

Economics for Marine Mammal Protection

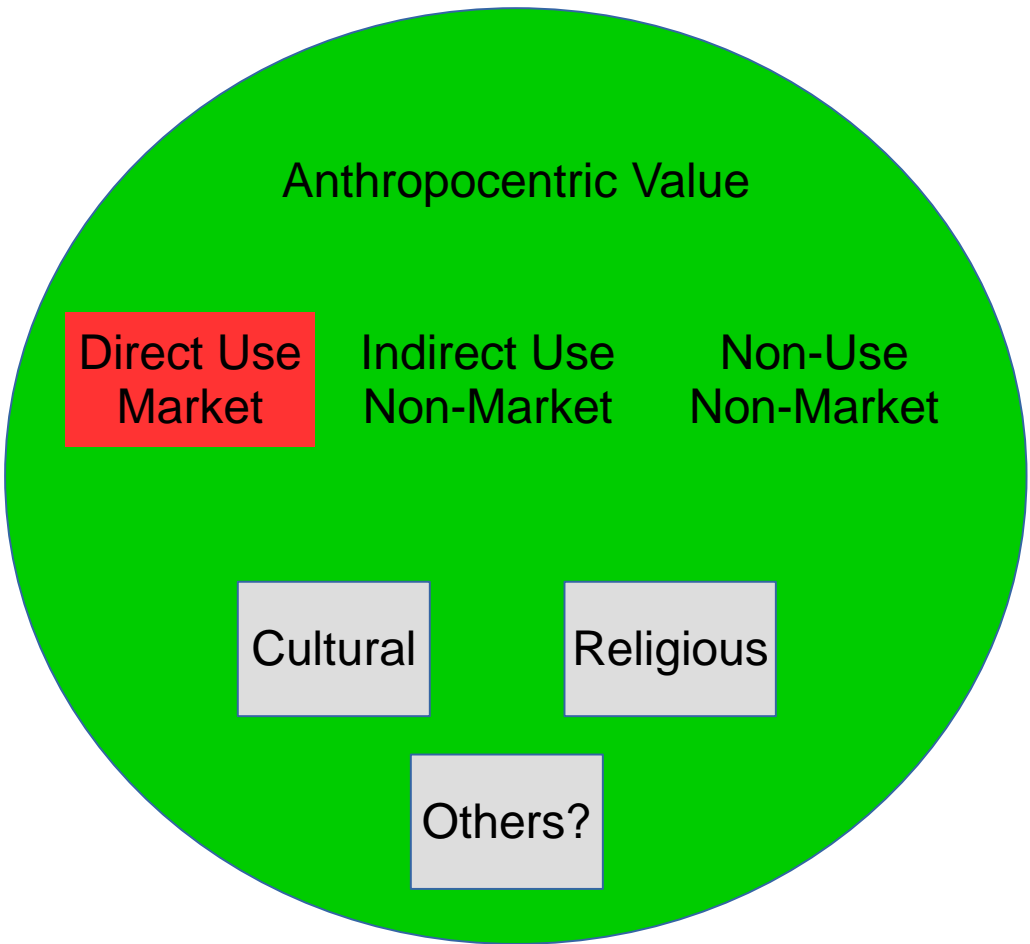
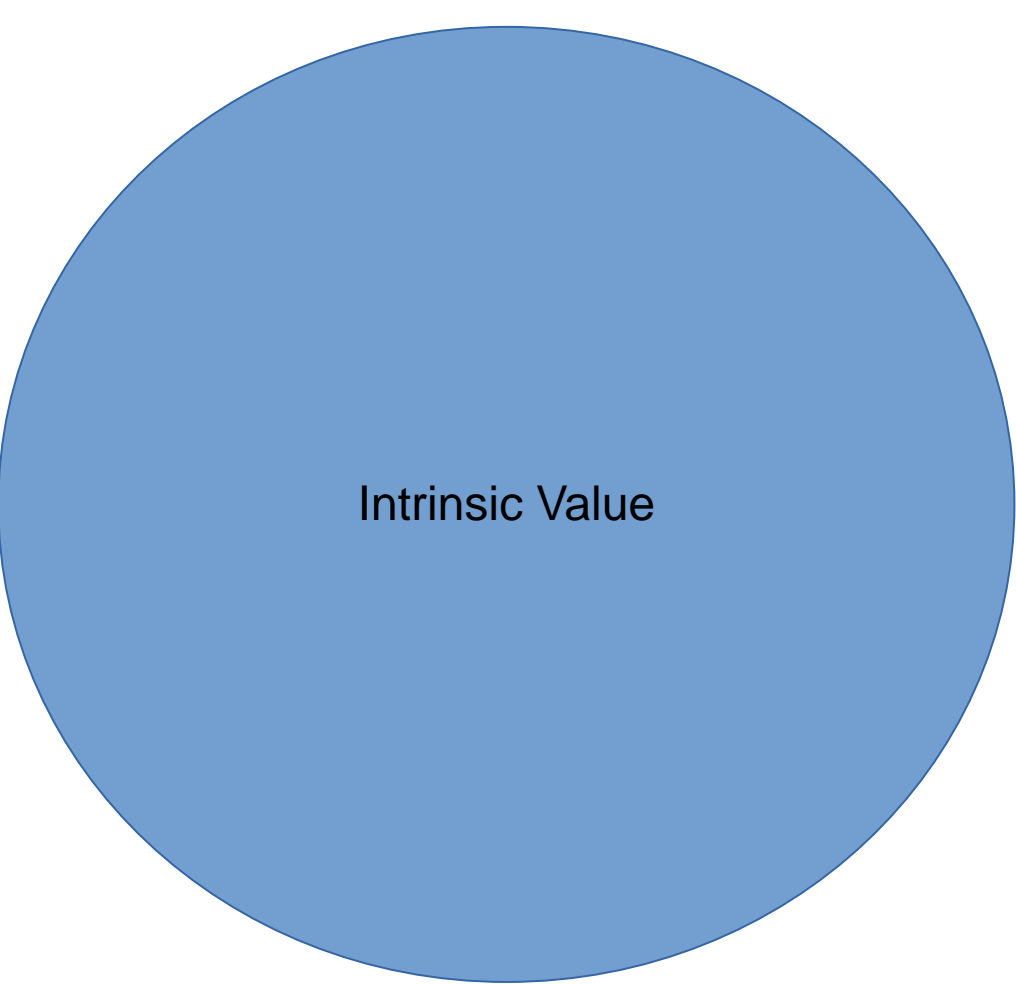
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1. Price and Value

