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International Certification for the Quality
and Sustainability of Marine Aquarium Organisms ...
from Reef to Retail

ANNUAL REPORT 2001 - EXECUTIVE SUMMARY

Overview

MAC has become the global leader and coordinator for developing certification for sustainability in the international trade of marine ornamentals, thereby contributing to coral reef conservation. MAC is widely seen as a real world example of how industry, consumer and environment stakeholders can work together to create "win-win" collaboration of economic and conservation goals. The launch of Marine Aquarium Council Certification at the end of 2001 is an indisputable measure of the significant progress MAC has made.

As of late 2001, forty-five companies in nine countries, including 17 wholesalers in the United States who together account for 35 to 40 percent of the US importing capacity, signed Statements of Commitment to become MAC Certified as soon as possible. Statements of support have also arrived from major industry associations, including Ornamental Fish International as well as the Indonesia Coral, Shell and Ornamental Fish Association (AKKI) and the Philippines Tropical Fish Export Association. KLM, after a two-year suspension of wild animal shipments, reopened shipment only for marine ornamentals, contingent upon exporters agreeing to adhere to criteria that KLM derived from the MAC Standards.

Institution Development

The MAC team was fully developed in 2001 to six full-time and four part-time professionals in 2001 who worked together to develop and launch the certification system, earning a well-deserved reputation for excellence and quality in their work and relations with others. MAC continued to build strong partnerships with key organizations to achieve its mission, notably with WWF, IMA, UNEP-WCMC, Reef Check, SeaWeb and EMS, and is expanding this to additional organizations such as Terangi in Indonesia and Community Conservation Investment Forum (CCIF).

The Board of Directors has functioned well as an international representative board and provided strong direction for MAC in the development of the governance structures needed to fully implement certification. The Board's already well developed sense of solidarity and support for MAC and certification has increased as the Standards were finalized and the Certification system launched in 2001.

Network Development

A strong MAC focus on outreach and communications allowed the MAC network to grow rapidly during 2001 among consumers (i.e., hobbyists), as well as in the industry, government, NGOs, international organizations, public aquariums and the science community in major export and import countries. There are almost 3,000 individuals from over 60 countries in the MAC network mailing list. Network growth was accomplished through consultations, briefings with relevant organizations, and presentations and networking at key conferences.

We continued to proactively provide regular information to the network via the fully revamped MAC website and the quarterly "MAC News". A MAC brochure was printed in English and Indonesian and has been widely distributed and very well received. MAC is increasingly sought out to assist and provide direct input to media coverage and is sponsoring more balanced reports on the marine ornamentals situation. Numerous articles in major print media mention the "win-win" consumer-oriented solution that MAC is developing to achieve coral reef conservation.

Certification System Development

MAC launched certification in late 2001 in keeping with the Certification Development Plan outlined in late 1999. The certification development included finalizing the standards, conducting feasibility studies on the certification use in developing countries, finalizing the "label," testing the certification through the full chain of custody from reef to retail in several countries, undertaking pre-certification outreach and information dissemination with the industry and consumers, and conducting the actual industry launch of the certification.

In the first half of 2001, efforts focused on developing the MAC "Core Standards" and "Best Practice Guidance." These documents established the basic criteria and supporting advice on environmental certification for the marine ornamentals trade and incorporated public feedback and the results of numerous rounds of review by the international, multi-stakeholder MAC Standards Advisory Group (SAG).

The Core standards cover:

- Ecosystem and Fisheries Management: in-situ habitat, stock, species management and conservation.
- Collection, Fishing and Holding: harvest of fish, coral, live rock and other harvesting and related activities, e.g., field handling and holding practices.
- Handling, Husbandry and Transport: animal care stocking, packing, transport, etc. at wholesale and retail.

Challenges and Lessons Learned

Overall Challenges:

The development of environmental standards and certification for the collection and trade in marine ornamentals has proven to be more complex and time consuming than envisaged. The reasons for this include numerous externalities, many of them unanticipated:

- This industry is based on the collection and trade in live animals, engendering a range of health and husbandry issues not required of other environmental certification systems (e.g., forest products, food fish).
- The MAC Certification thus requires standards to maintain health and quality control for the entire "chain of custody" through to retail, and not merely tracking of certified products.
- Defining the spatial aspect of the resource base is fundamental to certification, and this is complicated in the marine environment.
- Defining those who have access to the area and its resources is also fundamental to certification, which is difficult where marine areas are "open access" or "community access."
- The lack of basic information on the local abundance, life histories and harvest levels of the species involved make it difficult to develop early consensus on what sustainable use levels are.
- Many of the fish and coral are not a part of specific "stocks" with a more or less defined geographic range, but are widely distributed, making the marine ornamentals trade a single global fishery.
- The standards and certification must address and be applicable to the entire global fishery, taking into consideration vast socio-economic, political and cultural differences.

- There is a significant lack of data on the size, composition and trends in this global fishery, requiring MAC input into developing an institutional arrangement and process (with WCMC) to rectify this--diverting MAC efforts from certification development.
- MAC Certification will cover the trade in corals and giant clams, thus requiring integration with CITES issues and requirements.
- Most of the key export countries are characterized by difficult and/or rapidly changing political conditions, e.g., Indonesia, Philippines, Fiji, Solomon Islands and Sri Lanka.
- The governments of several key import and export countries have given serious consideration to trade bans (notably the US), requiring MAC input to these developments--diverting MAC efforts from certification development.

