

**FORUM SECRETARIAT
C-SPODP II Project**

Title: Marine Ornamentals Certification

Implementing Agency: Forum Secretariat **Contact Person:** Mike Mullins/Jaindra Kumar

EXECUTIVE SUMMARY

The Marine Aquarium Council (MAC) will take the lead role in implementing activities to develop a third party marine ornamentals certification system for Forum Island Countries (FICs).

MAC was established in 1998 as an international multi-stakeholder institution to achieve market driven quality and sustainability in the marine ornamentals industry by developing an international system of certification and labeling for quality and sustainability. This project component is focused specifically on addressing the range of negative environmental impacts that are occurring, or may occur, in conjunction with the existing marine ornamentals industry. These issues were outlined in a report prepared by the Forum Secretariat and MAC under the first phase of the project. The second phase of the project focuses on three FICs – Fiji, Cook Islands and the Solomon Islands – and introducing a market driven certification and labeling system for its marine ornamental industries that will assist countries achieve a balance between developing profitable reef-based industries, maintaining reef health and minimising environmental impacts. The expected outcome of this project component is compliance by a significant portion of the marine ornamentals industry in Fiji, Cook Islands and Solomon Islands with the independently verified standards for quality and sustainability that have been developed in partnership with governments and other stakeholders. This will be achieved using a two step process. Step 1 will comprise two activities: (a) national consultations and workshops and (b) national industry profiles. Step 2 of the project will proceed upon agreement by national governments and stakeholders to pursue industry certification and labeling as a strategy for enhancing the sustainability of their respective marine ornamentals trade, and include two further activities: (c) certification testing, and (d) information, training and accreditation. There is limited data on the actual number of men and women involved in the marine ornamentals trade at the collection and export levels, or if and how collection activities are having differential impacts on men and women at the village level. The project will gather information to address these gap areas. It will also ensure that there is gender balanced village stakeholder participation in national workshops and networks.

The project will create a largely self-financed certification and labeling system for marine ornamentals. Once developed, the cost associated with implementing and auditing the standards and certification system will be borne by the marketplace, i.e. the industry and hobbyists. Market assessments indicate that there is a strong demand for comprehensive, independently certified marine ornamentals and that the industry is willing to pay the direct costs of certification, knowing that hobbyists are willing to pay more for certified products.

Background Information

Sustainability and Quality of the Region's Marine Ornamentals Trade

The Pacific region contains more reefs than any other part of the world. These reefs provide critical habitat for an unparalleled diversity of marine life that is vital to the environmental and economic health of FICs. One of the many benefits provided by reefs is jobs and income created through the collection and export of marine aquarium organisms - one of the few options for a sustainable local industry in island areas that have limited resources.

Although it is difficult to obtain consistent, hard data on the marine ornamentals trade (fish live corals, invertebrates and live rock and sand), indications are that it has grown considerably during the past 25 years. In 1975 the world trade in ornamental fish and associated goods was estimated at US\$ 4 billion a year, of which 1 per cent of the volume of fish were marine species. By 1986, the value of the global ornamental trade (marine and freshwater) had risen to US\$ 7.2 billion. About 10 % of the estimated 350 million aquarium fish involved in the trade (i.e. 35 million fish) are currently thought to be marine species. New aquarium technology and better understanding of the biology and ecology of aquarium inhabitants and of the compatibility and husbandry of marine organisms are key factors contributing to the expansion of the marine aquarium hobby and trade. The market for ornamental fish is dominated by the United States, which is estimated to make up 60 % of global demand. Western Europe, Japan, Taiwan and Australia are responsible for most of the rest. An estimated 85 % of the marine aquarium fish exported to the United States and Europe originate from reefs in the Philippines and Indonesia. The balance come from other coral reefs around the world including Pacific Island countries which was estimated to export between 4-10 % of the global supply in the early 1990s. Over 150 species of marine ornamental fish are collected from FICs for sale to overseas markets. The most popular species include Labridae (wrasse) - 27 %, Chaetodontidae (butterfly fish) - 18 %, Pomacentridae (anemonefish and damselfish) - 15 %, Pomacanthidae (angelfish) - 10 %, and Acanthuridae (surgeonfish) - 8 %. At present there is limited information available on the value and distribution of economic benefits resulting from the marine ornamentals industry in FICs, as well as industry practices and their impact on village communities and reef environments.

