fish arrive at their destination, if they are not properly acclimatized by the receiver, the fish can go into shock and die. The same can occur if there is an abrupt change in salinity and water temperature.

**The important point is: fishes have to be collected and handled properly to arrive in good condition and perfect health.**

**Another important point is this: the extremely long chain of custody typical in the marine fish trade means that fisherman get low prices for their fish.** Too many intermediaries take commissions as the fish pass from fishermen to exporters, and this chips away at potential profits for the fishermen. The chain of custody should be simplified, allowing fishermen to play a greater role in the trade and receive fair profits for their work. (For more details see session 2).