

A whale of a task

Mitigating deadly strikes,
entanglements and risks from
potential energy development

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Point Blue

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

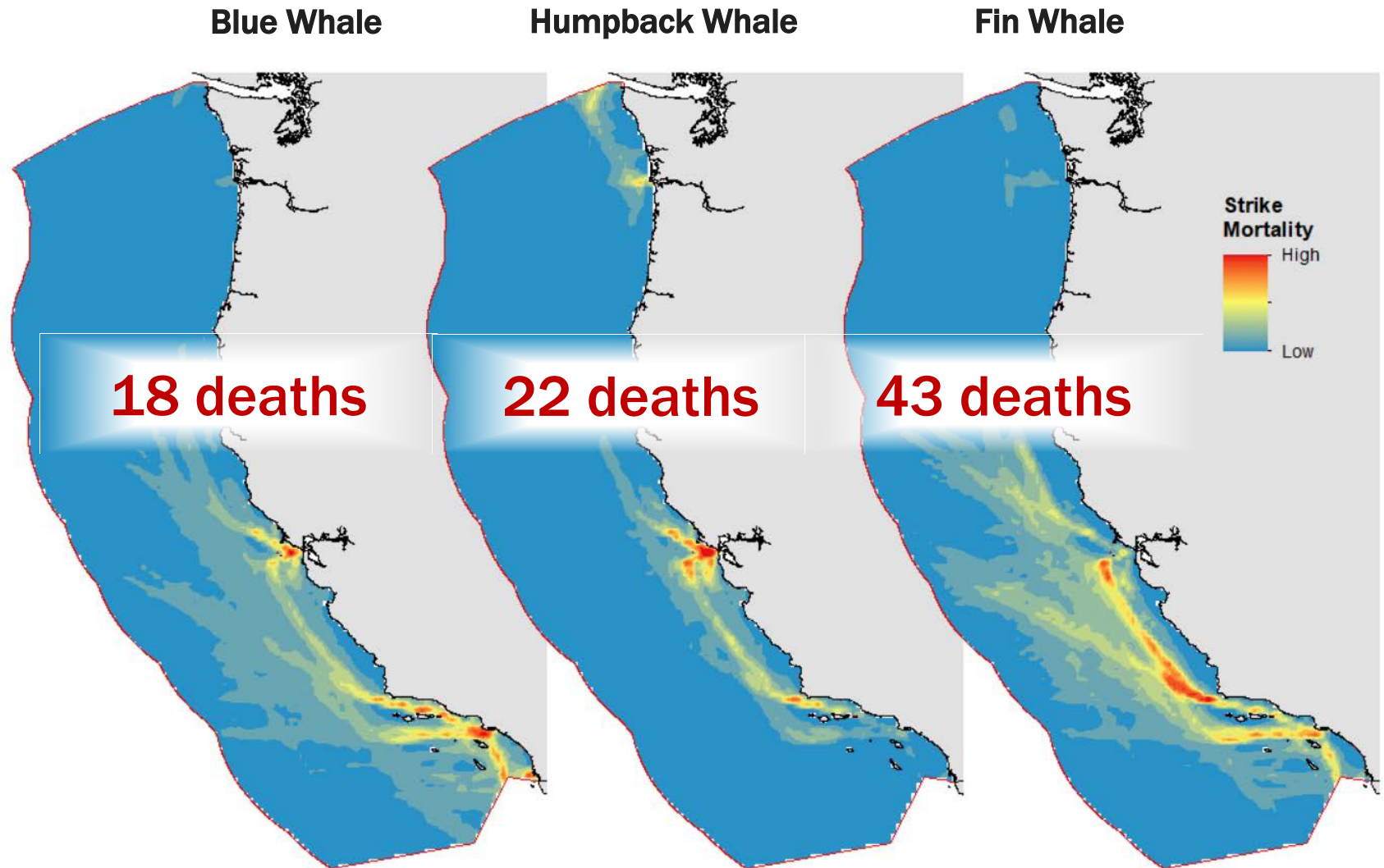


Strandings are a poor metric

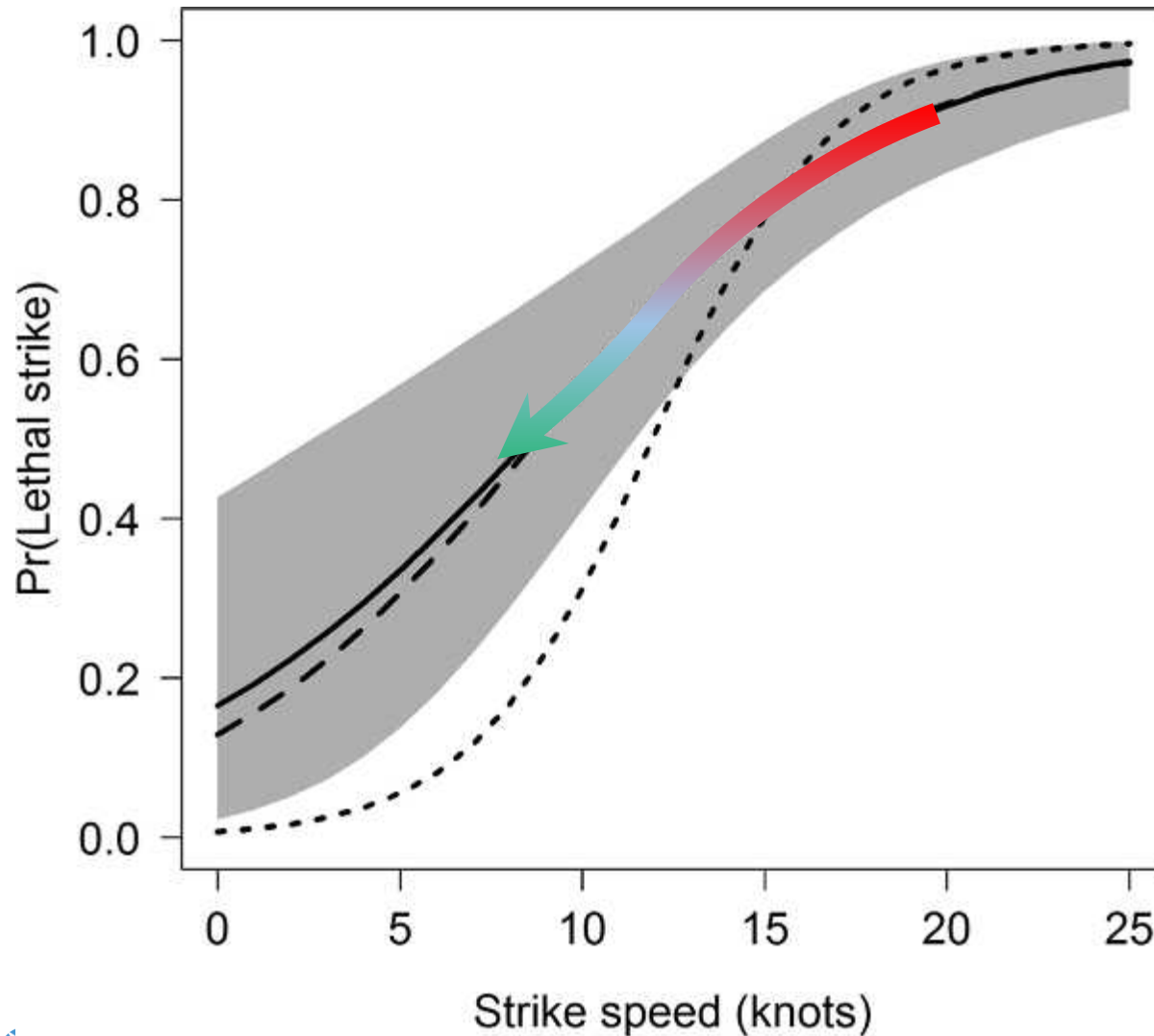


±5%

Where are whales struck?



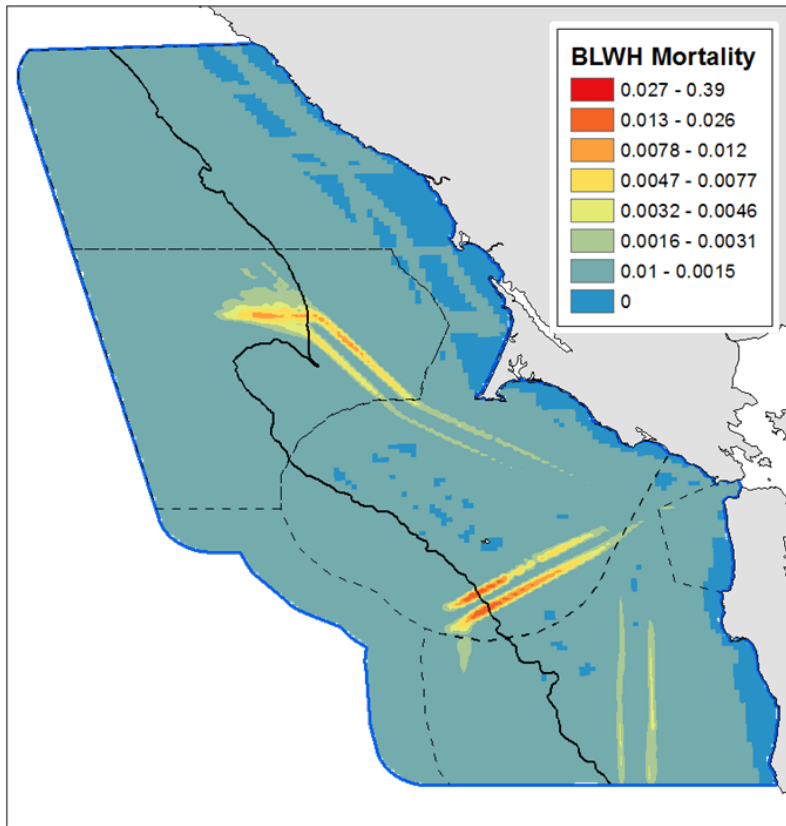
What can we do?