- Challenge:

The need for continuing advice and capacity building particularly with collectors and retailers.

- Lesson Learned:

To enable many developing countries to implement certification, efforts are needed for ensuring there is an opportunity and capacity for collectors to become certified, ensuring stakeholders have the capacity to develop certified ecosystem management for collection areas and creating the ability for MAC NGO partners to build capacity for "certifiable" collectors and "certifiable" ecosystem management for collection areas.

- Challenge:

The extremely rapid rise in demand for involvement in MAC and for MAC information created a high demand on MAC's limited personnel. This was combined with the difficulty, time and effort required to identify and engage staff and consultants appropriate for the new and unique nature of MAC, i.e., certification for environmental sustainability in the marine aquarium industry.

- Lesson Learned:

Priority setting has been essential in responding to requests for involvement in MAC and for information. Patience and networking have paid off in identifying very capable MAC staff and consultants that have formed a very effective team that is now rapidly building the certification system.

- Challenge:

The complex nature of developing certification for the international marine aquarium trade and the scattered locations of the MAC team has created the need for creating a MAC "process map" to guide the development of certification, develop workplans and measure/monitor progress and created challenges for managing the team and ensuring that individual efforts are contributing to the overall goals and objectives.

- Lesson Learned:

It is critical to clearly define ultimate goals and proximate objectives and then analyze these in terms of the "enabling conditions" that need to be met to achieve these goals and objectives. This leads to creation of a "road map" and a supporting workplan of the activities and actors needed to meet the enabling conditions--and a means to measure and monitor results. Face-to-face meetings, although expensive and time consuming to organize, are critical for team building, planning and coordination. Regular communications and reporting are essential, and should relate to an agreed upon overall blueprint for action (that is preferably linked to the "process map" and outlines the steps to achieving the proximate objectives and ultimate goals).

- Challenge:

Keeping the cost of MAC Certification reasonable, especially for collectors and retailers.

- Lesson Learned:

Several means for keeping the cost of certification as low as possible are being explored by the MAC Secretariat and stakeholders. For example, If clients in the same geographical area group together so that a certifier could visit several of them at one time, it would be possible to significantly reduce the costs for certifier expenses (e.g., travel, accommodation). Trade associations are well positioned to organize a "package deal" with a certifier so that their whole membership agrees to work with that certifier.

- Challenge:

The long-term financial sustainability of MAC is key measure of success, and we must develop the mix of sustainable funding needed in the long run.

- Lesson Learned:

Certification organizations such as MAC must develop a "business plan," including an analysis and strategy for long-term financial sustainability to ensure that the long-term costs of running a lean MAC organization can be met through a combination of levies, certification fees, direct industry support and outside grants.

- Peter Scott Accreditation Coordinator;
London, UK/Manila, Philippines
- Long-term consultant:
4-5 days/wk, from 1 June 00
Employee:
Full-time, as from 1 Jan 02
- Peter's role has been to develop the accreditation program and the interaction with certification companies and provide technical input to the development of the MAC Standards.
 - He is working closely with MAC Country Coordinators in the Philippines, Indonesia and the Pacific Islands, to oversee MAC feasibility study and test cases and, now, the initial implementation of certification.
 - Peter will also work with certification companies interested in being MAC accredited and the MAC relationship with other certification development organizations, e.g., MSC, FSC, and the association ISEAL.
 - Peter's role is now evolving into the lead on developing MAC Governance structures and processes, especially the Standards Committee.

- Rezal Program Officer;
Kusumaatmadja MAC Office, Honolulu, US
- Long-term consultant:
Full-time from 1 October 00
Employee:
Full-time from 1 July 01
- Rezal's role has been to provide programmatic support to all MAC staff and to assist in coordinating overall MAC activities.
 - Working closely with MAC Country Coordinators in the Philippines and Indonesia, Rezal assists with planning for capacity building activities for MAC Certification implementation.
 - Rezal reviews and revises the planning and tracking of MAC's progress, especially the certification development, through "process maps" that provide a road map for the organization.

- Sylvia Spalding Communications Coordinator
MAC Office, Honolulu, US
- Employee:
Full-time from 1 July 01
- Sylvia's role has been to develop and implement a MAC communications strategy and program in collaboration with MAC partners.
 - Much of this has been new for MAC, e.g., creating the conference booth, crafting FAQ and info docs with other staff, drafting press releases and articles, coordinating with the media, creating the new website, establishing the photo and video archive, developing media contacts, etc.
 - Sylvia writes the MAC quarterly newsletter, responds to general inquiries about MAC from the general public and MAC stakeholders, updates MAC website content, updates MAC internet mailing list network, and monitors the news for articles relevant to MAC.

- Aquilino "Lino"
Alvarez Philippines Coordinator;
MAC Office, Manila, Philippines
- Long-term consultant:
Full-time, from 17 July 00
- Lino assists MAC in expanding our capacity, developing the network, conducting consultations with stakeholders and increasing industry and stakeholder support for MAC.
 - With MAC staff and MAC stakeholders, he provides MAC Philippines leadership in developing certification initiatives in the Philippines.
 - He is responsible for identifying project partnership opportunities for certification implementation and monitoring and evaluating the results of MAC partners capacity building activities.

