A whale of a task

Mitigating deadly strikes, entanglements and risks from potential energy development

R. Cotton Rockwood and Jaime Jahncke

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Conservation science
for a healthy planet.

Photo: Cascadia Research Collective

Three-pronged approach to protecting large whales

1. Decrease ship strike deaths
2. Lower entanglement in fishing gear
3. Ensure offshore energy is whale-friendly

Ships kill whales

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Strandings are a poor metric

±5%

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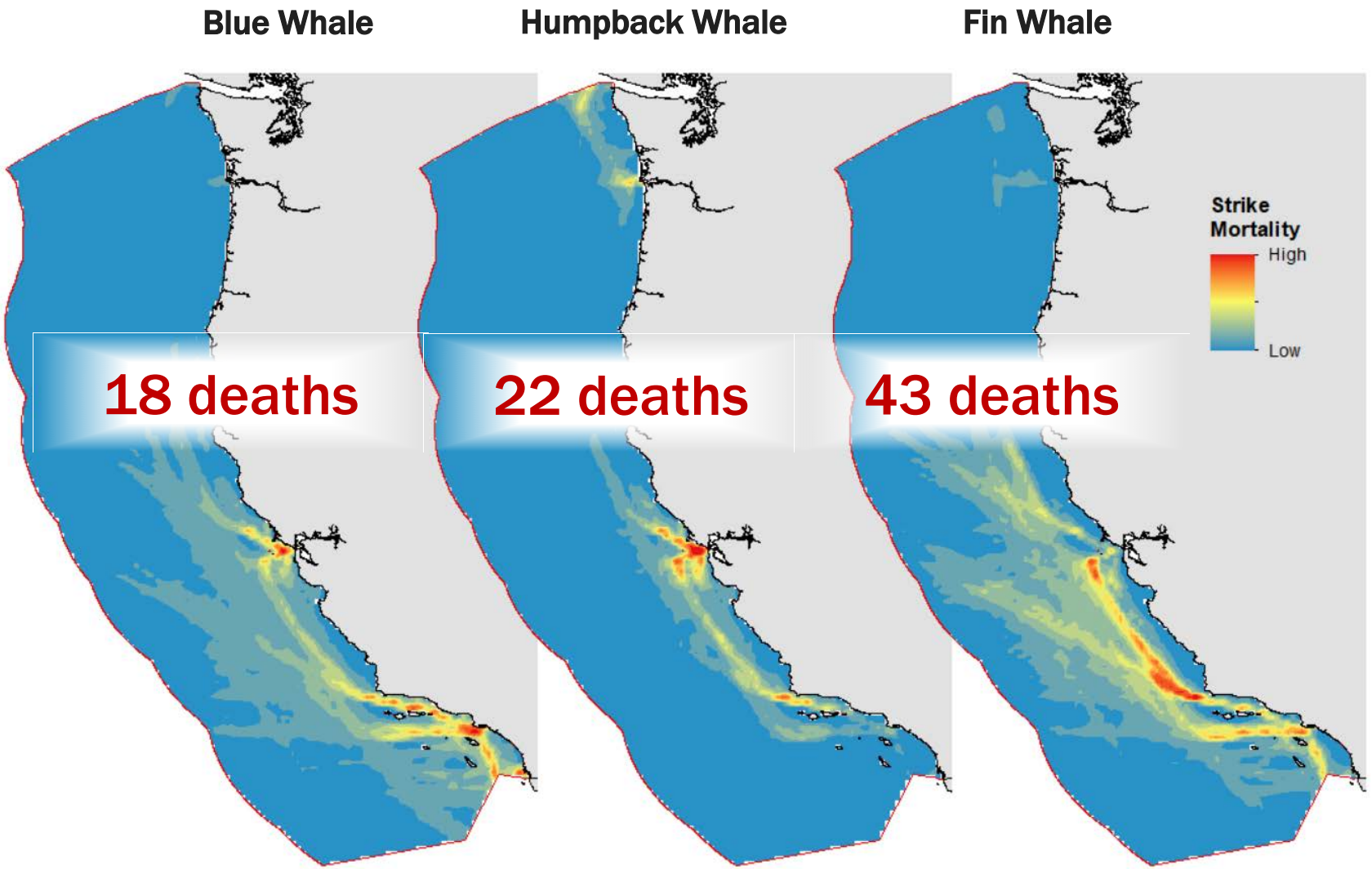
Where are whales struck?