There is a range of challenging environmental concerns associated with the marine ornamentals industry. Destructive collecting practices and poor husbandry of the organisms after collection affect the industry's long-term potential for achieving a balance between reef health, aquarium animal collection and community benefits. Destructive collecting practices include the use of sodium cyanide and other chemicals to stun and catch fish, the breaking of corals, and the over harvesting of organisms from limited areas. Chemical use causes long-term habitat damage by killing or damaging corals and reduces populations of associated non-target fish and invertebrates that are killed or injured. Many of the fish caught in this manner do not survive transport to the retailer or die soon after they have been sold. There is currently an overseas market perception that destructive practices are not prevalent in FICs and this is used to market aquarium organisms from the region based on a reputation for quality.

Live coral and live rock are also a growing part of the aquarium trade, creating additional habitat concerns, especially in the Pacific region where this is a rapidly growing segment of the trade. FICs currently export over 60 species of live coral to North America, all of which are growing in demand. In Fiji for example, 56 species of coral are collected for live export and 12,000 pieces were officially exported in 1991. Live coral and rock are the fundamental building blocks of the coral reef ecosystem. The trade in all hard (stony) corals, both live and dead, is regulated under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as are all species of giant clams (Tridacnidae). CITES provides an important level of control and data gathering for the trade in these important coral reefs species. Within the Pacific region, the following FICs are Parties to CITES: Fiji, Papua New Guinea and Vanuatu.

However, most of the major countries importing coral reef organisms for the marine aquarium trade are Parties to CITES. Shipments of hard coral, giant clams and, for many import countries, live rock and soft coral with substrate attached, thus require a CITES permit issued by the appropriate government agency of the exporting country. SPREP has strongly recommended that coral harvesting not be allowed except in limited, regulated and sustainable ways, and it is the goal of certification to support this kind of harvesting.

Even when collected in an environmentally sound manner, aquarium organisms may suffer from poor husbandry practices such as improper handling, inadequate facilities, poor water quality during storage and transport, and high packing densities that result in reduced survivorship. Unnecessary mortality from destructive collecting practices and poor husbandry leads to added pressure on coral reefs as more organisms are collected to make up for those that die during collection, during storage or transport, or soon after being sold. At the collection level the marine ornamentals industry may also produce negative socio-economic effects by undermining other reef use practices and failing to equitably distribute financial benefits.

There are some species and groups of marine organisms that may not be appropriate for commercial harvesting. However, this will be an evolving situation, as the knowledge of the biology and ecology of reef species advances, along with the ability to keep species in captivity. At the current state of the art and knowledge, species that should be considered as inappropriate for the trade include those that:

- Are rare or endangered in the country or in the region,
- Have particularly important ecological roles, e.g. cleaner wrasses, cleaner shrimp;
- Are generally very difficult to keep and do not survive well in captivity, e.g. cleaner wrasses, nudibranches;
- Have specific or difficult feeding requirements and therefore are generally very difficult to keep and do not survive well in captivity, e.g. butterfly fish that feed only on corals; and
- Provide specific habitat for other species, e.g. anemones that have a symbiotic relationship, and are required for clownfish to survive.

It is clear that the marine aquarium industry can provide high quality, healthy aquarium organisms with minimal mortality harvested from a sustainably managed reef environment, as well as good, equitably distributed returns to village communities. This is exemplified by successful industry operations that operate in this manner and are ready to provide information to back their claims. Indications are that hobbyists would prefer to support this kind of industry. However, there is currently no system in place to identify and document quality products and sustainable practices and allow the consumer to reward those in the industry operating on this basis.