Michelle Lam Pacific Islands Coordinator; Long-term consultant
Honiara, Solomon Islands 3/4 time, from 1 Aug 01

- Michelle recently joined MAC following the resignation of Esaroma Ledua.
- She assists MAC in expanding MAC capacity to develop network and conduct consultations with stakeholders in the Pacific Islands and increasing industry and stakeholder support for MAC.
- She is responsible to identify project partnership opportunities for certification implementation and monitor and evaluate the results of MAC partner's capacity building.

Gayatri Lilley MAC Indonesia Long-term consultant:
Full-time; May-Nov 2001

- Gayatri assisted MAC in expanding our capacity, develop networks, conduct consultations with Indonesia stakeholders and increase industry and stakeholder support.
- With MAC partners, she provided the leadership in developing certification in Indonesia.
- She identified project partnership opportunities for capacity building activities.
- Unfortunately, Ms. Lilley decided not to stay in Indonesia beyond November 2001.

Svein A. Fossa Europe Liaison Director; Long-term consultant:
Norway Up to 1-4 days/mo, from June 00

- Svein assists MAC by helping with the interaction with European hobbyists and industry.
- Limits to MAC's capacity to develop programs to cover all areas have constrained our ability to fully develop the MAC Europe program with Svein.
- We hope to expand the MAC interaction in Europe in the future.

Janean Magers Administrative Assistant Part-time consultant
Honolulu, Hawaii

- Janean develops and maintains MAC financial reports and files.
- She tracks MAC grants and oversees payroll and employee benefits.
- She coordinates financial and other administrative issues between MAC headquarters and satellite offices.

1.2 Administration and Offices

1.2.1 MAC Main Office in Honolulu

Main Office:

- We continue to sub-lease very cost-effective space from The Nature Conservancy (TNC) Hawaii and Asia/Pacific Program headquarters in downtown Honolulu.
- There are considerable synergies, cost-savings and ambience result from sharing the building with TNC, and it is a very agreeable arrangement for both organizations.
- With the addition of MAC's full-time communications coordinator and part-time administrative assistant/bookkeeper, the space available to MAC is pretty tight, but manageable.
- The MAC sub-lease at TNC expires in June 2002. TNC has been adding staff, and the building is very full now. It is unclear whether we will be able renew the lease and stay in the building. If not, there is a surplus of reasonably priced business space available in the neighborhood.

Operations

- We have significantly improved MAC accounting and bookkeeping support by hiring a part-time administrative assistant/bookkeeper who has been developing computerized MAC accounting and reporting procedures and documentation, largely working from a home office.
- We have organized on-call information technology support services from the TNC in-house Information Technology staff.

1.2.2 Other MAC Offices

MAC Office – Manila

- We continue to rent office space in Manila.
- There is a receptionist/ administrative assistant and part-time accountant.

MAC Office – Pacific Region

- The MAC Pacific Region Coordinator based in Suva, resigned in mid-2001.
- The new MAC Pacific Region Coordinator is base in Honiara, Solomon Islands, operating out of her home office.
- We had negotiated for the MAC Office to be hosted by the South Pacific Forum Fisheries Agency in Honiara, but the costs were not reasonable relative to the size of the project budget.

Other Offices

- All other MAC personnel operate out of home offices.

1.3 Governance

1.3.1 MAC Board of Directors

The MAC Board continues to be a diverse, multi-stakeholder group representing the major stakeholder and geographic regions of priority to MAC (see Appendix 1). The Board's already well developed sense of solidarity and support for MAC and certification has increased as the Standards were finalized and the Certification system launched in 2001.

At the annual Board meeting in November 2001, the Board agreed to move forward with making some needed changes in the governance process. For example, the entire Board has to be re-elected each year, creating an unnecessary complication for the Board and the Secretariat. The Board membership process requires changing the MAC By-laws to develop staggered terms for Board members, delegate the Executive Committee the authority to fill Board vacancies occurring between meetings and establish a Nominating Committee.

With the launch of the Certification system, MAC is turning more attention to the development of the Board committees to fulfill MAC functions in developing and coordinating the implementation of certification, especially the Standards Committee and Accreditation Committee.

1.3.2 MAC Board Committees

a. Standards Committee

As is common with other international standards-setting organizations, MAC is establishing an independent and impartial committee to oversee the MAC certification scheme and its documentation. This Standards Committee is being created as independent of the potential influence of the Board, while at the same time having its operations overseen by the Board and its outputs reported to the Board. The Board can recommend that the MAC Standards Committee consider certain issues as a matter of priority.

The Standards Committee will have the following Sub-Committees:

- Training Sub-Committee
- Science Sub-Committee
 - Species Suitability Committee
 - Chemical Detection Method Committee
 - Collection Area Monitoring Committee

b. Accreditation Committee

To implement the certification system, MAC will accredit certification bodies wishing to certify in accordance with the MAC Standards. Certifier accreditation is the responsibility of the MAC Board's Accreditation Committee and is based upon an evaluation of a certifier's adherence to the MAC Accreditation Manual and a peer review of the accreditation assessment activities of the MAC Secretariat, based on the MAC Accreditation Officer's recommendation for certifier accreditation.

1.4 Financial Situation

1.4.1 Summary and Analysis

The success of fund raising has allowed us to build the core MAC functions and expand into building MAC capacity through staff, consultants and key partnerships. It will be essential to have grant support for several more years to maintain this momentum and growth towards sustainability, meaning that considerable priority and effort by the Executive Director will continue to go towards fund raising.