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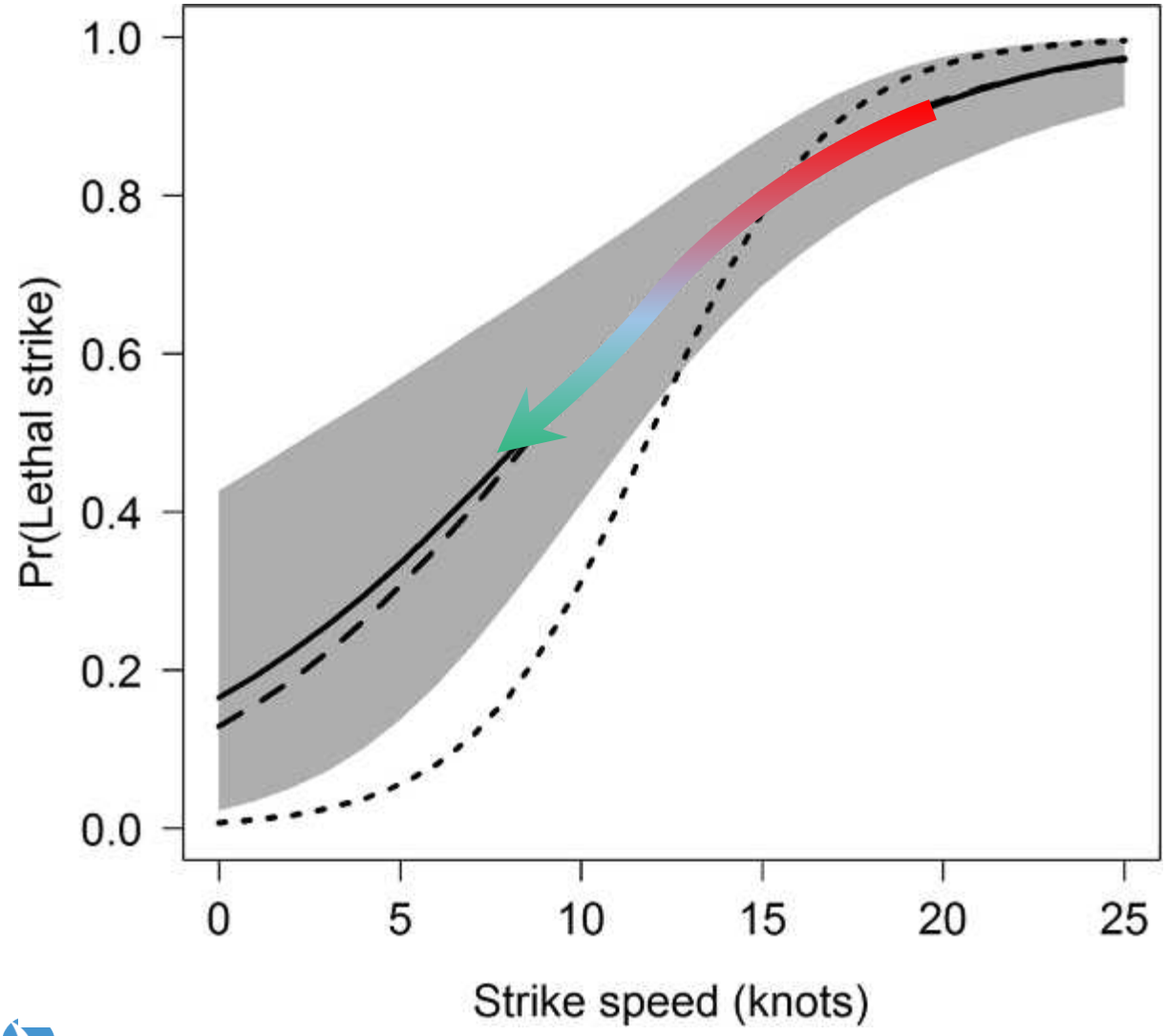
What can we do?



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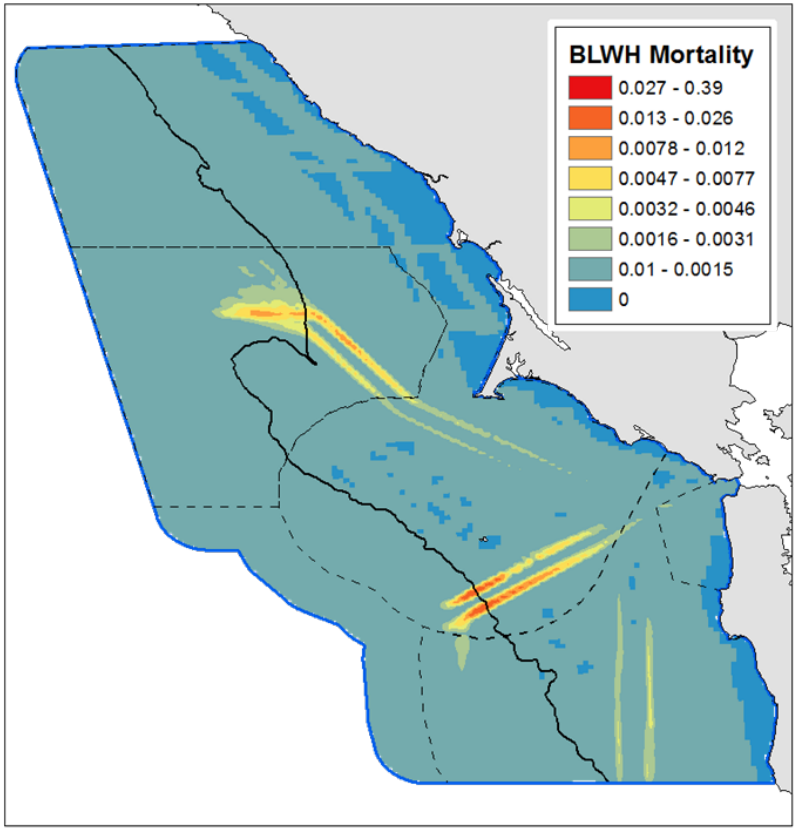
What about our local ocean?

