

## GOAL 12:

# REDUCE IMPACTS FROM INTERNATIONAL TRADE IN CORAL REEF RESOURCES

### KEY THREATS ADDRESSED:

Reducing impacts from international trade is important to reducing a number of key threats to coral reef ecosystems. The figure below is a general summary of the relative importance (H = high, M = medium, L = low) of this goal in addressing the impacts from these threats. A higher ranking suggests that activities under this goal are considered more important to addressing the threat. Lower rankings suggest that although activities under this goal may make significant contributions, they may currently be less important to addressing the threat. The rankings are a summary of input shown in Table 2. The actual importance of this goal to addressing threats to reefs will depend on location and other factors (see Tables 3 and 4 for regional comparisons).

THREATS	Global warming/ climate change	Diseases	Hurricanes/ typhoons	Extreme biologic events	Overfishing	Destructive fishing practices	Habitat destruction	Invasive species	Coastal development	Coastal pollution	Sediment-ton & runoff	Marine debris	Overuse from tourism	Vessel groundings	Vessel discharges
<b>Reduce Impacts of Trade</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>H</b>	<b>H</b>	<b>M</b>	<b>M</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>L</b>

### RATIONALE FOR ACTION:

Many coral reef species and resources are harvested globally for commercial purposes, including food, the aquarium trade, live fish markets, construction materials, curios, jewelry, pharmaceuticals and traditional medicines. Some of this commercial collection involves destructive fishing practices, such as the use of poisons to capture live reef fish for aquaria and live fish markets. In many cases, the local and regional intensity of collection appears to be occurring at unsustainable levels. Surveys suggest that almost all reefs have been affected by over-collecting, and that there may be almost no pristine reefs left in the world (Hodgeson 1999).

Unsustainable and destructive fishing practices are altering the ecosystem functions of reefs and greatly diminishing long-term benefits to local communities, who depend upon reef resources for food, livelihoods, coastal protection and cultural activities (Johannes and Riepen, 1995). Unsafe diving practices associated with collection of some species for trade is also leading to a high incidence of illness, paralysis and death of collectors in some regions.

Executive Order 13089 on coral reef conservation charges the U.S. Coral Reef Task Force with analyzing and addressing the U.S. role in the international trade of coral reef species. The Task Force International Working Group has taken a number of actions to fulfill this task (see <http://coralreef.gov/> for Working Group reports). A recent symposium on coral trade summarizes many of the findings to date (Best and Bornbusch 2001).

During the 1990's, the U.S. was consistently the world's largest importer of coral. The U.S. imports 60- 80 percent of the live coral, over 50 percent of the curio coral, and 95 percent of the live rock and reef substrate in international trade each year, and the global trade is increasing annually by 10-30 percent (Bruckner 2001). In addition, the U.S. is estimated to import about 8 million of the 14-30 million marine aquarium fishes in trade. The aquarium trade includes over 1,000 species, with approximately two-thirds originating in the Indo-Pacific and a large proportion caught using cyanide. Coral reef fishes are also being overexploited for the live reef food fish trade, which supplies Asian restaurant markets with groupers, large wrasses and other low productivity species that are particularly vulnerable to overfishing.

As the world's largest importer of ornamental coral reef species, the U.S. has a critical responsibility to address degradation of coral reef ecosystems that may arise from destructive collection practices and unsustainable trade. The U.S. has banned the use of most destructive fishing practices, and collection of stony corals and live rock are prohibited in most federal, state and territorial waters. However, many coral reef products and species continue to be imported into the U.S. that were captured using harmful extraction methods or were overexploited. In the last several years, there have been efforts by the aquarium industry and non-governmental organizations to develop new procedures and guidelines for sustainable collection and transport of coral reef organisms for the industry (e.g., Marine Aquarium Council Certification Program).

Furthermore, survivorship of animals from reef to consumer is often low due to stresses associated with cyanide fishing and poor handling and transport. In light of the global decline in coral reef ecosystem health, and because of the prominent role of the U.S. as a consumer of coral reef species, it is in the national interest of the U.S. to ensure the environmental sustainability of collection and trade as well as the long-term environmental and economic benefits to local communities dependent on coral reef ecosystems.

## **STRATEGY TO REDUCE IMPACTS OF GLOBAL TRADE**

The goal of this strategy is to reduce the adverse impacts of collection and trade in coral reef animals, encourage more responsible trade, and encourage the conservation and management of coral reef ecosystems both domestically and internationally. The strategy is outlined in the U.S. National Action Plan to Conserve Coral Reefs and related documents of the International working group of the U.S. Coral Reef Task Force. For more detailed information see <http://coralreef.gov/>. The strategy includes two broad objectives to achieve the goal:

Objective 1: Assess the nature and extent of the trade in coral reef species, and both positive and negative impacts associated with the trade.