The long-term financial sustainability of MAC is crucial, and we must develop the mix of sustainable funding needed in the long run. This involves consideration of:

- What the likely mix of contributed and earned income will be once certification is widely sought by the industry.
- Consumer willingness to pay for certified products.
- Country or industry differentials or premiums in the price for certified products.
- What the likely sources of MAC earned income will be in the long-term.
- How the transition to earned income should be managed.
- The need for direct industry grants to the MAC during the transition to earned income.
- The eventual need for predictable, stable income.

The costs of running a lean MAC organization can hopefully be fully met through a combination of levies, certification fees, direct industry support and outside grants. It is critical to the growth of MAC that there is a "business plan," including an analysis and strategy for long-term financial sustainability, as soon as possible.

1.4.2 Financial Support to MAC

a. New and Continuing Grants to MAC

- *Packard Foundation*: for two years for institutional development, certification development and network development (July 2001 to July 2003).
- *MacArthur Foundation*: for three years for awareness raising and certification system development (early 2000 to early 2002).
- *Canada-South Pacific Ocean Development Program*: over three years to the Forum Secretariat for MAC Certification development in South Pacific region (from August 2000).
- *MacArthur Foundation*: for two programs: 1) a consortium approach on capacity building/training for marine ornamental fishermen in certifiable collection methods and 2) to develop the independent program to evaluate chemical detection methods (from mid-2001 to mid-2003).

b. Existing/Continuing Grants for MAC Partners

- *Packard Foundation Conservation Program*: over three years to the UNEP-World Conservation Monitoring Centre (WCMC) for the Marine Ornamentals Information System (MOIS)--an ongoing international program of documentation and data for marine ornamentals in trade and provide consistent, comprehensive, quality information.
- *MacArthur Foundation*: over three years to SeaWeb to work with the Ocean Project and American Zoos and Aquariums Association to develop communications, awareness raising

materials and displays for public aquariums on the marine aquarium trade and certification. Note: with the addition of the MAC Communications Coordinator, SeaWeb has agreed to provide most of this to MAC to undertake some of these activities.

- *MacArthur Foundation*: over three years to Environmental Media Services to develop and implement media communications and awareness raising campaign strategy, materials and activities. Note: with the addition of the MAC Communications Coordinator, EMS has agreed to provide most of this to MAC to undertake these activities.
- c. Recently Completed Grants
- *USAID*: over one year to MAC for capacity building and certification development in Indonesia (funds available in late 2000).
 - *Packard Foundation*: for two years for institutional development, certification development and network development (July 1999 to July 2001).
- d. Industry Support
- *Industry Contributions*: Contributions to MAC have continued in 2000 from a few individual companies and trade associations. We especially note the contributions of the Philippines Tropical Fish Exporters Association and Sea Dwelling Creatures.
 - *Long-Term Need*: There is a need for a systematic, sustained and growing contribution of industry to MAC to begin to transition the organization into financial sustainability (see below) and to send a clear signal that industry is committed to supporting MAC and bringing certification to reality.

1.5 Major Partnerships

1.5.1 UNEP-WCMC: Global Marine Aquarium Database (GMAD)

Key Objectives:

- To improve the quality and quantity of data
- Undertake quantitative analyses of the ornamental trade
- To help assess the sustainability of the ornamental fish trade for MAC

Status:

- 3-year funding obtained from Packard Foundation in 2000
- Data from many exporters and importers being entered into database
- Significant data contributions and initial "State of the Trade" summary presented in Nov 01
- MAC "Statement of Commitment" requires importers/exporters to provide data to GMAD
- Assistance from trade associations is helpful in encouraging companies to provide data

1.5.2 Reef Check: Reef and Fisheries Stock Monitoring Methods and Program

Key Objectives:

- To determine which species need to be monitored, design the monitoring protocols
- To test the design of the monitoring program
- To analyze the data for trends and use it to inform the standards and certification process

Status:

- 2-year funding obtained from MacArthur Foundation in 2001
- Initial assessment of species to be monitored developed by Reef Check with industry
- Draft monitoring protocol developed
- Monitoring protocol reviewed at International Coral Trade Workshop (Jakarta, April 2001) and technical monitoring workshop (Honolulu, August 2001) and revised.
- Reef Check field staff hired in January 2002 to begin field testing in the Philippines

1.5.3 Environmental Media Services (EMS): Media and Outreach Strategy Development

Key Objectives:

- Raise awareness among hobbyists, retailers, policy makers and the general public of the need for, and viability of, certified marine organisms
- Educate the media about the marine aquarium trade and MAC Certification efforts
- Draw attention to the benefits of the marine trade, the role of MAC and certification and correct inaccurate media coverage of the marine aquarium trade

Status:

- 3-year funding obtained from MacArthur Foundation in 2000
- Press info available on EMS website, some monitoring of media undertaken
- Focus group with hobbyists conducted (Virginia, Nov 2000); retailer survey in mid-2000
- With the hiring of the MAC Communications Coordinator in mid-2001, MAC and EMS reformulated the project and developed a subcontract for MAC to undertake most of the media outreach efforts directly

1.5.4 SeaWeb: Awareness Raising Through Public Aquariums

Key Objectives:

- Develop an information brochure, awareness-raising exhibits
- Develop and distribute an information packet and media kit
- Adapt and distribute the materials for use by aquariums outside North America

Status:

- 3-year funding from MacArthur Foundation
- Consumer research planning, funds and effort combined with EMS (see above)
- Periodic communications to all AZA public aquariums and "The Ocean Project" member institutions (e.g., museums with aquaria) by SeaWeb/The Ocean Project
- Based on the initial research through EMS, SeaWeb recommended MAC focus more effort from this project on direct outreach to consumers and retailers, rather than spending most of the limited funds on trying to reach them through public aquariums
- The project was reformulated to focus on retailers and consumers, and, with the hiring of the MAC Communications Coordinator in mid-2001, MAC developed a subcontract with SeaWeb to undertake most of these efforts directly at MAC

1.5.5 IMA Philippines: Certification Feasibility Study: Capacity Building for Collectors

Key Objectives:

- Identify project collectors and collection sites and design and develop a training program based on MAC Standards for Ecosystem and Fishery Management (EMP) and for Collection, Fishing and Holding (CFH)
- Assess collectors' skills in fish collection and husbandry and their ability to develop and implement a basic management plan in their collection sites
- Implement net collection training and post-harvest handling training for collectors and capacity building assistance in the field sites to enable them to meet EMP standards
- Enable collection site(s) and collectors to participate in Certification test case

Status:

- Funding provided to IMA by MAC (MacArthur Foundation support for capacity building)
- Project successfully completed in 2001

1.5.6 Terangi Indonesia: Capacity Building for Collectors in Indonesia

Key Objectives:

- Develop a "consortium" of NGO partners with experience working in the fishing communities
- Develop and test materials and programs for training collectors in certifiable fishing practices

- Ensure exchange of experience between feasibility efforts in the Indonesia

Status:

- Funding to be provided by MAC in early 2002 (MacArthur Foundation capacity building funds)
- Project to begin in early 2002

2. Network Development and Communications

2.1. Communications and Media

With the addition of the MAC Communications Coordinator, Sylvia Spalding, in July 2001, MAC has been able to make major new efforts in communications, awareness raising and outreach with the media, public, consumers and industry. A comprehensive communications program framework has been developed for mid-2001 to mid-2003 and is being implemented. A communications strategy for the launch of MAC Certification in November 2001 was developed and has been implemented.

2.1.1 Communications Materials, MAC Contacts Database and MAC News E-Mailing List

- Website:

This continues to serve as a key communications vehicle for MAC and was completely revised for the launch of MAC Certification in November 2001. The new site features entry points to areas with information specifically for key MAC interest groups: marine aquarium keepers, the marine aquarium industry, public aquariums, conservationists, government agencies, the news media and certification companies. Viewers can also download the MAC Core Standards and Best Practice Guidance documents, locate companies committed to becoming MAC Certified and certification companies interested in becoming MAC Accredited, learn how to submit information to the Global Marine Aquarium Database, find a variety of background information on MAC and on the global trade in marine aquarium organisms and subscribe to the MAC quarterly newsletter.

- Brochure and FAQs/Info Sheets:

20,000 English copies and 1,000 Indonesian copies of the brochure have been widely distributed and well received. MAC staff have produced a series of FAQs, Fact Sheets and Info sheets that have been distributed, are posted on the website and in the MAC Press and Info Kits.

- MAC Press and Info Kits:

Comprehensive press and info kits are now available for the media and other interested parties and have been distributed to hundreds of media contacts as part of the MAC Certification launch.

- Network Database and E-Mail List:

This is constantly being added to and is the basis for a to rapidly growing e-mail/fax contact list - currently with almost 3,000 individuals from over 60 countries and territories.

- MAC News:

This is produced quarterly and distributed to the e-mail distribution list of almost 3,000.

- MAC Certification Launch:

MAC Certification was launched at the Marine Ornamentals 2001 conference (Orlando, Florida, Nov 27-29). MAC Board Member Bruce Bunting, vice president of the World Wildlife Fund US, made the announcement and unveiled the MAC Certification label as part of his conference-opening keynote speech, "Buy a Fish, Buy a Coral, Save a Reef." Press kits and press releases were sent to general media environmental writers/editors and trade publications and to MAC contacts in government agencies, conservation organizations and public aquariums around the world.

2.1.2 Media

Media interest in the ornamentals trade continues to appear, and MAC responds whenever possible to incorrect information. MAC is increasingly sought out to assist and provide direct input to media coverage and is sponsoring more balanced reports on the marine ornamentals situation. Although most articles continue to introduce the issues by highlighting the "bad news" side of the trade, they now usually also mention MAC and the development of certification. The quality, accuracy and balance in reporting on the marine aquarium trade and sustainability issues has improved significantly due to the input and involvement of MAC.

- **Print:**

Numerous articles that mention MAC have been published on the international wire services, in the US, UK and in SE Asia papers (see Appendix 2).

- **TV/Radio:**

Several TV companies have been in touch w/ MAC about possible stories on the aquarium trade, use of cyanide, coral harvesting, and MAC and the development of certification. MAC was featured on a Hawaii TV news item and participated in the nationally syndicated radio talk show "Pet Talk".

2.2 Network Development and Stakeholder Relations

MAC outreach efforts in 2001 continued to focus on contacting stakeholders to expand or establish familiarity with MAC and certification through consultations in major source and import countries, as well as briefings with key organizations and presentations at strategic conferences. With the finalizing of the working version of the Standards and need for testing, efforts focused more on developing interaction with the industry and identifying collectors and companies willing and able to participate in the certification testing. The highlights of 2001 are outlined below.