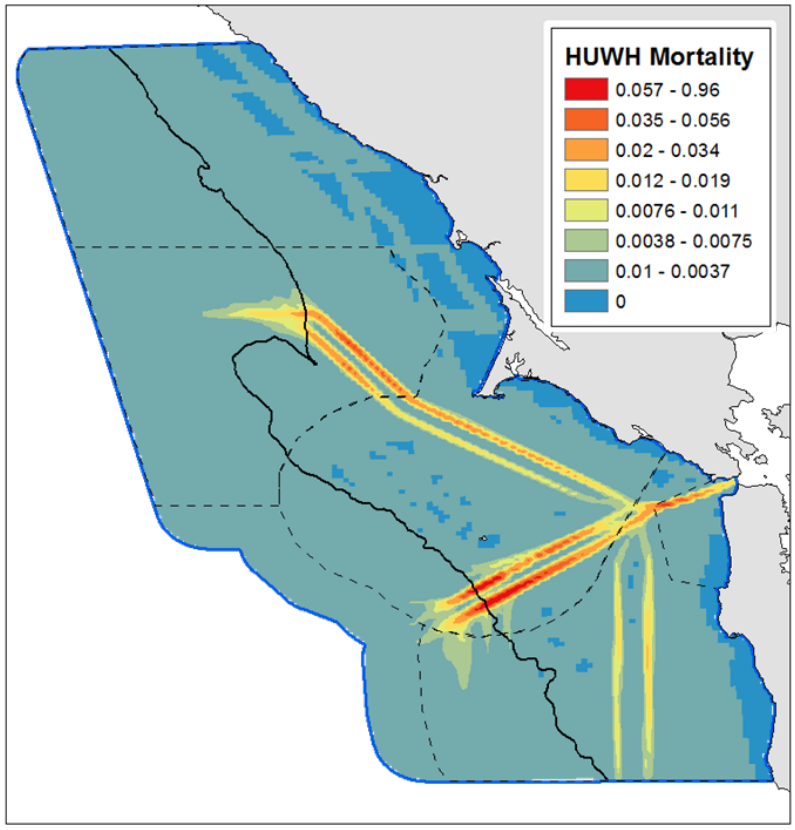
Blue Whale

2.7 deaths.



Humpback Whale

7 deaths



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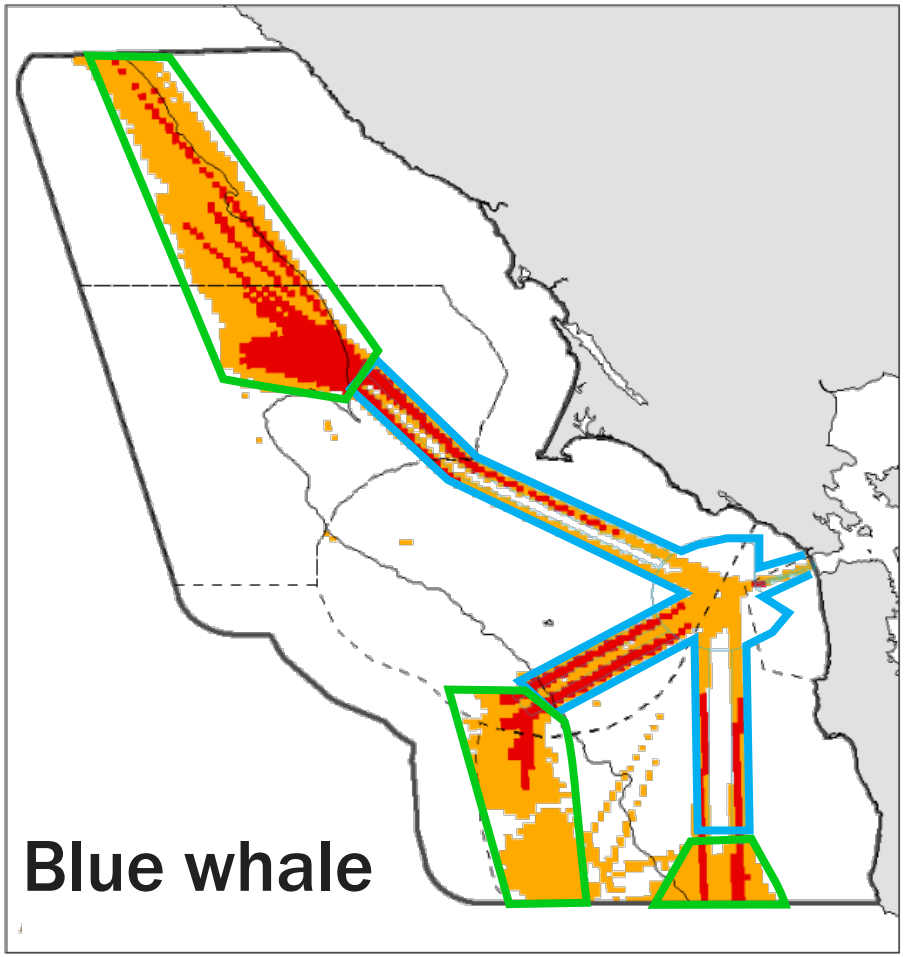
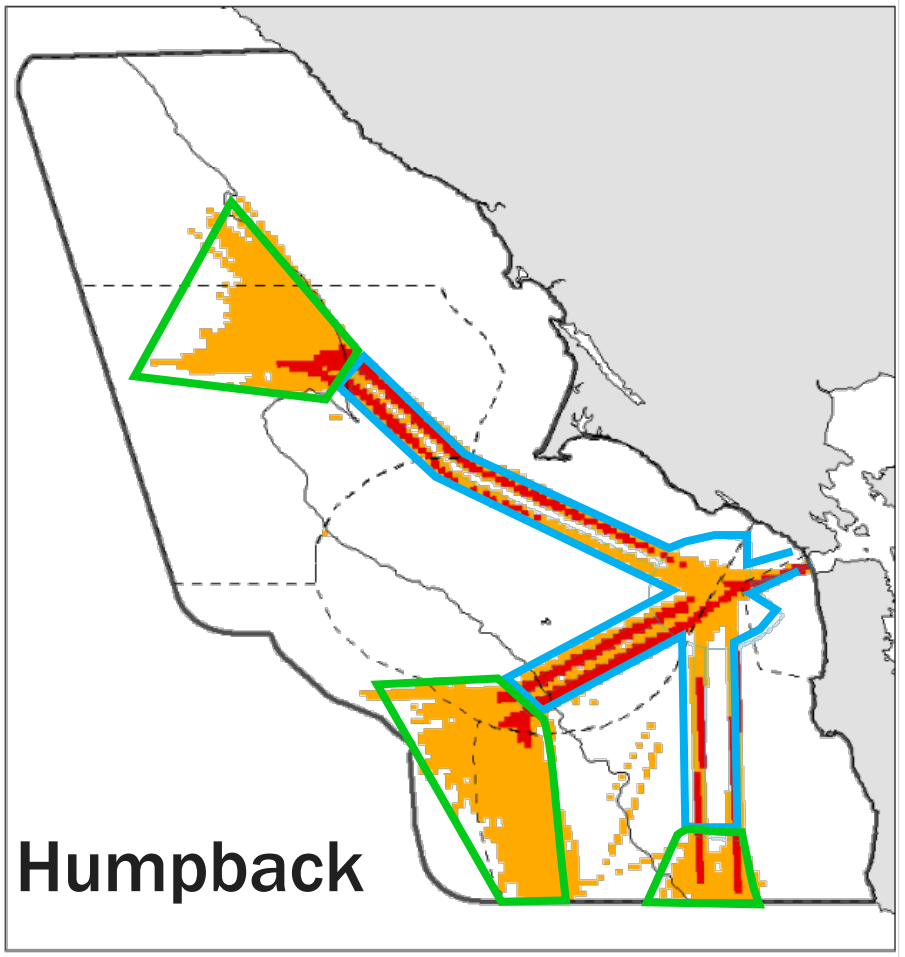
Potential areas of focus