Myth: There is no market for marine mammal conservation. Since there is no market and the price is zero, for economists marine mammal conservation isn't valuable.

Reality: Great concern about prices particularly when prices **do not** reflect the full costs or benefits of an activity.

Value for Marine Mammals

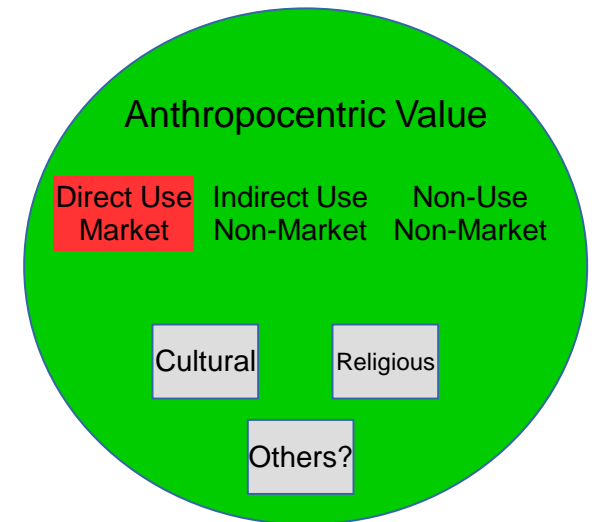


Values Outside of Markets

- **Indirect Use (Non-market):** Whale watching tours. If no whales no tours, so people really value whales but only observed indirectly via tours
- **Non-Use (Non-Market):** people would be willing to conserve marine mammals because they value MM or ecosystem services independent of any direct use or to maintain resource for future use

Examples

\$13 Billion
Value society gains from recovering threatened and endangered marine species.



