

PRELIMINARY SUGGESTIONS FOR A NMFS  
SEA TURTLE PROGRAM IN THE PACIFIC

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Statement of needs and anticipated benefits:

Fourteen areas under U. S. jurisdiction in the Pacific are known to contain either feeding or nesting aggregations of sea turtles (Appendix I). However, for most of these areas, very limited information exists on the status of the stocks with respect to numbers, composition, conservation, cultural/nutritional importance, and basic life history data necessary for effective management. A factor which further complicates this situation is the tendency of some sea turtles, particularly the green turtle *Chelonia*, to undertake periodic migrations across international boundaries. The belief is widely held that sea turtle stocks throughout all the Pacific Islands have experienced steady declines within historical times. The primary reasons for these declines are likely to include overexploitation for human consumption and alteration of critical habitat.

All species of sea turtles except the flatback of Australia (*Chelonia depressa*) are now listed as either Threatened or Endangered under the U. S. Endangered Species Act of 1973. As the lead agency for jurisdiction over sea turtles, NMFS has responsibility for gathering the appropriate ecological/biological information, and for instituting management practices that will enhance and <sup>stabilize</sup> perpetuate sea turtles. The goal of such efforts is to eventually reach a state where all sea turtles can be

removed from their listing under the Act. The NMFS does not presently have a sea turtle program in the Pacific (SW Region), although an active program has been developed since FY 1976 in the Southeast Region where accidental take due to shrimp trawling, habitat alteration, and the scarcity of management-oriented information have received national attention. A NMFS comprehensive plan for the "recovery and management" of sea turtles in both the SE and SW Regions was drafted in May 1978, but has not yet been acted upon in Washington, D. C.

Except for work underway in Hawaii, New Guinea and the Great Barrier Reef, essentially no research programs of sea turtles exist in the Pacific Islands. A need therefore exists for NMFS to initiate a Pacific program that would encompass at least the following four broad categories.

1. Information development
2. Resource management
3. International assistance
4. Enforcement

*long term*

Information development will be fundamental to determining the proper resource management techniques. The following partitioning of projects represents a method by which such information could start to be gathered.

1. Population Survey and Assessment of the Hawaiian Archipelago, Johnston and Wake - In-depth determination of all foraging and nesting turtles and their habitat requirements; detailed life history study; evaluate the effects of direct and indirect fisheries.

2. Foreign Assistance to Pacific Island Nations - Provide assistance in the development of survey, assessment and management programs; develop cooperative programs with SPC and IUCN.
3. Population Survey of American Samoa - Conduct a survey to estimate the numbers of foraging and nesting turtles; determine their cultural/nutritional importance to native inhabitants.
4. Population Survey of Rose Atoll - Conduct a survey to estimate the numbers of foraging and nesting turtles; estimate the magnitude of poaching by foreign fishing vessels; determine predator-prey relationships of hatchling turtles and indigenous rats.
5. Population Survey of Trust Territory, Guam and Commonwealth of the Northern Marianas - Conduct a series of surveys to estimate the numbers of foraging and nesting turtles; determine cultural/nutritional as well as economic importance; determine the locations and magnitude of poaching by foreign fishing vessels; evaluate the effects of direct and indirect fisheries.
6. Population Survey of Howland, Baker, Jarvis, Palmyra and Kingman Reef - Conduct surveys to estimate the numbers of foraging and nesting turtles.
7. Population Survey of Canton and Enderbury - Conduct surveys to estimate the numbers of foraging and nesting turtles.

Of these proposed projects, the life history study of the Hawaiian *Chelonia* population is considered to be of major importance for the following reasons: 1) the population lives and breeds solely within the confines

of the 1600-mile archipelago thereby making it subject only to U. S. jurisdiction, 2) a unique land basking habitat exhibited at certain sites provides easy access to individuals of both sexes at differing stages of maturity, 3) ecological conditions provide excellent opportunities for the required satellite tracking study, 4) comprehensive life history data collected will have broad application to other populations where such research is not feasible, and 5) a research program is already underway, but funds from existing sources are presently short-term and at an inadequate level.

An additional area in the Pacific in need of investigation is the accidental take of sea turtles by the tuna purse seine fishery. Depending on the total numbers involved and rates of mortality, this at-sea capture has potential for providing unique information on aggregations (very likely olive ridleys *Lepidochelys olivacea*) at sites distant from their nesting beaches. For the Eastern Pacific, these data would be particularly valuable in view of the rapidly deteriorating status of the Mexican nesting colonies.