2.2.1 Consumers (Hobbyists)

- **US:** A presentation for hobbyist clubs and aquarium societies on sustainable aquarium fisheries was developed to increase consumer awareness of and confidence in MAC Certification. It is being initially be delivered by MAC spokespersons. The MAC Executive Director attended and made presentation at MACNA (Baltimore, Aug). At the 2nd International Marine Ornamentals conference where certification was launched, MAC staff provided updates on the MAC Certification system, explained the nuts and bolts of the system and summarized the MAC communications plan for educating consumers and other stakeholders in countries that import marine ornamentals. In other talks, MAC staff reviewed progress in introducing MAC Certification to industry operators in the Philippines and plans to facilitate the adoption of the MAC Standards in Indonesia and the South Pacific. MAC partners discussed progress with the Global Marine Aquarium Database, monitoring protocols for MAC Certified collection areas, capacity building in the Philippines and the significance of MAC Certification to public aquaria. MAC Certification received recognition from a variety of conference participants at the 2nd International Marine Ornamentals conference:
 - A study on the value and demand for MAC Certification by the industry revealed that more than half were very or moderately familiar with the MAC certification and that 77 % were very or somewhat likely to use MAC Certification in 2002.
 - Results of a recent marine ornamentals survey of marine aquarium hobbyists showed 80 percent strongly support the efforts of organizations such as MAC that are working to educate and certify those in the chain of supply of marine organisms.MAC has also established increased presence on marine aquarium Web sites and their chat rooms.

- Europe: Some ongoing correspondence with European aquarium keeper associations and German hobbyist association (VDA).

2.2.2 Industry and Certifiers

- US: Certification Coordinator visit to interested importers and retailers in Chicago, Michigan, and Ohio (Oct). Group and individual meetings with most of the major importers in the US west coast (LA, Sept).
- Europe: Ongoing interaction with key importers in UK, Netherlands, France and Germany. Presentation by MAC Executive Director at Global Pets Forum (Florence, Nov).
- Indonesia: Ongoing interaction and several meetings with Indonesia export association as a whole and with key individual AKKII members and officers by MAC Indonesia consultant, MAC Accreditation Coordinator and MAC Program Officer. Several meetings with group of Bali based exporters and with key individual exporters.
- Philippines: Numerous meetings and ongoing interaction with Philippines export association as a whole and with key individual exporters by MAC Philippines Coordinator, MAC Accreditation Coordinator and MAC Program Officer.
- Trade Shows: MAC Certification Coordinator attended largest US trade show for animal trade (Backer Show, Chicago, Oct, 2001), unveiled MAC booth and met with numerous exporters, importers, retailers, trade associations and media.
- S Asia/Indian Ocean: Some interaction with a few large Sri Lanka exporters.
- Red Sea/E Africa: Contact with a few companies.
- Airlines: Ongoing interaction with KLM to respond to their interest in linking with MAC Certification.
- Certifiers: Numerous meetings and ongoing interaction with certification companies by MAC Accreditation Coordinator.

2.2.3 Environment Organizations

- Indonesia: Continued interaction and network developing very well through ongoing consultations. Developing special working relationship for WWF and Terangi to develop and deliver capacity building to collectors and communities for becoming certified. Participated in meetings of the NGO network on marine certification.
- Philippines: Strong ongoing interaction with WWF Philippines and IMA. Extensive partnership project with IMA to work with fishing communities on collector training and ecosystem management. Growing interaction with other small NGOs on counterpart funding for collectors training.
- Pacific: Ongoing interaction with FSPI and WWF South Pacific.
- US: Strong ongoing interaction with WWF US and TRAFFIC. MAC briefing seminar for US NGOs held, with good attendance (DC, Aug).

2.2.4 Public Aquariums

- US: MAC Executive Director and Certification Coordinator attended annual AZA conference (Saint Louis, Sept), made presentation and expanded network among public aquariums. Certification Coordinator had follow up meetings with Shedd Aquarium. Provided briefing document and power point for MAC AZA Board member to present at annual AZA Regional Aquatics Workshop.
- Europe: Provided briefing document for MAC supporter (London Zoo) representative to present at annual meeting of European Union of Aquarium Curators (EUAC) (Rotterdam, Oct).

2.2.5 Governments

- US: MAC briefing seminar for many US NGOs held (DC, Aug). Continued interaction and

watching brief with the US Coral Reef Task Force, especially the Trade Sub-group. MAC Communications Coordinator presented a MAC update at the USCRTF meeting and USCRTF Education and Outreach Working Group meeting (both in DC, Dec).

- Europe: Ongoing watching brief re EU suspension of some coral imports from Indonesia.
- Indonesia: MAC Indonesia Consultant and MAC Program Officer held numerous meetings and generated significantly expanded interest from Indonesia agencies, including Ministry of Marine Affairs and Fisheries, Ministry of Trade and Industry, and State Ministry of Environment.
- Philippines: Continued interaction with Director of Bureau of Fisheries and Aquatic Resources, who delivered a keynote speech at the Marine Ornamentals '01 conference. MOU finalized with Palawan Council for Sustainable Development.

