Large Marine species research in Tuvalu: marrying science and local knowledge for conservation

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The diversity of large marine species, including marine mammals, is poorly understood in Tuvalu waters. Our collaborative study between the Environment departments of Tuvalu and New Zealand was initiated to address this gap in information. Multi-species cetacean, shark, turtle, and ray surveys were carried out by marine experts from New Zealand, SPREP, local government staff and traditional fishermen. Additional tagging, sighting and tagging data were collected by an in-country turtle and cetacean network that was established as part of this project. In addition, an invaluable aid to survey design and baseline knowledge was the consultation process undertaken with local fishermen to discern their knowledge of large marine species hot spots in Funafuti lagoon, species distribution, fishermen-large marine species interactions, species behavior, cultural value and initial perceptions of Tuvaluans towards large marine species sightings. The study was able to confirm numerous large marine species, including: four definite and three possible cetaceans, two different types of turtles, three rays, and five species of shark. Interviews with fishermen and locals indicated strong cultural ties and reliance on these species. Among other things it was noted that: turtles are largely hunted for cultural occasions and sale, the shark finning company may be posing a conservation threat to certain species, cetacean interactions are generally noted as positive, and sharks are the species primarily involved in fishing depredation events. This project was a positive demonstration of capacity building as noted by the active participation of Tuvaluans in data collection, planning, implementation, and monitoring. In addition this project worked towards increasing the current understanding of large species biodiversity and was inclusive of traditional knowledge. Coupling traditional and scientific knowledge is a cost effective and important approach in both increasing our understanding of biodiversity and also to aid in conservation of large marine species in Tuvalu.

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