

Protecting Coral Reefs from Destructive Fishing Practices project. Site- and country-level activities will focus on Pacific countries where TNC is presently working: Papua New Guinea, Solomon Islands, Palau, and the Federated States of Micronesia. The project will involve a number of locally based groups — both government and non-governmental — in those countries. The results and lessons learned will be adapted and disseminated for use throughout the Pacific region. The project will:

- develop and facilitate the application of cost-effective and practical monitoring and assessment protocols and an associated training manual for reef fish aggregations for use by Pacific Island fisheries officers and conservation practitioners;
- develop and have adopted relevant policies and guidelines for application at the local through regional levels for the assessment and management of spawning aggregation sites, also taking into account the larger issue of aggregating reef fish management away from these sites;
- develop and implement site-specific management strategies that incorporate customary management practices;
- develop appropriate design and management criteria for marine protected areas (including Locally Managed Marine Areas) for protecting both spawning aggregations and aggregating reef fish;
- increase the skills of our partners in reef fish aggregation site monitoring and assessment;
- develop regional and national “teams” composed of fisheries agency staff, locally based non-governmental organisations, and universities to maximise the resources available to identify, assess, and monitor reef fish spawning aggregations; and
- raise the awareness and appreciation among stakeholders of the limited productivity and vulnerability of aggregating reef fish populations and associated ecosystems, the nature and significance of spawning aggregations, and options for improving management.

For further information contact:

Dr Andrew Smith  
The Nature Conservancy, PO Box 1738, Koror  
PW 96940, Republic of Palau.  
Tel: +680 488.2017, fax: +680 488.4550  
email: [andrew\\_smith@tnc.org](mailto:andrew_smith@tnc.org)



## News from the Marine Aquarium Council (MAC)

### First MAC certified collection area, collectors association, exporters, importer and retailers

Source: *MAC News*, 3rd Quarter 2002

The world's first to achieve MAC certification were confirmed by the London-based MAC accredited certification company IMS International in August. The Batasan Tropical Fish Collectors Association in Bohol Province, Philippines, and their collection area have been certified, as have the Manila-based exporters Aquarium Habitat, Aquascapes and HD Marineworld. IMS assessed the collection area and the organisations for their compliance with the appropriate MAC Standard in late June 2002. Collection areas are assessed to the Ecosystem and Fishery Management Standard; collectors to the Collection, Fishing and Holding Standard; and exporters to the Handling, Husbandry and Transport Standard.

This world first will be formalised in early October 2002 with the presentation of the MAC Certificate of Registration to the Batasan collectors. The Philippines Government support for MAC Certification and its commitment to backstop this with monitoring and enforcement will be evidenced by the participation in the ceremony by officials from the barangay (local community), municipality, province, and, possibly, national government.

Meanwhile, at the other end of the chain of custody, a Michigan import company and four Midwest retail facilities in the United States were assessed in mid September for their compliance with the MAC Handling, Husbandry and Transport Standard. The initial report by the Vancouver-based MAC Accredited certification company Shizen Megumi sound very promising, and in early October it is likely that these companies will become the first import and retail facilities in the world to realise MAC Certified status.

## MAC Certified chain of custody ... from reef to retail becomes reality

Source: *MAC News*, 3rd Quarter 2002

With the expected confirmation of MAC Certification for a US importer and several retailers, the first MAC Certified organisms will be available in the marketplace for purchase by marine ornamental enthusiasts. To be MAC Certified, marine aquarium organisms must be collected from a MAC Certified collection area by a MAC Certified collector and pass only through MAC Certified facilities (e.g., exporter, importer, retailer) from reef to retail. In this way, hobbyists can be sure that the fish they buy are net caught from a managed collection area and that the certified marine aquarium organisms have been handled only by trained staff at quality facilities. Hobbyists and industry operators will be able to log on to the MAC website at [www.aquarium-council.org](http://www.aquarium-council.org) to locate the certified facilities. Within these facilities, the MAC Certified organisms will be found in the tanks with the "Marine Aquarium Council Certified" label.

## Retailers obtain significant benefits through MAC Certification

Source: *MAC News*, 3rd Quarter 2002

This summer, Aldwin Co, a business administration graduate student, conducted a cost and benefit analysis of MAC Certification for the US retail sector of the marine aquarium industry. The research showed that all of the companies involved in the study would attain significant savings and increased profitability by becoming MAC Certified and carrying MAC Certified marine aquarium organisms.