2.2.6 Intergovernmental Organizations

- Pacific Islands: Ongoing interaction with South Pacific Forum Secretariat (the intergovernmental body for the independent countries of the island Pacific) and with South Pacific Regional Environment Programme (SPREP) and Secretariat for the Pacific Community (SPC). MAC Executive Director attended meeting of Heads of Fisheries Departments of the Pacific (Noumea, July) and made presentation on MAC and certification.
- UNEP-WCMC: Major partnership. (See partnerships section.)
- Organization for Economic Cooperation and Development (OECD): Presented case study on certification of marine aquarium trade for OECD conference on "Business and Biodiversity" (Paris, Jan).
- International Coral Reef Initiative (ICRI): MAC is a member of ICRI Coordination and Planning Committee, which has a regular item re the aquarium trade on its agenda. MAC Executive Director attended and provided updates on certification at ICRI meeting in Philippines (Cebu, Apr) and sent an update document for the ICRI meeting in late 2001

3. Certification System Development

At the MAC Board meeting in December 2000, we presented the Certification Action Plan that outlined the steps leading to: finalize and test standards of practice, conduct certification feasibility study, and undertake pre-certification outreach and information dissemination with the industry and consumers--up to the launch of certification in 2001. The "Road Map" diagram (Appendix 3) and timeline (Appendix 4) describe the progress we have made in keeping to the certification program that was presented to Board.

3.1. Standards Development

MAC has developed standards for the marine ornamental industry through an international multi-stakeholder process that includes the following steps:

- The initial rough draft of standards, developed in 1999 by the MAC Executive Director, synthesized existing information and preliminary stakeholder input. The MAC Board of Directors and Strategic Planning Workshop reviewed this draft in September. An announcement in the 3rd Quarter 1999 issue of *MAC News* invited other interested parties to participate in the Standards Working Groups. Participants at the Marine Ornamentals '99 conference provided input on the draft standards during MAC workshop sessions.
- In April 2000, a MAC multi-stakeholder workshop set the actions needed for further development of the MAC Core Standards. The MAC Certification Coordinator and MAC Accreditation Coordinator were hired, and a Standards Advisory Group (SAG) was established. The multi-stakeholder SAG consisted of about 80 members, fairly equally represented from Asia, the Pacific, North America and Europe.

- The initial working draft of the MAC Core Standards and Best Practice Guidance documents was developed in October 2000 by the MAC Secretariat. It was reviewed by the SAG during November–December 2000 and by participants of the Pacific Regional Workshop on the Aquarium Trade (Nandi, Fiji) in February 2001.
- The second working draft of the MAC Core Standards and Best Practice Guidance documents was prepared by the MAC Secretariat during the first quarter of 2001 and posted on the MAC website for general public review during March–April 2001. The public was informed about the opportunity to participate in the MAC public review in the 4th Quarter 2000 and 1st Quarter 2001 issues of the *MAC News*. Participants at the International Workshop on the Coral Trade (Jakarta, Indonesia) in April 2001 also provided extensive review and comment during working sessions. In June 2001, the SAG reviewed the results of the public review and provided further comments.
- The final working version, i.e., Issue 1 of the MAC Core Standards and Best Practice Guidance documents, was published on the MAC website on July 6, 2001.
- MAC Core Standards and Best Practice Guidance was officially launched on Nov. 27, 2001, upon approval by the MAC Board of Directors.

3.2 MAC Certification Logo and Label

The MAC Board, staff and others worked with graphic artists to develop several candidates for the MAC logo (i.e., corporate brand mark) and its adaptation as the MAC label (i.e., the actual MAC seal of approval for certified facilities and marine ornamentals). The MAC symbol was selected by a panel of MAC Board members and staff. The logo and label were unveiled at the Marine Ornamentals 2001 conference when the certification was launched and were well received. An information and use pack is being finalized soon to describe the appropriate and allowed use of the label for companies that become certified and for the media.

3.3 Certification Feasibility Study

Following the completion of the Standards, the Philippines Feasibility Study conducted in 2001 indicated that several reef-to-export chains were ready to participate in the Certification test cases later in 2001. Most encouraging was the very high level of achievement of less than 1 percent dead on arrival (DOA) from reef to collector. The study involved 339 collectors (representing about 10 percent of the nation's ornamental fish collectors) at 18 collection sites. Collectors from seven sites were able to deliver marine aquarium organisms conforming to the MAC Collection, Fishing and Holding Core Standard. MAC's partner in the Philippines feasibility work, International Marinelife Alliance, has trained several collector cooperatives in the independent certification process. Interaction and feedback from the sessions enabled the training manuals for collectors to be finalized and published prior to the Certification test cases.

3.4 Certification Testing

MAC needed to undertake a number of test cases to validate the Certification scheme. The testing determined whether the MAC Core Standards, Best Practice Guidance documents and Interpretive Manuals form a certification methodology that is sufficiently robust for use in evaluating the performance of marine ornamental organism collection areas, those responsible for the management of a marine ornamental collection areas, collectors, exporters, importers, trans-shippers and retailers and also serve as a mechanism by which issues surrounding the accreditation of potential MAC certifiers can be ascertained.

The test cases had the other additional objectives of:

- Determining if there are further elements that can be measured and need to be included within the MAC Certification scheme
- Providing MAC with information on the necessary certification techniques that should and can be employed
- Assessing the issues relative to the MAC Certification program and methodology for use when accrediting certifiers
- Providing MAC with the opportunity to work closely and actively in partnership with stakeholders of the marine aquarium industry

Five international certification companies tested the MAC Certification system in early November 2001 to analyze the operations of 18 companies in the Philippines, United States, United Kingdom and Netherlands that volunteered to participate. The two UK wholesalers who participated in the MAC test cases together account for the majority of that nation's importing capacity for marine aquarium organisms. The certifiers determined that the MAC Certification system is sufficiently robust to evaluate collection areas, resource management and industry operators throughout the chain of custody, e.g., collectors, exporters, transshippers, importers/wholesalers and retailers.

