NOAA FY 2000 Budget Request Fact Sheet

LANDS LEGACY INITIATIVE

Coral Reef Restoration

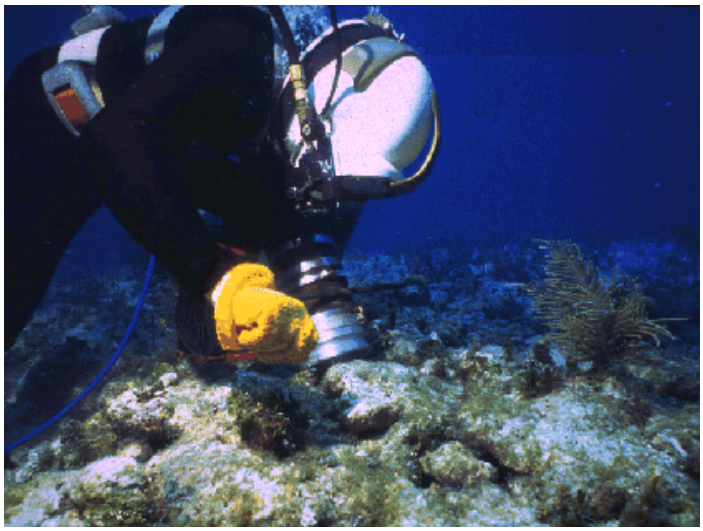
NOAA requests an increase of $10 million in FY 2000 to restore some of the most exquisite and endangered ecosystems on Earth - coral reefs. Coral reef ecosystems are among the most biologically productive and diverse in the world and support a stunning diversity and abundance of undersea life. NOAA's Coral Reef Restoration request is a key component of the Administration's FY 2000 Lands Legacy Initiative, and complements an increase of $2 million requested under the Year of the Ocean Coral Reef Protection Initiative for protecting and conserving coral reef ecosystems. This funding will support partnerships that involve coastal communities in repairing damage directly inflicted on coral reefs.

NOAA Budget	FY 2000 Change $M
National Ocean Service	
Ocean Resource Conservation and Assessment	
(Coastal Dredging and Restoration)	$10
(Coral Reef Restoration)	$10
Ocean & Coastal Management	
(Coastal Zone Management Program)	$32
(National Estuarine Research Reserves System)	$ 3
(National Marine Sanctuaries)	$12
National Marine Fisheries Service	
Conservation and Management Operations	
(Fisheries Habitat Restoration)	$23
Procurement, Acquisition, and Construction Account	
(National Estuarine Research Reserves System)	$12
(National Marine Sanctuaries)	$ 3
NOAA Lands Legacy Initiative - - Total	$105

Why Restoration is Needed

Coral reefs are home to more than 25 percent of all marine life and support about 4,000 fish species in just 0.3 percent of the sea area. These fragile reef structures are found along the shores of 100 nations, including U.S. Atlantic, Pacific and Gulf coasts, and provide a foundation for tourism, recreation and fishing industries that sustain billions of dollars in economic activity. Yet over the last few decades, coral habitat has been negatively impacted by human activity, including U.S. coral reef ecosystems. Estimates suggest that two-thirds of the world's reef are dying. This destruction threatens both the coral reefs and the economies they sustain.

Over the past 10 years, NOAA has recovered more than $10 million from shipowners to restore coral reefs injured by large vessel groundings. With these funds, the Administration has demonstrated that it's possible to restore coral reef ecosystems. Even so, a large amount of coral is lost each year to small vessel groundings, whose cumulative impact is very destructive. In the Florida Keys alone, it is estimated that around 400 small vessel groundings occur each year. Additionally, large vessel groundings continue to occur in unprotected areas, especially in the Caribbean and Pacific. Since no source of funding is readily available for restoring many of these sites, this investment requests funding to restore sites directly injured by human activities that are currently left as devastating piles of rubble and gashes in the reef structure.



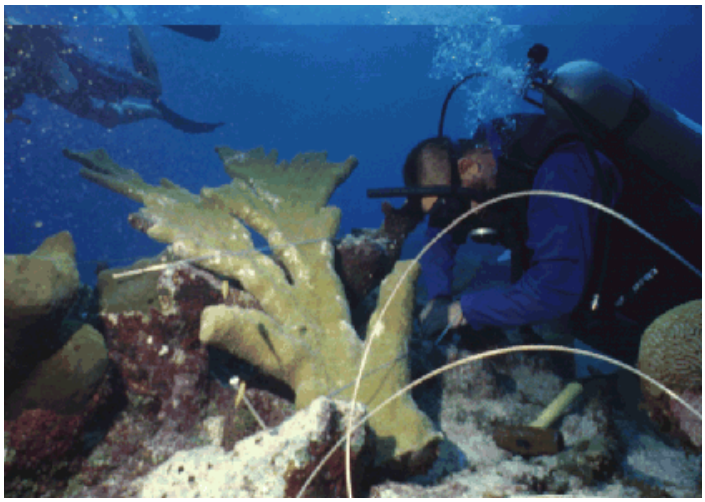
Removal of reef rubble at the M/V Elpis grounding site in the Florida Keys.