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Stopping strikes off the Bay

15% decrease in deaths in 2016 & 2017

Improved cooperation from ships	=	20 – 30% fewer deaths
Speed limits at ends of the lanes	=	40 – 60% fewer deaths

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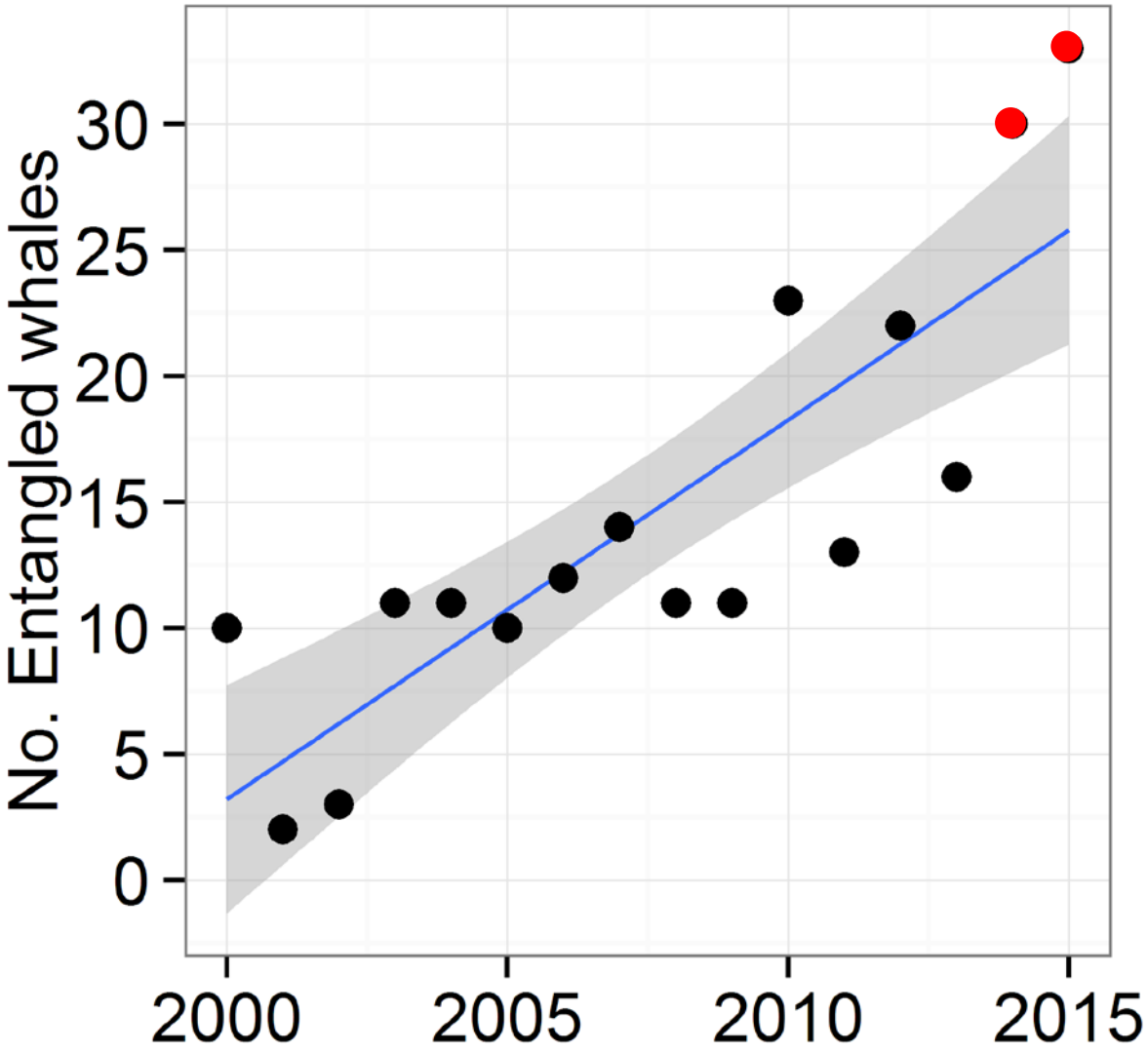
Entanglement in fishing gear is increasing