3.5 Industry Commitment to MAC Certification

As of the end of 2001, forty-five companies in nine countries, including 17 wholesalers in the United States who together account for 35 to 40 percent of the US importing capacity, signed Statements of Commitment to become MAC Certified as soon as possible. Statements of support have also arrived from major industry associations, including Ornamental Fish International as well as the Indonesia Coral, Shell and Ornamental Fish Association (AKKI) and the Philippines Tropical Fish Export Association. In addition, the first airline has provided strong support for certification. KLM, after a two-year suspension of wild animal shipments, in November 2001 reopened shipment only for marine ornamentals. However, the shipping of marine ornamentals is contingent upon KLM shippers in select countries agreeing to adhere to criteria for quality and sustainability, which are derived primarily from the MAC Standards.

Appendix 1

MAC BOARD OF DIRECTORS

(as of 12 Dec 01)

- John Brandt, Board Member, Marine Aquarium Societies of North America
- Bruce Bunting, Vice President, World Wildlife Fund-US
- Keith Davenport, Director, Ornamental Aquatic Trade Association
- John Dawes, Coordinator, Ornamental Fish International
- Johannes Subiyanto, Marine Policy Advisor, The Nature Conservancy-Indonesia
- Marshall Meyers, Executive Director, Pet Industry Joint Advisory Council
- Mary Middlebrook, Board Member, American Marinelife Dealers Association
- Vaughan Pratt, President, International Marinelife Alliance-Philippines
- Doug Warmolts, Chair, Marine Fish Advisory Group, American Zoos and Aquariums Association
- Lolita Ty, President, Philippine Tropical Fish Exporters Association
- Dradjad Wibiowo, Director, Indonesia Ecolabeling Institute
- Frank Vorhies, Head, Economics of Biodiversity Unit, IUCN - World Conservation Union.
- Yuni Yarman, Chair, AKKII - the Asosiasi Koral Kerang dan Ikan Hias Indonesia [Indonesia Coral, Shell and Ornamental Fish Association]

Appendix 2

MAC IN THE MEDIA

MAC in the print media in 2001 and late 2000 (a partial listing)

- "Aquarium Group Fights 'Cyanide Fishing'", Nature, Volume 408, November 2, 2000.
"Reef Relief" New Scientist, November 4, 2000.
"Asians using cyanide to catch tropical salt-water pet fish," Associated Press, November, 2000.
"Fish collectors can help protect coral reefs," Philippines Daily Inquirer, November 21, 2000.
"Certification system aimed at discouraging cyanide to catch fish," The State Newspaper, October 26, 2000.
Pets International, June 2001, "The Marine Aquarium Council: Certification for Quality and Sustainability in Marine Ornamentals".
Scientific American, July 2001, "Fishy Business".
San Jose Mercury News, 22 May 2001, "Saving Reefs: A collective approach".
VetCentric (on-line magazine), 24 June 2001, "The Seahorse Situation".
"Marine Ornamentals and Conservation", in "Korallenriff Aquarium: Volume 1" by Svein A. Fossa and Alf Jacob Nielson revised and republished in 2001 (in German).
The Wall Street Journal, 29 May 2001, "Guppies for yuppies".
Reuters, 14 June 2001, "Exotic Fish Trade Grapples with Image, Breeding".
The Honolulu Advertiser, 4 June 2001, "Reef-fish collectors treat prey with care".
'Balancing Act,' by Gary Cochran, Freshwater and Marine Aquarium, Aug. 2001
'Hawaii Filling World's Aquariums,' by Adrienne Ancheta, Honolulu Advertiser, Aug. 12, 2001
'MAC Progress Report,' by Paul Holthus, OFI Journal, Aug. 2001
'MAC Valuation Study at the University of Florida,' by Sherry Larkin, OFI Journal, Nov. 2001
'Aquarium Organization Launches Program to Protect Environment,' by Mike Branom, Associated Press (reprinted in the Honolulu Advertiser, Maui News, West Hawaii Today, Tampa Tribune)
'Marine Aquarium Council (MAC) Launch Statement,' by Bruce Bunting, Nov. 27, 2001, <http://www.worldwildlife.org/news/>
'Orlando Launch for MAC Standards,' Nov. 28, 2001, <http://www.ornamental-fish-int.org/newsflash.htm>
'Coral Reefs: Aquarium Certification Aims to Save Reefs, Fish,' by Brian Stempeck, Greenwire, Nov. 29, 2001
'Marine Aquarium Council,' by Svein Fossa, Pet Scandanavia, Nr. 2, 2001
'Gifftod im Meer,' by Sarah Simpson, Spektrum der Wissenschaft, Dec. 12, 2001
'International Certification System for Marine Aquarium Trade,' PETS International Magazine, Dec. 2001
'International Certification System Aims to Protect Marine Environment,' Dec. 17, 2001, http://iucn.org/info_and_news/press/newdecember.html
'Legislation for January and February 2001,' by Roger Halleen, The Federation Report (Official Publication of the Federation of American Aquarium Societies), Jan. 2002

Appendix 3

MAC CERTIFICATION SYSTEM DEVELOPMENT ROAD MAP DIAGRAM 2000-2001



