INITIATIVE: PREVENT EXTINCTION OF HIGHLY ENDANGERED MARINE TURTLES

1. Desired Outcome: Protect globally imperiled populations of green, hawksbill, olive ridley, loggerhead, and leatherback sea turtles from extinction. Implement a comprehensive domestic program to reduce interactions with fishing gear with the goal of exporting gear modifications for reducing fishery interactions globally.

2. Brief Description of Initiative:

Sea turtles are an integral component contributing to the ecological biodiversity of many marine environments and they play a key role in maintaining ecological balance in the communities they inhabit. Sea turtles are an integral part of coral reef communities, where much of the marine biodiversity is found. Recent studies have defined the important ecological role of certain species of sea turtles in maintaining the delicate balance of sponge diversity and abundance in coral reef communities. We have only scratched the surface in our understanding of the overall ecological role of these higher trophic level species. The elimination, through extinction or vast reduction in population size, may cause catastrophic changes in coral reef or estuarine ecological communities, upon which humans depend significantly.

In addition to ecosystem value, ecotourism is an important component of tourist revenue in coastal areas, both in the United States and abroad, and the controlled and organized viewing of nesting sea turtles is a valuable component of this ecotourism in many places. Eco-tourism to sea turtle nesting beaches, when conducted in an environmentally sound manner, may provide significant benefits to economically depressed regions of the world. Highly successful eco-tourism programs and associated sea turtle oriented, community/cottage industries at nesting beaches such as that developed in Brazil have the potential to conserve sea turtles and enhance living standards in many parts of the world. Dwindling of the nesting populations of sea turtle species may impact important seasonal tourist revenues. The northern subpopulation of the loggerhead is seriously impacted by deep-water longline fisheries operating in the U.S. Atlantic, Azores, western Europe and in the Mediterranean. The loggerhead turtle also utilizes the nearshore waters along the Atlantic seaboard. Gillnet fisheries targeting such finfish as cod, herring, and monkfish operate in these nearshore waters and likely result in serious negative impacts to loggerheads. Management measures to reduce incidental capture in these fisheries may have a negative economic impact, unless gear strategies can be developed that allow the two to co-exist. A large component of this initiative seeks to achieve gear technology solutions. Conversely, the incidental take of sea turtles by commercial fisheries, if not assessed and addressed through conservation measures, may result in closures of economically valuable fisheries.

Sea turtle populations around the globe are under tremendous pressure from incidental capture in domestic and international fisheries, directed harvest (both legal and illegal), and other anthropogenic threats (e.g., vessel collisions, habitat degradation). The western North Atlantic (Surinam and adjacent areas) nesting population of the olive ridley (*Lepidochelys olivacea*) has declined more than 80

percent since 1967. Incidental capture in fisheries and directed take are primarily responsible for the decline. The hawksbill turtle, decimated by directed harvest for its shell, is considered critically endangered worldwide. Populations of hawksbills in the western Pacific, southeast Asia, and the Caribbean have been significantly reduced, some to a mere fraction of their historic abundance. The eastern Pacific green or "black turtle" nesting population is less than 1% of historic levels in Mexico, and continues to decline. The loggerhead population in Australia and adjacent waters of the South and Indo-Pacific has collapsed, resulting at least in part due to incidental capture in high seas fisheries. In the U.S. the northern nesting subpopulation of loggerhead turtles, occurring from northeast Florida through North Carolina, has shown no evidence of recovery despite more than a decade of intensive conservation efforts. Considerable attention has been focused on the incidental capture of sea turtles in numerous domestic fisheries, both state and federally managed as well as foreign fisheries. Several high profile legal challenges in the U.S. have resulted in court-ordered management of domestic fisheries. NOAA has the opportunity to partner with the states and the international community at the government, academic, industry, and private level to assess the status of sea turtle populations and to work toward effective solutions that ensure recovery and conservation of these species, especially with regard to incidental capture. Sea turtles are an integral part of the marine environment, in particular the coral reef community and highly productive estuarine systems, as well as the high seas. Knowing and monitoring the critical habitats of these species is useful in inferring the distribution patterns of species and their abundance, in predicting their risk of extinction if and when environmental conditions change, and in establishing policies designed to reduce the mortality of these protected species. Through partnership with NESDIS, NMFS will explore ways in which remote sensing might be utilized to implement real-time management actions.