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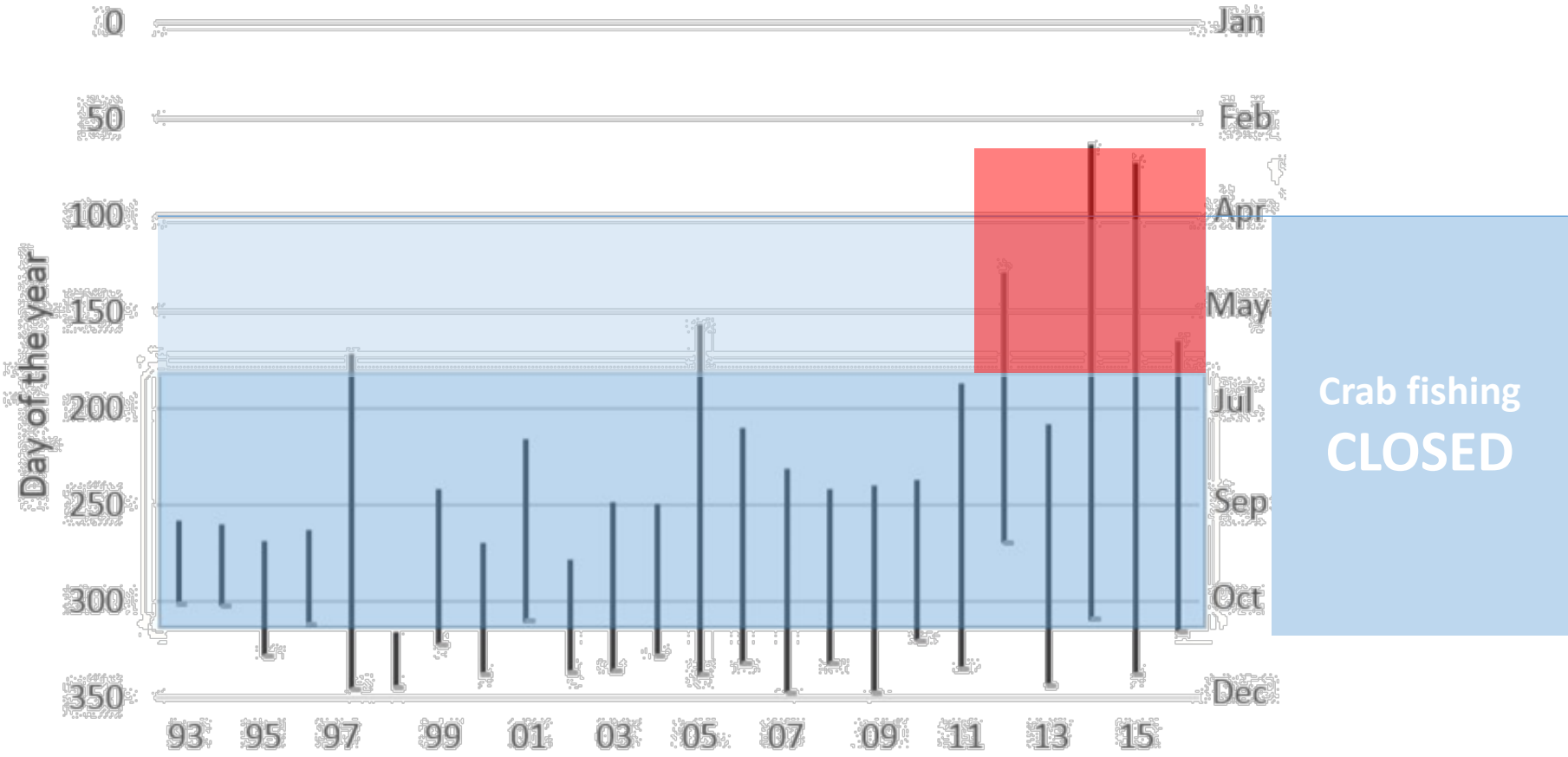
Humpback whales are arriving earlier

