

**Appendix C9: What are NMFS' Social Science Needs
Identified by Protected Resources'
Regional Management?**



What are NMFS's Social Science Needs Identified by PR Regional Management?

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Input Data

1. Draft Economic Data Gap Report (2007)
2. Annual PR Reports
 - ITS for turtles (2012)
 - SARs for marine mammals
3. PRSIPP - PR Science Needs Request
 - Presented at:
 - 3-day PRSIPP workshop (Sept 2013)
 - BOEM, Navy, FWS, and others included in Day 1 then NMFS
 - Annual PR ARA meeting (May 2014)
 - Products: Spreadsheet and presentations of PR Science needs
4. National Call with RO and OPR Division Chiefs on PR Social Science needs (Aug 2014)

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Economic Data Gaps Report Three (3) broad categories of data used to protect and recover protected species

- Cost of Fishery Management Actions
 - Commercial: Lack of precision in PR bycatch estimates does not allow management at FMP, thus at gear type.
 - Non-commercial: Recreational & Subsistence even less known
 - State managed areas
- Cost of Non-Fishery Regulatory Action
 - Critical Habitat 4(b)2
 - Recovery Plans
- Benefits of
 - Fishery and Non-Fishery Management Actions
 - Too few species evaluated at national level

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Call with RO and OPR Division Chief Social Science Needs Request

- Call Set up
 - Sept 2014 PR Science Needs Request
 - PR Science Needs categorized by:
 - Region, Taxon, Species, Themes, Priority Rating
 - Social Science can be an asset in
 - Mitigating Threats
 - Recovery & Restoration
 - PR Economic Fact Sheet
 - Identified Potential Mitigating Threats
 - Fishery Related
 - Non-Fishery Related Interactions
 - Provided a matrix (taxon by threats) - Please rank (1 high to 5 low) before the call



Attendees on the Call

Economists: Doug Lipton, Dale Squires, Rita Curtis, Kathryn Bisack, Dan Holland, James Hilger and Lew Queirolo

Regional Office PR and OPR (Division Chiefs): Dave Gouveia (NE), David Bernhart (SE), Jon Kurland (AK), Lynne Barre (NW/SW for Chris Yates), Jean Higgins (PI), Nicole Le Beouf (OPR), Angela Somma (OPR), Cathryn Tortorici (OPR)



Alaska Region Non-exhaustive Overview of Current Needs!

- Cost of Fishery Management Actions
 - Prominent Commercial Interaction: Aleutian Island Groundfish and Steller sea lions
- Cost of Non-Fishery Management Actions
 - Offshore energy development - huge and growing
 - Climate change and associated loss of sea ice: Case of ice seals
 - Cruise and whale watching ships - value wildlife viewing but threats include:
 - lethal interactions, harassment in feeding and resting areas
- Benefits of
 - Non-consumptive use value for marine mammals
 - Subsistence use of marine mammals unique in AK



West Coast Region

- Cost of Fishery Management Actions
 - Commercial: Orcas
 - Large Whale entanglements (recreational?)
- Cost of Non-Fishery Management Actions
 - Ship Strikes
 - Recreational: Orcas and abalone in future
 - Noise: Large whales and small cetaceans
 - Offshore Energy
 - Orca prey reduction due to salmon consumption
 - Sea turtle conservation banking since international threat
- Benefits of ...same need as AK
- Need post analysis of PR policy instruments

West Coast Region	Lrg Wh	Sm Cet	Seals	Turtles	Fish Salmon	Fish Other	Coral	Invert
Commercial	1	2&1 SRKW-prey	2	1	2	2		
Recreational	5	4	3	1	2	1		3
Whale Watch	3	1	5	5				
Inten Kill		3	1	2 International	4			
Subs Harv	4			2	2			4
Ship Strikes	1	1	3	5				
Noise	2	2	3	5	5	4		
Offshore Energy	2	2	3	3	4	4		
Tourism	3	3	3	5	5			
Climate Change	4	4	4	2 International	2	3		2
Disease	5	3	4		3			1
Contaminants	5	1	3		3			2
Habitat				2	1			



