

## Marine Turtle Training and Satellite Telemetry in the Republic of the Marshall Islands

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The Marshall Islands Marine Resources Authority (MIMRA) is the scientific agency that studies and manages marine species in the Republic of the Marshall Islands (RMI). Recently, MIMRA conducted turtle by-catch mitigation training for the MIMRA led observer program. MIMRA also increased data collection by permitting Women United Together in the Marshall Islands (WUTMI) to conduct a turtle salvage project to characterize and determine the stock composition of turtles (*Eretmochelys imbricata* and *Chelonia mydas*) in the Marshall Islands. The joint effort between MIMRA and WUTMI, included an expedition to Erikub Atoll where satellite transmitters were affixed to post-nesting green turtles to determine migratory pathways and foraging grounds.

From 2005 to 2007, MIMRA conducted training of observers in the Majuro-based fishing industry to increase awareness of the importance of documenting marine turtle-fisheries interactions. By the end of 2007, Secretariat of the Pacific Community's GEN-2 forms were being filled out more often and more accurately than in previous years, indicating that the training was successful. Observers were also able to photograph turtles from fisheries interactions. MIMRA faces challenges in the future to continue to train, assist and encourage observers in reporting marine turtle and fisheries interactions.

MIMRA permitted the WUTMI turtle data collection project which was conducted by five women stationed in Majuro, Wotje, and Ailuk Atolls between 1 October 2007 and 30 September 2008. WUTMI opportunistically collected data and samples from turtles or turtle remains that had been used for food or cultural purposes as

allowed under Marshallese laws. Turtle carapace lengths and widths were measured with a flexible tape measure to the nearest tenth of a centimeter. Small skin samples were obtained for future mitochondrial DNA analysis, and photographs were taken. In addition, data collectors obtained information on turtle capture location, capture method, and use of turtles from the fishermen.

In August 2007, members of MIMRA and WUTMI affixed Telonics ST-20 transmitters to the carapaces of five post-nesting green turtles from Erikub Atoll, using the minimally invasive technique of applying fiberglass cloth and polyester resin over the transmitter and onto the turtle's carapace. Transmitters sent signals through ARGOS, and data were shared with MIMRA and WUTMI through NOAA Pacific Islands Fisheries Science Center. Turtle Loj 2 traveled to the Philippines and settled into foraging grounds around Palawan Island. Another turtle (Loj 1) traveled to forage near Tarawa Atoll, in Kiribati. This track appears to follow that of Jebake, a legendary sea turtle of Marshallese tradition. One turtle's transmitter ceased transmitting at Bikini Atoll, RMI. The final two turtles circled in the open ocean for a few months. One turtle was 100 km south of Pohnpei, Federated States of Micronesia when the last transmissions were received. The other circling turtle remained within the Marshall Islands Exclusive Economic Zone when transmissions ceased. At least two transmitters continued to send locational data through September 2008. MIMRA will utilize the data from these studies as a basis for better conservation and management actions in the Marshall Islands. MIMRA will also encourage international exchange of information with nations sharing RMI turtle resources.