As part of the study, Co completed a detailed documentation and analysis of income and expenditures at four retail companies of varying sizes and types. A number of the companies that Co worked with found the research exercise useful in unexpected ways. For example, he helped them evaluate their true costs and what would be needed to ensure that their desired profit margins were realistic and/or accurately used. He also helped them better understand what they would need to do to become MAC Certified.

In addition, Co assisted in the design of a manual for an inventory management and point-of-sale software program that can be used by the retailers to support their MAC Certification compliance efforts. His work with the software package has filled a crit-

ical need for MAC and for the industry. MAC is pursuing the development of this software.

While the individual company reports are confidential, the general report "MAC Certification and US Retailers: Costs and Benefits" will be made available on the MAC website at [www.aquarium-council.org](http://www.aquarium-council.org). Co's internship was supported as a Packard Foundation Environment Fellow and organised by the MBA-Non-Profit Connection.

## Pacific Region Update

Source: *MAC News*, 4th Quarter 2002

### Fiji

In October 2002, MAC held the Regional Workshop on Certification Process and Procedures in Suva, Fiji, with representatives from export companies, government agencies, universities and conservation organisations. Following the workshop four Fiji exporters, all who have signed the MAC Statement of Commitment, worked with MAC to develop policy and procedures manuals and draft collection area management plans as part of their efforts to be certified by mid 2003. WWF Fiji also worked with one of the communities to help develop a collection area management plan.

MAC also worked to raise awareness of the responsible aquarium trade with the tourism industry — an industry that has repeatedly called for closing the trade in Fiji. MAC made a presentation to the Mamanuca Hoteliers Association that was well received, with the MAC Certification process seen as a way to help clarify and resolve conflicts in use.

### Vanuatu

A one-day multi-stakeholder workshop followed by a one-day workshop on MAC Certification was held in Port Vila in November. The workshops brought out issues from the tourism industry concerning reef degradation as a result of bad collection practices; the need to raise awareness, especially on the concept of certification; and the need for community support on reef management. Following the workshops, MAC worked with the three marine aquarium companies in Port Vila, all of which reaffirmed their desire to become MAC Certified.

### Solomon Islands

The Solomon Islands Ministry of Fisheries and Marine Resources (MFMR), which is very supportive of MAC Certification, attended the Regional Workshop on Certification in Suva, Fiji in October,

along with representatives of the Marau community and an environmental NGO from Solomon Islands. MAC has been working with communities participating in the aquarium trade in Marau Sound to help them become familiar with MAC

Certification and the collection area management plan. The communities have requested training assistance to implement the MAC Standards.



## Noteworthy publications

live reef fish

APEC/NACA/BOBP/GOI. 2002. Report of the Regional Workshop on Sustainable Seafarming and Grouper Aquaculture, Medan, Indonesia, 17–20 April 2000. Collaborative APEC Grouper Research and Development Network (FWG 01/99). Bangkok, Thailand: Network of Aquaculture Centres in Asia-Pacific. 224 p. [[www.enaca.org/Publications.htm](http://www.enaca.org/Publications.htm)]

APEC/NACA. 2002. Report of the APEC/NACA Cooperative Grouper Aquaculture Workshop, Hat Yai, Thailand, 7–9 April 1999. Collaborative APEC Grouper Research and Development Network (FWG 01/99). Bangkok, Thailand: Network of Aquaculture Centres in Asia-Pacific. 140 p. [[www.enaca.org/Publications.htm](http://www.enaca.org/Publications.htm)]

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Burke, L., Selig, E. and Spalding, M. 2002. Reefs at risk in Southeast Asia. A publication of the World Resources Institute in collaboration with the United Nations Environment Programme — World Conservation Monitoring Centre, The World Fish Center, and the International Coral Reef Action Network. Washington D.C.: World Resources Institute. 72 p. [[www.wri.org/wri/reefsatrisk/reefriskseasia.html](http://www.wri.org/wri/reefsatrisk/reefriskseasia.html)]

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Job, S.D., Do, H.H., Meeuwig, J.J. and Hall, H.J. 2002. Culturing the oceanic seahorse, *Hippocampus kuda*. *Aquaculture* 214:333–341.

Lai, L.W.C. and Yu, B.T. 2002. The evolution of the fry market in the marine fish culture industry of Hong Kong: An economic perspective. *Aquaculture Economics and Management* 6(3/4):191–214.

Pawiro, S. 2002. Live reef fish trade in Asia – update. *INFOFISH International* 6:33–37.

**Note from the editor:** This article describes some interesting new trends in the live reef food fish trade. Examples are given of the coral trout, *Plectropomus leopardus*, being sold at remarkably low prices in restaurants in Hong Kong and Malaysia. This and other trends are examined in light of recent shifts in both