The demand from informed consumers for environmentally sound products can provide incentives for industries to adopt and adhere to standards for quality and sustainability. The single most important market force in the marine aquarium industry is the purchasing power of hobbyists. Market assessments show that there is a strong demand for certified marine aquarium organisms and that this demand will increase rapidly when there is a comprehensive, independent certification system. At the same time, marine aquarium organisms from uncertified sources will face decreasing market acceptance and destructive and substandard practices will decrease as these operators either adjust their practices "upward" to comply with certification standards or lose market support.

Government agencies, industry, and NGOs have made isolated attempts to address the impacts of the marine aquarium trade. Such efforts have included monitoring and testing for cyanide in aquarium fish, training collectors in non-destructive practices, and providing nets to collectors. Yet, while these activities are important, they have not been able to transform the industry because they have only addressed limited aspects of the commerce in marine aquarium organisms. No single government or other party has been positioned to work with the full "chain of custody", the range of other stakeholders, the global consumer demand for marine aquarium organisms, and coral reef conservation issues.

In response to this, the Marine Aquarium Council was established as an international multi-stakeholder institution to address the situation comprehensively and achieve market-driven quality and sustainability in this industry by developing an international system of certification and labeling for quality and sustainability in the marine ornamentals trade. This will include developing standards for quality products and sustainable practices; providing a system to document compliance with these standards and label the results; and creating consumer demand for certified products and practices. The Council began as an initiative of a cross section of organizations representing the aquarium industry, conservation organizations, public aquariums, hobbyists, scientists and others concerned with:

- Addressing concerns about the effects of destructive fishing and poor handling practices on coral reef fish and habitat;
- Developing a market for marine aquarium organisms supplied through certified sustainable practices based on consumer demand and added value for certified organisms;
- Maintaining livelihoods and income generation of rural fishers through a sustainable marine aquarium industry; and
- Increasing marine conservation awareness and action within the industry and among marine aquarium hobbyists and the general public.

Participation in the Council continues to be open to those interested in contributing to a constructive dialogue concerning the development of market incentives and a certification and labeling system to achieve this goal. Key MAC partners and supporters include major international and regional conservation organizations (WWF, The Nature Conservancy, FSPI, TRAFFIC). It is envisaged that the MAC will evolve into a largely self-financed system based on improved economic return from certified marine aquarium organisms, consumer willingness to pay for these organisms, and industry willingness to pay for certification.

The Director of the MAC has made presentations on the development of certification and labeling and its importance to marine resource conservation, management and sustainable use at several key gatherings in the South Pacific region. At both the 1998 SPC Regional Technical Meeting on Fisheries (October 1998) and the Forum Secretariat/SPREP Seminar on Trade and Environment (January 1999), fisheries, environment and trade officials from the region expressed considerable positive interest in MAC and certification. MAC has also been asked to collaborate with SPREP in the delivery of a training workshop in 2000 to establish a permitting system to manage and monitor the coral trade in the region. This activity will work hand in hand with certification system being proposed under this project.

The Forum Secretariat, in collaboration with MAC, prepared a report in June 1999 that indicated it is possible to have a trade in marine aquarium organisms in FICs that is based on quality, sustainability and environmentally and socially sound practices. The proposed project is urgently needed to assist the region in addressing the controversy and concerns over the

sustainability of the marine ornamentals trade. For example, in Fiji in July 1999, the debate over the impacts and sustainability led to hearings by the environment and fisheries ministries to try and determine the impacts, sustainability and management of this industry. As a result, the government has limited the industry to the current operators until there are standards of practice, government regulation and monitoring. The project proposes to work with the governments on addressing these needs.

Project Goal and Purpose

The project goal:

to use market forces to transform the marine ornamentals industry in at least three FICs into one based on quality and sustainable use of coral reefs.