3. What needs to be done by NOAA?

- Identify stock home ranges through genetic analyses.
- Determine migratory patterns and primary foraging areas to facilitate bi-national and multi-national conservation efforts. Integrate remotely sensed oceanographic data with distribution and migration data.
- Build capacity through technical training workshops, partnership programs, and the development of educational materials.
- Implement multi-lateral agreements (e.g., Interamerican Convention for the Conservation and Protection of Marine Turtles, CITES). Negotiate and implement a multi-lateral agreement for the Indian Ocean Region.
- Assist developing nations with conservation, research, and recovery programs for highly endangered sea turtles.
- Develop and export gear solutions for non-shrimp fisheries to reduce incidental take.
- Support long-term in-water index surveys to monitor population trends. Support and implement additional in-water index surveys where needed.
- Determine subpopulation demographics through DNA techniques.
- Implement identified management strategies to reverse population declines.

4. Who are NOAA's partners in this effort and what will they do?

NOAA will partner with the Department of Interior - U.S. Fish and Wildlife Service, the Department of State - Office of Marine Conservation, the U.S. Agency for International Development, the States, especially those that have entered into ESA Section 6 agreements with NMFS. NMFS and State Fish and Wildlife agencies will assist in monitoring and enforcement efforts, research activities, status reviews, and implementation of management measures.. We will use the funds secured through this initiative to leverage resources from these agencies to maximize available funding and enhance conservation efforts. Non-governmental organizations and industry will play an important role in capacity building, through hands-on efforts and network-building to achieve conservation benefits. We envision a strong role and working partnership with the National Fish and Wildlife Foundation (NFWF), the International Union for the Conservation of Nature and Natural Resources (IUCN), the Wider Caribbean Sea Turtle Network (WIDECAST), as well as other NGO's in the international community. We will work closely, through the Department of State and through established NOAA/NMFS relationships with foreign fishery and wildlife agencies to promote conservation and recovery activities for sea turtles and to assist these nations in implementing effective programs and management actions especially with regard to the export of solutions identified to reduce incidental capture in various fisheries.

5. What will it cost? What are we currently spending?

NMFS has historically allocated a proportionally low level of funding toward the recovery and conservation of sea turtles in the domestic and international arena. While some new funds have been realized in recent years these have been primarily targeted toward crisis-management efforts to prevent extinction. In FY01, NMFS funding for sea turtle recovery is on the order of 10M, including all FTE personnel and benefits, contracts, program funding, travel, etc. Sufficient funds have not been available to commit to proactive efforts or to build the domestic and international capacity necessary to effectively address critical conservation challenges and ensure species survival. There have been no long-term committed funds to develop international partnerships, support the implementation of multi-lateral agreements, and provide funding support for priority research especially with regard to the development of gear-based solutions. In many cases, especially with regard to developing nations, minimal funding support realizes maximum conservation gains on-the-ground. The proposed initiative funding will result in the implementation of an integrated domestic and international program for sea turtles that places a high value in developing solutions to incidental capture in various fisheries, capacity building in developing nations, international partnerships, and multi-lateral agreements to conserve sea turtles. The net result will be stemming the extinction crises which face many populations of sea turtles both in the U.S. and throughout the world. Additionally, NOAA would be well-placed as an international leader in conservation and recovery efforts for sea turtles. The following summarizes funding needs:

Component	FY2001	FY2002	FY2003	FY2004	FY2005
Identify Stocks	100K	100K	50K	50K	25K
Identify Migratory Routes and Foraging Habitats	250K	250K	150K	150K	75K
Develop/Implement Gear Solutions	750K	750K	500K	500K	250K
Support/Implement Index Monitoring	250K	250K	250K	250K	250K
Build Capacity	200K	200K	100K	100K	50K
Implement Agreements	100K	100K	100K	100K	50K
Assist Developing Nations	200K	200K	100K	100K	100K
Collaborate with States	250K	250K	250K	250K	200K
TOTAL	2.0M	2.0M	1.5M	1.5M	1.0M

Proposed Funding Recipients and FTE Request in Parentheses:

	FY2003	FY2004	FY2005	FY2006	FY2007
NMFS	1.25M(3)	1.25M(3)	700K(1)	700K(1)	450K
NESDIS	100K	100K	50K	50K	50K
Contractors	750K	750K	750K	750K	500K

6. How will we know if we succeed?

Insert performance measures.