Earlier arrival exposes whales to fishing gear for longer



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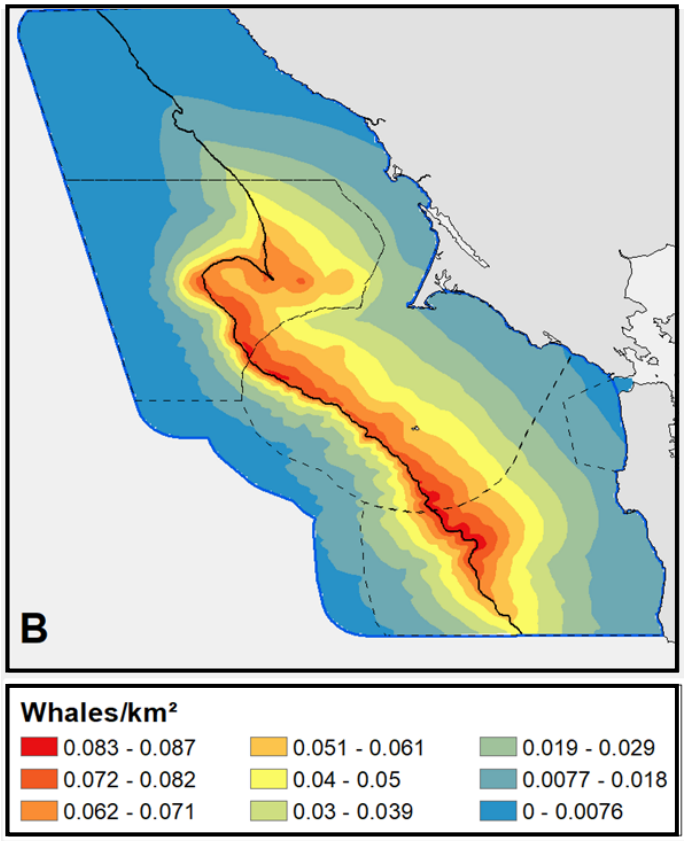
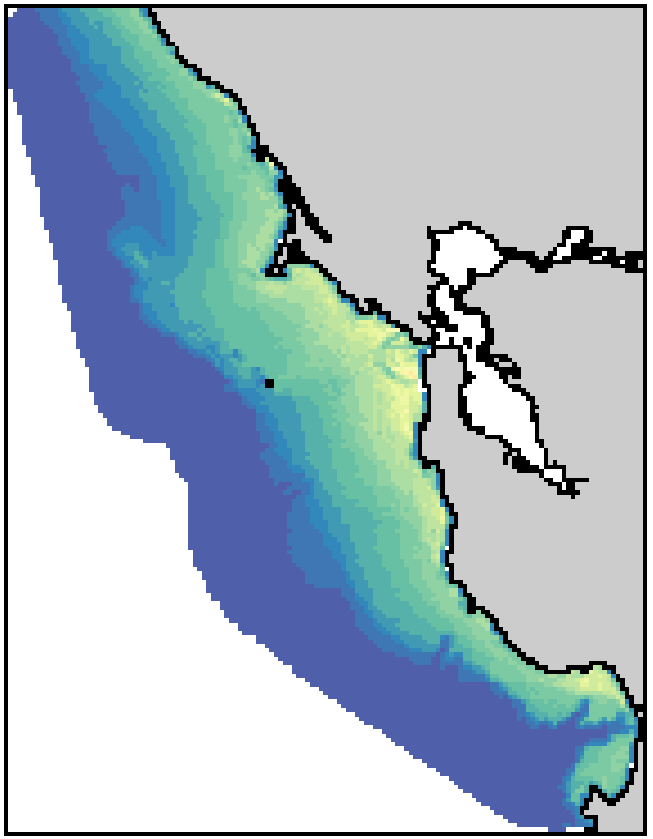
Whale habitat overlaps with crab fishing gear

There is high entanglement risk for humpback whales in fishing gear off San Francisco

Humpback whales



Crab pots



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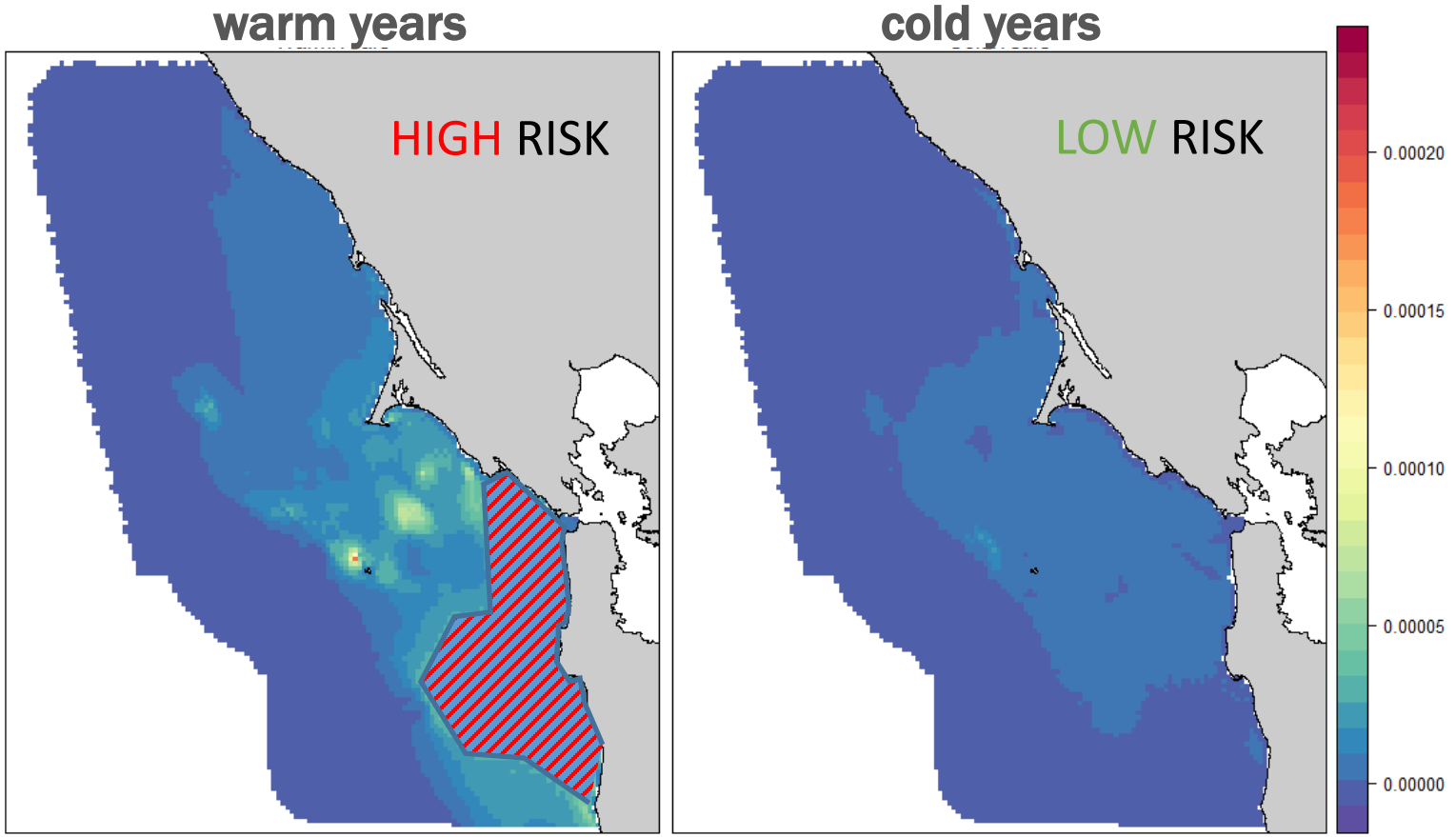
Entanglement risk is greater in warm years

