

(e.g., shrimp trawling and pelagic longlining) and from coastal construction (e.g., beach nourishment and hopper dredging) has been greatly reduced as a result of these protective measures.

While implementing various management measures to protect the species, as listed, we have been mindful of the different dynamics of the subpopulations. Biological opinions, issued under section 7 of the ESA, have specifically considered the effects of actions on the Northern and South Florida subpopulations. For example, NMFS SEFSC (2001) modeled the differential effects of pelagic longline fishing in the Atlantic on the Northern and South Florida subpopulations of loggerheads, and NMFS' biological opinion on the Atlantic Highly Migratory Species fisheries (NMFS, 2001) concluded that the impact of ongoing mortality of loggerheads, particularly Northern loggerheads, in the pelagic longline fishery, together with the environmental baseline and cumulative effects acting on the species, would be expected to appreciably reduce the survival and recovery of the species. Consequently, NMFS implemented a reasonable and prudent alternative to reduce the impacts of the pelagic longline fishery. The biological opinion and particularly the treatment of the subpopulations' interdependence for the species' survival and recovery were challenged and upheld in court (*Bluewater Fishermen's Assoc. vs. NMFS*, U.S. District Court for the District of Massachusetts, September 30, 2002).

As stated previously, we have convened a recovery team to update and revise the Atlantic recovery plan for loggerheads. The recovery team is conducting a full, independent review of the species' biological and habitat requirements and re-evaluating appropriate recovery goals and recovery actions to meet those goals. We will request that the recovery team consider establishing "recovery units" within the recovery plan, specifically looking at the previously identified subpopulations. In this determination, we found that the western North Atlantic loggerhead subpopulations are not discrete and thus not distinct population segments. The subpopulations are interrelated for recovery purposes, and they are important individually in many ways. These interrelated subpopulations are consistent with the recovery units set forth in some recovery plans. In recovery plans that use this concept, the Services generally describe recovery units as geographic or otherwise identifiable subunits of the listed entity

that individually are necessary to conserve genetic robustness, demographic robustness, important life stages, or some other feature necessary for long-term sustainability of the overall listed entity. Designation of subpopulations as recovery units in the recovery plan would make the importance and interdependence of the subpopulations clearer and would give us greater guidance on recovery actions that will benefit individual subpopulations and most effectively conserve loggerheads as a species.

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