2. Balancing the Scale

- Balancing the cost-benefit ledger can be useful politically and lead to better public policy

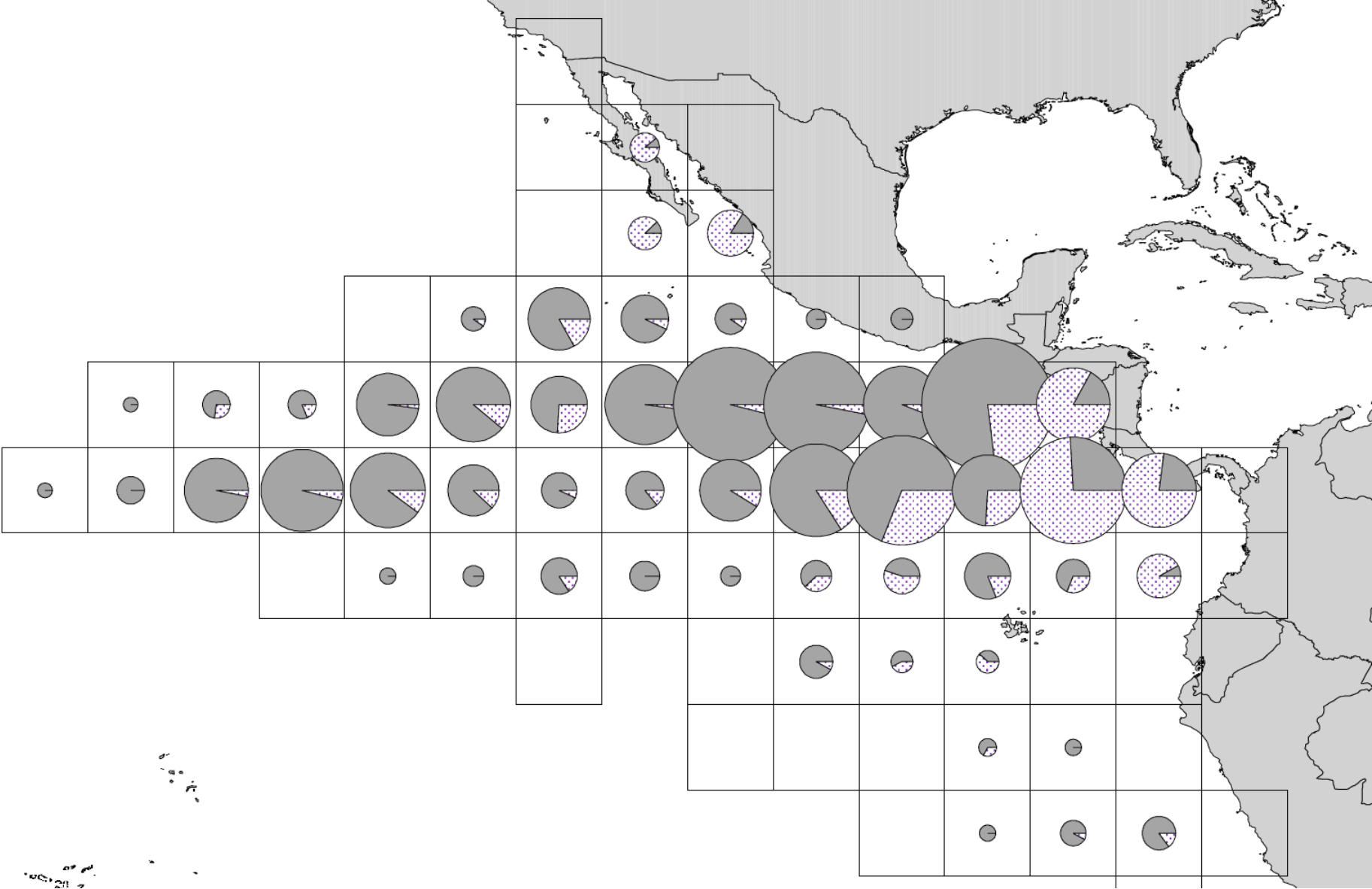
Activity	Cost	Benefit	
Restore oysters in Chesapeake Bay via reef restoration	\$14,800 / acre		
			

3. Effective Regulation and Cost Effectiveness

Even if the concept of valuing marine mammals seems morally repugnant or a futile empirical exercise, an environmental economics approach can be useful for:

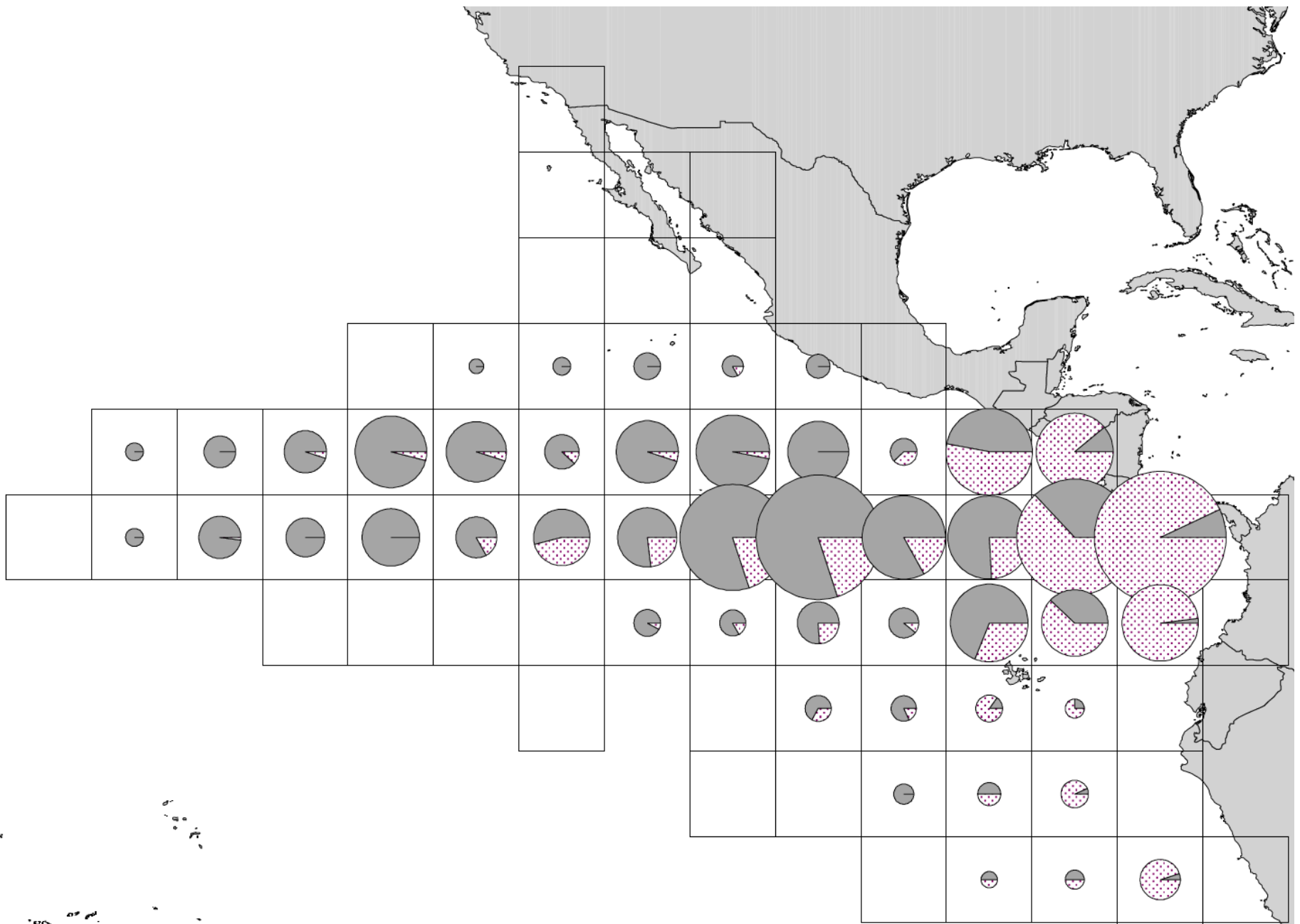
- Understanding responses by regulated parties that may undermine (or help) biological objectives
- Find conservation efforts yielding greatest biological benefits for scarce conservation resources

ETP Tuna Fishing in 1988



Grey = fishing targeting marine mammals

ETP Tuna Fishing in 1992



Grey = fishing targeting marine mammals

Conservation Resources Resources are Scarce

	Cost to Reduce Fishery Interaction by 1 Sea Turtle	Cost to Increase Hatchling Survival by 1 Sea Turtle	Return on Investment: Increase Hatchling Survival:Reduce Fishery Interaction
California drift gillnet	\$205,363	\$1,858	\$111:\$1
Hawaii longline	\$28,054	\$1,858	\$15:\$1

Questions?