Objective 2: Evaluate and implement approaches to mitigate negative environmental impacts associated with the trade.

## **SUMMARY OF ACCOMPLISHMENTS (2001)**

The following is a partial summary of recent accomplishments by members of the U.S. Coral Reef Task Force to achieve the goal and objectives. For more detailed information see <http://coralreef.gov/>.

### Objective 1 Accomplishments:

- Assessed the trade in stony corals and the U.S. role as a major consumer. (NOAA, DOI, DOS and partners)
- Assessed the domestic harvest of ornamentals from Florida. (NOAA and partners)

### Objective 2 Accomplishments:

- Exercised global leadership and raised awareness in international and regional fora such as the International Coral Reef Initiative (ICRI), Convention on International Trade in Endangered Species (CITES), Asia Pacific Economic Cooperation (APEC) and other opportunities (e.g., Special Protected Areas Wildlife (SPAW)). (DOS, USAID, NOAA, EPA, DOI)
- Developed a comprehensive trade strategy to reduce adverse impacts of trade. (DOS, USTR, DOI, NOAA, USAID, DOJ, EPA)
- Worked with the Marine Aquarium Council and other groups in development of sustainable practices and certification programs for trade in coral reef species for the aquarium industry. (NOAA, DOI, DOS, USAID, DOJ, EPA)
- Increased human and institutional capacity in developing countries to address adverse

impacts and promote sustainable management. (DOS, USAID, NOAA)

- Supported programs under the East Asia and Pacific Environmental Initiative to address destructive fishing practices and negative aspects of international trade. (USAID, DOS).
- Established precedent-setting criminal convictions for illegal imports of protected corals and Caribbean lobsters, and illegal harvest and commerce in Hawaiian corals and live rock. (DOI, DOJ, NOAA).
- Led the successful initiative by the APEC forum to adopt the Destructive Fishing Resolution and begin implementation. (DOS, NOAA, USAID).
- Provided financial and technical support to the Pacific Regional Workshop “Sustainable Management of the Marine Ornamental Trade” in Fiji. (DOS, USAID, NOAA).
- Sponsored and organized the “International Coral Trade Workshop; Development of Sustainable Management Guidelines” in Jakarta, Indonesia. (NOAA, DOS)

### **IMPLEMENTATION PLAN 2002-2003**

Successful implementation of the strategy is contingent on funding and other factors, including effort by a variety of federal and non-federal organizations. The International working group of the U.S. Coral Reef Task Force, working with many partners, provided the following partial summary of key actions needed from government and non-governmental entities in 2002-2003 to help fulfill the objectives. For more detailed information see <http://coralreef.gov/>.

To Address Objective 1:

- Continue consultations with coral exporting countries and other stakeholders to assess the nature and extent of the impacts associated with trade in coral reef species.
- Assess the nature and extent of the impacts associated with the trade in coral reef species, especially the marine curio, ornamental and food trades, and assess the adverse impacts on the health of collectors.
- Assess U.S. ornamental reef fish and curio imports through analysis of customs declaration forms and develop a web-based database for compiling import data.
- Evaluate the ornamental fishery in U.S. waters, including the extent of trade and status of resource, and develop recommendations for sustainable management.

To Address Objective 2:

- Exercise global leadership in shaping and developing mutually supportive environmental and trade policies.

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- Participate in international and regional fora, including CITES, APEC and ICRI, to address concerns relating to coral reef species trade and to raise global and regional awareness of the issues and solutions.
- Work with various stakeholders to develop public education and awareness materials aimed at reducing unsustainable harvest practices and responsible consumer behaviors.
- Expand human and institutional capacity-building efforts in countries with coral reefs to develop and implement sustainable management plans, enforce relevant laws and regulations, develop environmentally sound collection practices and alternatives, and implement other measures that protect and conserve coral reef ecosystem.
- Work with stakeholders to encourage sustainable, environmentally sound captive-breeding or artificial culture programs in host countries that ensure benefits to local communities and to reduce the introduction of exotic and invasive species.
- Promote effective governance and sustainable management practices for artisan and commercial uses, including the use of marine protected areas.
- Improve domestic law enforcement of illegal coral reef species trade.
- Work with the marine aquarium industry and various stakeholders to eliminate destructive collection practices, reduce mortality during handling and transport, and promote industry-led certification schemes that are rigorous, environmentally sustainable and include equitable distribution of profits to local communities.
- Work with stakeholders, APEC members, and non-governmental organizations to develop industry standards for the live reef fish food trade.

Develop and implement additional measures as appropriate to ensure that consumer demand for marine aquarium organisms does not threaten the health and sustainability of coral reef species and ecosystems.