



**Many people around the world love to watch colourful fish swimming in a glass tank. And the most popular are those from tropical coral reefs. Many of these fish come from the Pacific Islands.**



An aquarium is a tank, usually made of glass, in which people keep aquatic species.\* A freshwater aquarium is easier to stock and maintain but a marine aquarium is usually much more spectacular, particularly if it contains colourful tropical species.

## Where and what species?

The export of coral reef fish, hard and soft corals, giant clams, live rock and a number of reef invertebrates\* (such as sea stars, crabs and shrimps) from Pacific Island countries and territories started in the 1970s. It has since expanded to become an important source of income and employment for a number of communities in the region.



### Live rocks?

*The rock itself is not alive but made up of the calcium carbonate skeletons of long dead corals. However, over time, this rock has been bored into by worms, sponges and bacteria\* and other marine species. It is considered useful in that it is porous and has a large surface area for bacteria to colonise. The bacteria improve water quality by using nitrogen waste.*

The trade currently operates from many countries including Fiji, Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia, French Polynesia, Marshall Islands, Tonga, Cook Islands, Federated States of Micronesia, Kiribati and Palau.

According to data collected by SPC, the six most commonly exported species include the following in order of decreasing importance:

- southseas devil (*Chrysiptera taupou*) from Fiji;
- whitetail *Dascyllus* (*Dascyllus aruanus*) from Fiji;
- anemone clownfish (*Amphiprion percula*) from Solomon Islands;
- bicour angelfish (*Centropyge bicolor*) from Fiji;
- twospined angelfish (*Centropyge bispinosus*) from Fiji;
- sapphire devil (*Chrysiptera cyanea*) from Solomon Islands.

In most countries the collection of marine species for export is a relatively small operation. However, the trade provides employment, mostly in rural communities and contributes to the earning of foreign exchange.



The majority of aquarium fish are caught on the reef slope in depths of less than 35 metres, with occasional specimens taken at depths in excess of 50 metres. The fish are generally caught one at a time by experimented divers using scuba and either a small meshed surround net or a hand-held scoop net.

The standard method of packing live aquarium fish for air freight involves placing the fish in a plastic bag or container with clean sea water. The bag is then inflated with pure oxygen and packed in strong styrofoam containers for transport.

The use of damaging collection techniques such as those based on the use of sodium cyanide, quinaldine and rotenone (all of which are fish anaesthetics) is generally banned both by the aquarium fish collectors and governments. The capture of some fish may involve the removal of selected branches of coral. But this damage is minimal and the branches can be re-planted to grow into another colony.

## Management

Many Pacific Island countries have or are in the process of developing management plans to effectively develop, monitor and regulate the aquarium fish trade.

The industry is a non-damaging one as only a few selected species are harvested for export. And the most desirable species are small, brightly coloured fish that are generally not sought after for food by local fishers.

The aquarium keepers who buy the fish are often concerned about the possible impacts of taking large number of fish from coral reefs and may selectively source aquarium fish from well-managed operations and from countries with management plans. Some buyers are looking to stock their aquarium with fish that have been grown in aquaculture facilities.

At the moment SPC is working with industry to develop standard best practices that can be effectively and efficiently applied at the local scale by all. The standards are to achieve the following goals:

- the promotion of sustainable fishery\* practices;
- the fostering of good fishing and handling practices prior to export; and
- the promotion of good packing practices at export.