Entanglement risk is greater in warm years and when fishing effort in spring is high



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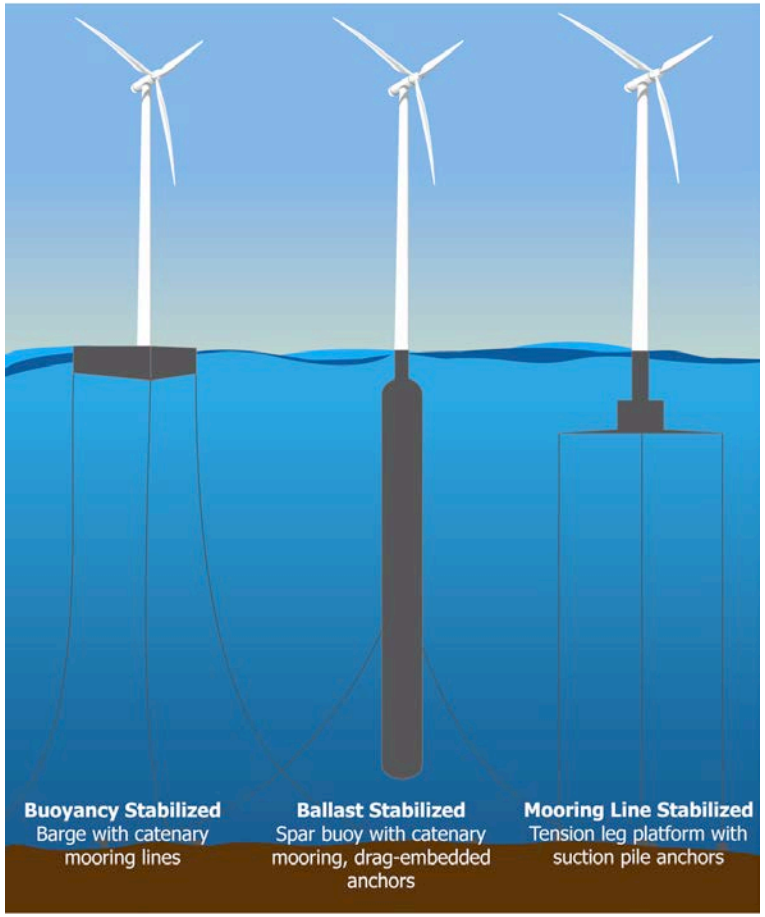
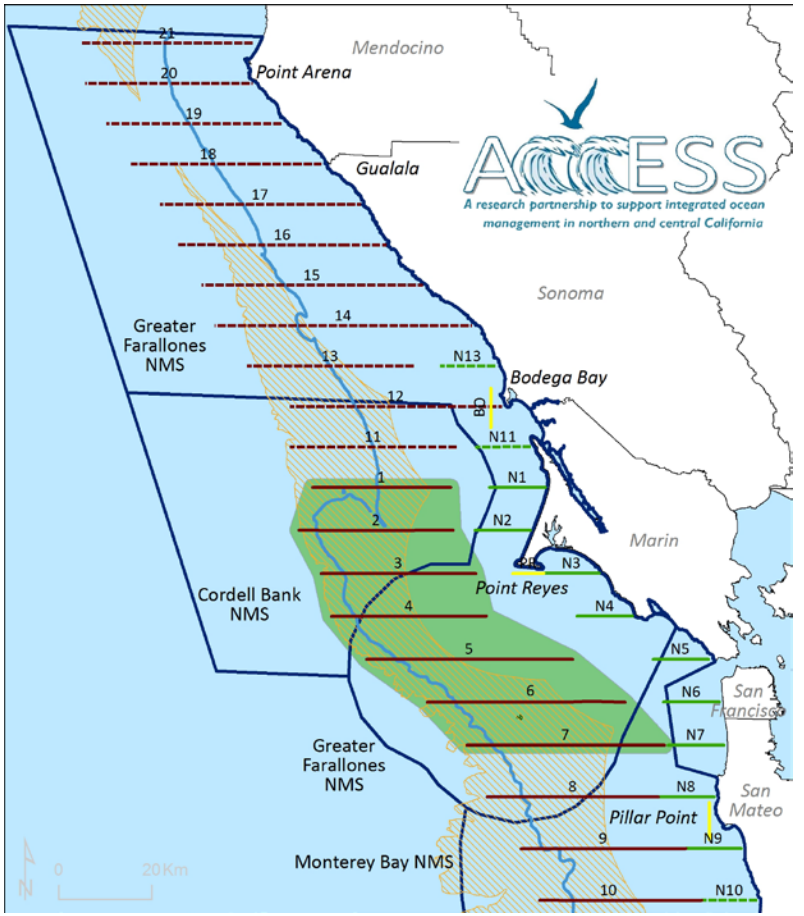
Potential offshore energy footprint off SF