Project Description and Summary of Activities

The Marine Aquarium Council (MAC) will be the lead agency for this project component. The Forum Secretariat, Pacific Community, South Pacific Regional Environment Program, the University of the South Pacific, World Wildlife Fund for Nature, ICLARM and other organisations will play advisory and/or technical support roles.

Using the services of a regionally based manager, this project component will undertake activities in three FICs over a three year period. The FICs selected for inclusion in the project are Fiji, Cook Islands and Solomon Islands. These three countries have been selected because they each have established marine ornamental export operations underway at different stages of development, and each of these industries have established contact with MAC. Fiji has the most well established ornamental export industry, with five companies now operating. With extensive reef area, regular air connection to many of the major markets of ornamentals and a reputation for quality products, the Fiji situation represents the challenges for developing sustainability in a well developed Pacific ornamentals industry situation. Cook Islands has a single, small ornamental export operation faced with many of the logistical difficulties characteristic of much of the region. Concerns have been raised about the social and environmental effects of village-level collection practices used in both of these countries. In the Solomon Islands, village-based grow out of cultured clams and the culturing of coral reef fragments for the aquarium trade have begun. Village based culturing is a potentially important component of the future of sustainable ornamental industry in the region. In the event that key stakeholders in any of these countries are unable to participate in the project, other FICs involved in the export of marine aquarium animals will be approached to take their place. The MAC network already includes interaction with the Cook Islands, Tonga, Federated States of Micronesia, Palau and the Marshall Islands. Industry operators and government officials in these countries have expressed interest in developing and implementing certification.

The Fiji-based Project Manager will coordinate implementation of the marine ornamentals component of the project for the three countries. MAC infrastructure must remain lean and focussed on coordinating and working through the MAC network to establish partnerships and in-kind commitments resulting in significant leverage of the investment in core staff.

This component of the project will be implemented using a two step process. Step 1 will comprise two activities: (i) national consultations and workshops and (ii) national industry profiles. Step 2 of the project will proceed upon agreement by national governments and

stakeholders to pursue industry certification and labeling as a strategy for enhancing the sustainability of their respective marine ornamentals trade, and include two further activities: (iii) certification testing, and (iv) information, training and accreditation.

i) National Consultations and Workshops to Develop a Stake-holder Network

Certification for the marine aquarium industry involves a complex mix of stakeholders, as well as the tremendous cultural, social, economic, environmental and political diversity of each country. Individual or small group consultations are often required to establish familiarity with certification among stakeholders. Multi-stakeholder workshops are an important step to develop interaction among stakeholders and establish the common ground needed for developing and implementing certification.

MAC has conducted consultations and workshops in 1997 and 1998 in key aquarium industry export and import areas, including the continental U.S., Hawaii, and the Philippines. Under this project, the Project Manger and the MAC Director will undertake consultations with the range of industry and other stakeholders in Fiji, Cook Islands and the Solomon Islands. An initial one-day national workshop will subsequently be held in each country to:

- Share lessons learned from marine ornamentals industries in the other parts of the world;
- Provide an opportunity for multi-stakeholder discussion on the key national issues posed by the marine ornamentals industry and strategies for addressing these concerns, including certification;
- Improve stakeholder understanding of MAC and identify key issues, difficulties, solutions and priorities for certification in the country;
- Initiate the development of a marine ornamentals network in the country; and,
- Obtain stakeholder input on priorities and a work plan for completing the industry profiles.

Establishment of an on-going national marine ornamentals network will maintain interaction among stakeholders and foster their involvement in developing and implementing strategies for addressing key areas of concern related to the industry, including options such as certification. The participants in MAC consultations and workshops will form the basis of the network in each country. The Project Manager will maintain regular communications among the stakeholders in each country, particularly industry participants.

ii) National Marine Ornamental Industry Profiles

There is limited current information available on the marine ornamentals resources, or industry practices, costs and benefits in the three target FICs and therefore a need to prepare a comprehensive picture of the existing situation. The profile will include: industry operators and practices; distribution of export species; volumes and values harvested and exported; the socio-economic situation and impacts in collection areas; the environmental impacts associated with collection; an analysis of sustainable production opportunities (e.g. mariculture); an indication of resource management options (e.g. limited entry permits, harvest quota systems); and, the feasibility of certification for the marine ornamentals industry in the country. This information, in particular data related to existing collection practices and village/reef level environmental, social and economic impacts, provides the foundation on which to review and test the draft standards and certification system.