Responding to the Problem

This initiative will help preserve irreplaceable parts of our natural legacy by reversing direct human impacts to coral reef ecosystems. The primary focus will be to implement projects in protected areas with established management regimes. This includes coral reefs in the Florida Keys, Puerto Rico, the U.S. Virgin Islands, Hawaii, Guam, American Samoa, and the Northern Mariana Islands. Restoration opportunities will also be identified for coral reefs outside marine and estuarine protected areas. NOAA, in partnership with states, academia, other agencies and

coastal communities, will restore injured reefs in the nation's coastal waters by:

Developing and Implementing Emergency Restoration Measures: Funds will be used to establish regional coral reef emergency response teams to immediately survey and monitor potential adverse events. They will also pursue environmentally-sound salvage actions, and implement emergency restoration measures for major coral reef damage. The magnitude of injury to reefs from vessel groundings can be greatly exacerbated by poorly executed or nonexistent salvage efforts. Grounded vessels continue to damage and destroy underlying coral reef structures even if they no longer threaten to release oil. Careless salvage efforts can destroy acres of previously unaffected coral reef. Additionally, the loose debris generated by a grounding can continue to injure adjacent reef areas well beyond the initial area and time of impact. Improved salvage techniques and emergency restoration activities can reduce the overall magnitude of injury to coral reef ecosystems.



Elkhorn coral reattachment at the Fortuna Reefer grounding site off Mona Island, Puerto Rico.

Implementing Coral Restoration Projects: Funds will support coral reef restoration projects in existing protected areas in Florida, Puerto Rico, U.S. Virgin Islands, Hawaii, Guam, American Samoa and other territories. In addition, restoration opportunities will be identified and cooperatively pursued in U.S. coastal waters where no management regime currently exists. NOAA has successfully generated funding for restoring coral reefs injured by catastrophic vessel groundings through natural resource damage actions. Yet for incidents involving small to moderately sized injuries, the cost of pursuing damage assessments often outweighs the benefits of restoration, resulting in a large total area of sites left in need of restoration. In addition, many coral reef resources in the nation's coastal waters are currently unprotected without any explicit statutory authority for restoring injured areas.

Developing Coral Nurseries: Funds will be used to establish coral nurseries in areas where dislodged coral can be stabilized, protected and cultured until a suitable transplant site is located and the coral can be reattached. The proposed nurseries will build upon previous experience in the Florida Keys National Marine Sanctuary and Hawaii and upon techniques for coral propagation being developed in the private sector. The nurseries will be located near coral reefs that are frequently impacted by vessel groundings. These facilities will help reduce detrimental impacts by minimizing mortality of injured corals and provide a steady source of donor material to help restore other injured sites.

Restoration Effectiveness and Technique Transfer: This initiative will support a review of coral restoration projects to determine optimal coral reef restoration techniques and to help quantify the extent to which these restoration efforts expedite the recovery of injured corals to pre-injury conditions. As a corollary benefit, restoration at smaller sites will provide numerous opportunities for developing, implementing and evaluating innovative restoration techniques that will, in turn, support restoration of larger areas. Given the slow growth rate of coral reefs, a dedicated long-term monitoring program is also required to evaluate techniques for expediting recovery of injured corals. Finally, coral restoration techniques will be transferred to other nations interested in protecting and restoring coral reef resources.

Why NOAA?

Over the past 15 years, NOAA has developed significant expertise in restoring coral reefs injured by large vessel groundings. The agency's capabilities were demonstrated through restoration efforts subsequent to the 1984 grounding of the *M/V Wellwood* off the Florida Keys, the 1989 groundings of the *M/V Elpis* and *M/V Alec Owen Maitland*, the 1997 *Fortuna Reefer* grounding off Puerto Rico, and the *R/V Columbus Iselin* grounding off the Florida Keys. Through these efforts, NOAA has demonstrated that it is possible to mitigate negative effects with emergency response efforts and to restore these habitats. NOAA possesses the institutional capability to transfer the knowledge gained through restoration experience, research and monitoring programs to coral managers around the world.

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