- Cost of Fishery Management Actions
 - Commercial interaction: False Killer Whale
- Cost of Non-Fishery Management Actions
 - International Threats: Leatherback, Loggerhead, Olive Ridley
 - Disease & Poaching: Green sea turtles
 - Habitat Loss: Hawksbill turtle
 - Recreational impacts: Main island seals, false killer whale, green sea turtles
 - Food limitations : Northern Island seals
 - Beach threats (e.g. harassment, intentional killings, other negative interactions): Main Island seals
 - Near shore disturbances (tourism etc.): Spinner dolphins
 - CHD: Hawaiian Monk Seal, Hawaiian False Killer Whale & Corals
- Benefits of ...same need as AK
- Fear of regulatory actions hinder our ability to get data



- Monk Seals:
 - Fear associated with the recent CHD proposal.
 - Are perceived impacts and actual impacts similar across communities for future regulations?
 - Understanding values associated with marine resources and monk seals across communities to maximize the impacts of outreach strategies for this species.
- False Killer Whales
 - TRP: How did actual costs to the fishing industry compare to perceived or projected costs?
 - Lack of information available on recreational fisheries interactions. Would a -better understanding of non-market values associated with fishery activities in the Islands provide a better understanding of how to approach some of these barriers?



- Sea Turtles
 - Interactions with recreational fisheries: Not well reported; Would understanding the obstacle to reporting support recovery for some of these species?
- Spinner Dolphins
 - Non-market value of local communities targeted for dolphin-directed behavior.
 - Non-market value to those that participate in dolphin-directed activities (non-tour participants).
 - Use value: Demand for swimming with the dolphins is high (2009), but how close do they need to be?
- Corals
 - Primary threat is climate change. Market and non-market costs of implementing smaller local scale management actions in relation to the health of reef systems as a whole.



- Cost of Fishery Related Actions :
 - Usual suspects (commercial & Recreational)
- Cost of Non-Fishery Related Actions
 - CHD Corals
 - Tourism, commercial dolphin tours: harassment
 - Bottlenose dolphins have negative behavioral changes
 - Recreational fishery growing rapidly:
 - incidental capture, boat operation strikes, harassment.
 - Offshore energy development
 - Coastal Development
 - Climate change & rising sea level is a looming big issue for corals
- Benefits of....Valuation:
 - Protect individual corals or whole reef?
 - Value to overall ecosystem
 - How does "iconic" species like turtles & dolphins affect tour trip values?



Northeast Region

- Cost of Fishery Related Actions :
 - Better understand sector management: How does it affect bycatch?
 - Pinger Compliance: accountability in sectors?
 - WTP for gear modifications versus closures. What is the tipping point? Or allow them to fish until a cap it met?
 - Fisher's behavioral response to closures? Specifically interested in MA restricted area closure for large whale plan. What do they do?
 - Competing mandates: MSA vs MMPA/ESA
 - Recreational Fishery: How much out there and how is it contributing to different parts of the economy?

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Northeast Region

- Cost of Non-Fishery Related Actions
 - Aquaculture an emerging issue (salmon?)
 - Technology advancement with drones: harassment
 - Seal haul outs
 - Whale watching trips to improve viewing
 - Whale watching guidelines weak. How does WTP value change with different encroachment guidelines? How does that vary across the country? What factors motivate compliance?
 - What makes people care about PR species? Should outreach be different for different groups of animals? How do we improve our regulatory outreach?
 - Public versus fishermen's perception of regulations: Is there a difference? Need more transparent understanding of regulations.
 - Dolphin safe tuna - NEFOP certification ?

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Office of PR

- Harassment of marine mammals, including swim-with, feeding and the recreational us
- Recreational fishing takes such as sea turtles and dolphins
- Intersections between above items
- Recreational use of drones: National proposed rule - working with Park Service
- Recreational Fishery: Need to know more about perceptions of PR issues (intentional dolphin killings, fear based killings, entanglement issues)
- Commercial Industry lawsuit in North Carolina about rec fishery not being regulated for PR takes
- Economic/Social issues are driving down the vaquita in Mexico. Need a buyout in gillnet fisheries in upper Gulf of California

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OPR

- Upcoming CHD
- Listings associated with imports?
- Need more than traditional data. What do fisherment think verus us? Eco-trust organization hired to collect data in Oregon

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Questions for us to address

- What does our end-of-the-day product look like?
- What are the common themes across past and future needs?
- How should we discuss the common past and future needs: by region, threat, taxon, types of analyses (CEA, Valuation, CBA)?
- What criteria can we use to prioritize?
- What should we discuss before, in and after we break out in groups?
- Should we break out in more than 2 groups to get a product today?