Annex 3 summarises available background information for Fiji, Cook Islands and Solomon Islands.

Progressing to the second stage of the project will occur for those countries that are committed to maintaining a marine ornamentals industry and make a formal written request of the Secretariat to participate in a certification and labeling program. A second one-day national workshop involving stakeholders will be convened to facilitate this decision. The workshop will review key issues posed by the ornamentals industry, new information prepared through the profiling exercise, discuss key issues, difficulties, solutions and priorities for certification in the country and identify companies and communities interested in participating in certification testing.

iii) Testing of Draft International Standards and Certification System

A solid, credible international system of standards, documentation, certification, and labeling is the core of achieving the goal of the project's second stage. To compel industry involvement and create tangible results early on, an initial working version of the certification system must be up and running as soon as possible, building on the draft international standards and certification system that MAC is developing. The draft standards and system will be reviewed by a South Pacific Working Group composed of individuals from the MAC networks in Fiji, Cook Islands and the Solomon Islands, and representatives from regional agencies and other interested organisations. The standards and certification system will be adapted to reflect the South Pacific situation and special issues, while maintaining their integrity to serve as "umbrella" standards for the industry internationally.

Industry members from the MAC networks in each country that are willing to contribute time and effort to certification development will undertake testing of the certification system. The testing will be conducted through trial runs of the certification standards along "strands" of the chain of custody from collection-to-retail. This will include collectors, producers of cultured aquarium products, and exporters.

The collectors and aquaculture operators will run their operations according to the standards and then pass them to the exporters, who will also run their operations according to the standards. A key part of the trial runs will be to test the capacity of the industry to operate according to the standards in real-world situations. The trials will also test the "cross-cutting" aspects of the certification system that link the collectors (or aquaculture operators) and the exporters, especially the product tracking and documentation system.

The testing will begin with collection-to-export strands in Fiji, Cook Islands and the Solomon Islands. At the same time, MAC will be conducting tests in the Philippines, Australia, and Hawaii. The products exported from these test runs will feed into import-to-retail test runs in North America and Europe. The tests in the South Pacific region, along with the other pilot areas, will ensure that trials are run in a sufficient number of areas and conditions to ensure that variation in different situations is adequately accounted for.

The results of the testing in the South Pacific region will be revised by the South Pacific working group and revisions recommended. These recommendations, along with those from the other test areas, will be synthesized by the MAC international working group and a revised version of the standards and certification system developed. The testing and revision process

may go through several iterations before the certification standards and system are considered ready for implementation.

Implementation of certification and labeling will begin when the certification standards and system are made publicly available and companies are invited to submit applications for initial certification audits. However, launching the certification system will require supporting information and training services.

iv) Informing, Training and Accrediting Industry Participants in the Certification System

Because certification is new to this industry, documents that clearly explain the standards, documentation system, etc. will be developed and distributed. This includes manuals that guide industry participants through self-evaluation procedures and explain how to upgrade systems and practices to achieve "certifiable" standards. A MAC international working group will be developing initial information materials. These will be reviewed by the South Pacific working group and revised to reflect conditions and needs in the region.

Materials for training industry personnel will be produced to facilitate industry ability to comply with certification. This will include training materials for collectors and MAC will need to actually provide training for some parts of the industry, such as collectors. Wherever possible, training will be conducted by MAC network members with existing expertise in training.

Actual certification will be undertaken by accredited certification agencies that have proven their qualifications to apply, monitor, and audit the use of the MAC certification system. Accreditation criteria will be developed by MAC and will be reviewed by the South Pacific working group to ensure they are relevant to the South Pacific region.