

**PELAGIC PREDATOR DISTRIBUTIONS AND ANTHROPOGENIC IMPACTS:
IMPLICATIONS FOR EFFECTIVE SPATIAL MANAGEMENT IN THE CALIFORNIA
CURRENT**

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Predators, including sea turtles have disproportionate impacts on marine ecosystems, yet we lack a spatially explicit assessment of cumulative human impacts to their populations that is essential for effective and comprehensive management of their populations. We created a cumulative utilization impact metric by combining tracking data of eight protected species of leatherback sea turtles (*Dermochelys coriacea*), four species of marine mammals, and three species seabirds (n=685 individuals) in the California Current and 24 species-specific weighted anthropogenic stressors to determine the overlap between relative habitat use of species and the potential human impact on those species. We found significantly greater impacts in the US National Marine Sanctuaries and on the continental shelf, with 82.6 and 98.2% of core cumulative utilization impact areas occurring within these regions, respectively. Species may benefit from increased spatial management in the Sanctuaries and other regions. Variation in how species and impacts are distributed emphasizes that using either alone is insufficient for effective spatial management. Results can be used to concentrate more effective management in areas where efforts will be both ecologically relevant and economically feasible across species.



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2013 INTERNATIONAL SEA TURTLE SYMPOSIUM

Baltimore, Maryland USA

5 to 8 February, 2013
Baltimore, Maryland, USA

Compiled by:

Tony Tucker, Lisa Belskis, Aliko Panagopoulou, Alan Rees, Mike Frick,
Kris Williams, Robin LeRoux, and Kelly Stewart

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