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Conflicts and trade-offs need to be evaluated

There are ~700 data layers to inform energy siting that need to be synthesized

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Summary

Point Blue is protecting whales from multiple impacts using three approaches

- **Science to support slowing and rerouting vessels**
  - Decrease ship strikes
  - Lower underwater noise pollution
- **Manage timing and space use by crab fishery**
  - Avoid entanglements
- **Improve siting of offshore energy**
  - Maintain habitat quality and continuity
  - Avoid acute or chronic sound impacts

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Greater Farallones NMS

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Firedoll Foundation

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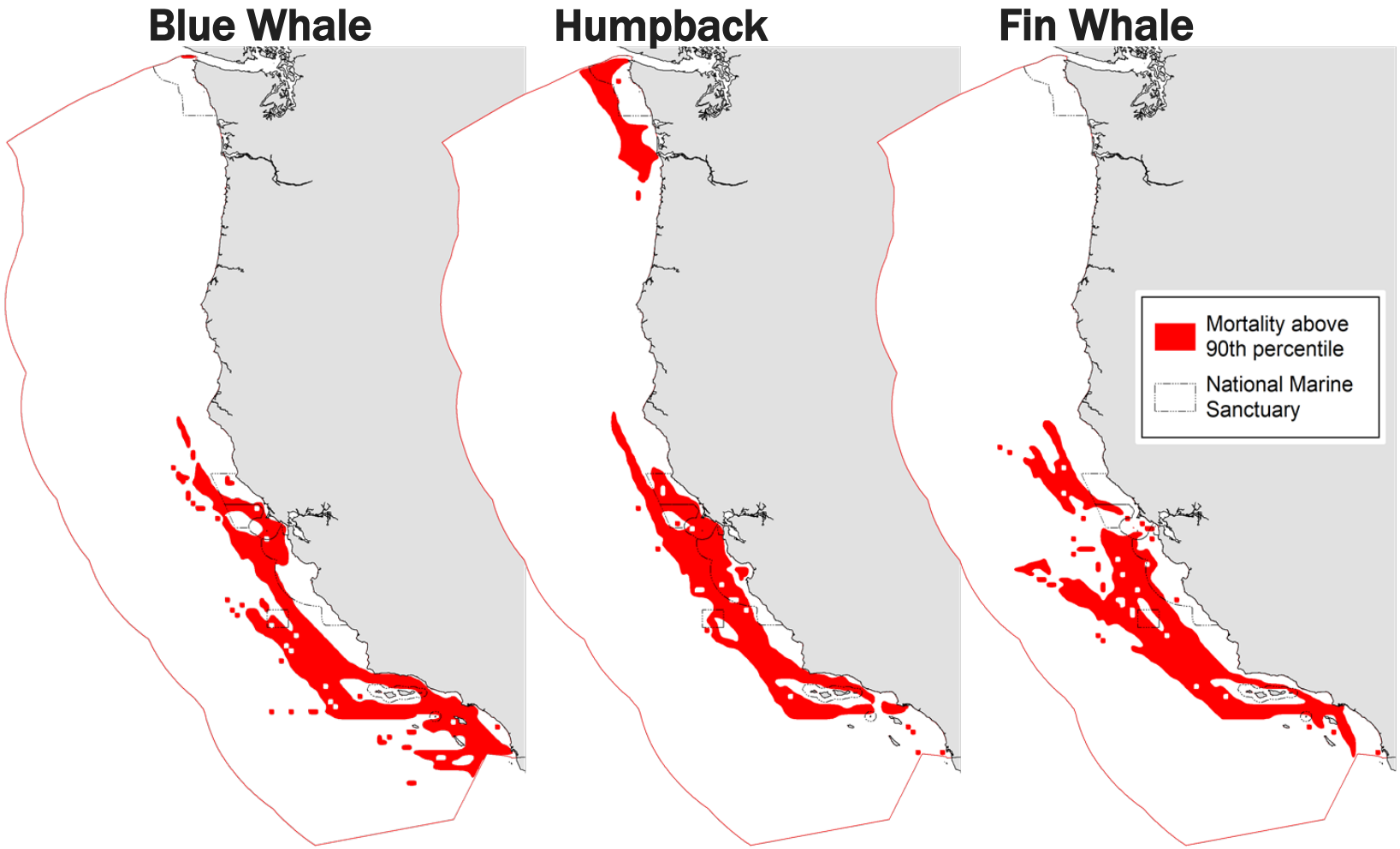
Thank You

Most mortality is in a limited area



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