What about our local ocean?

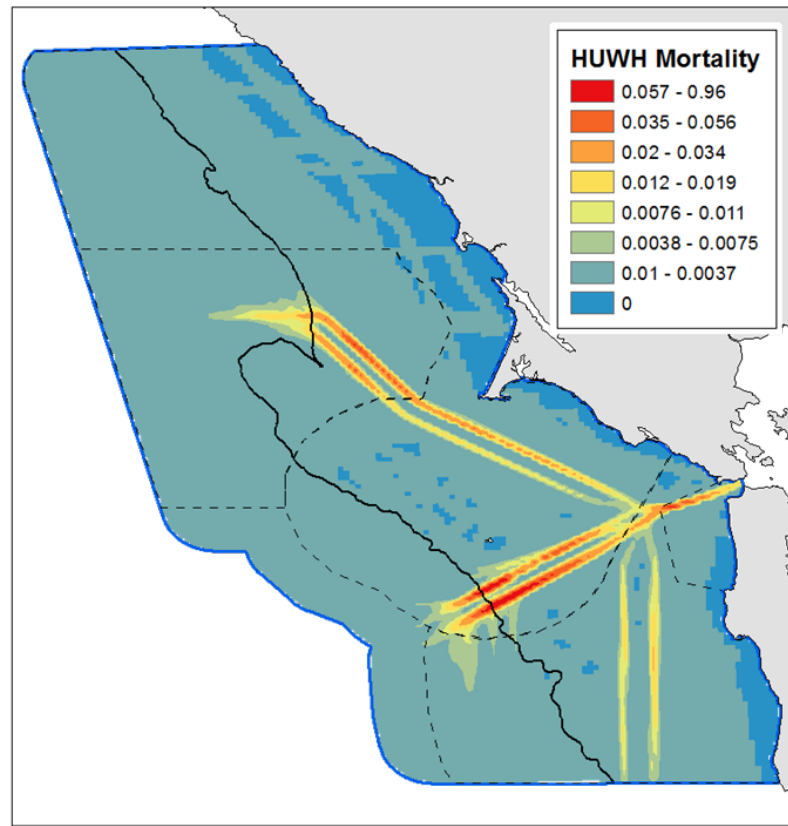
Blue Whale

2.7 deaths.



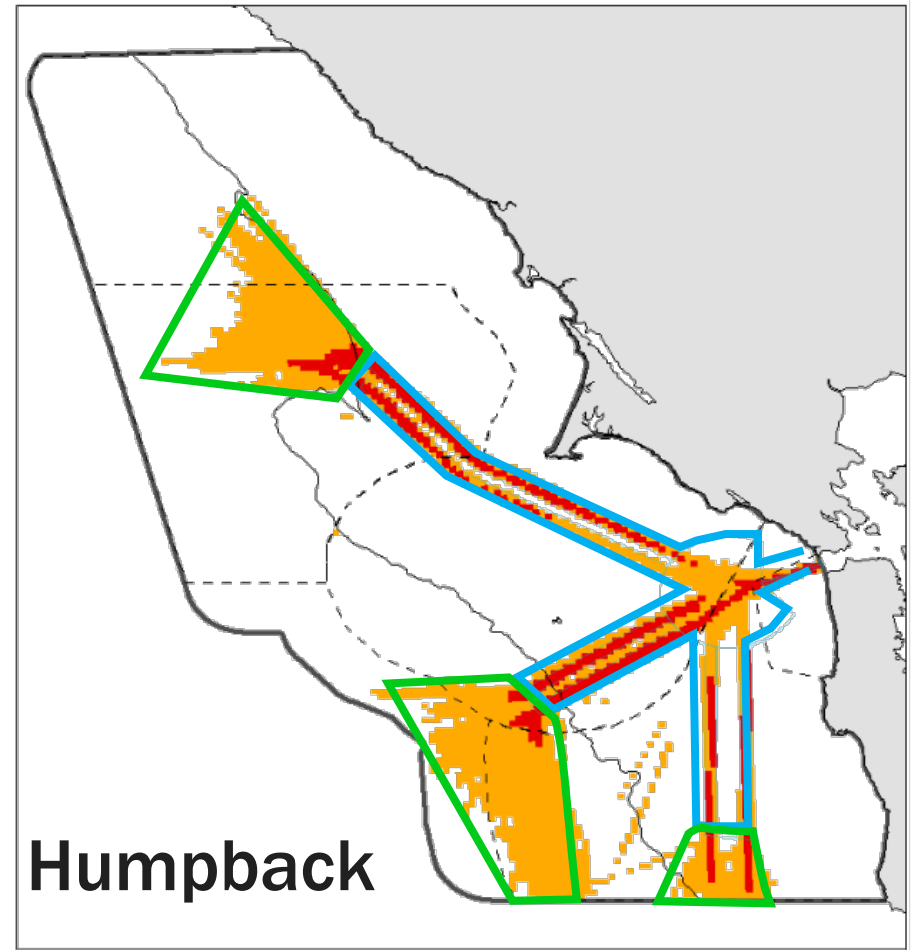
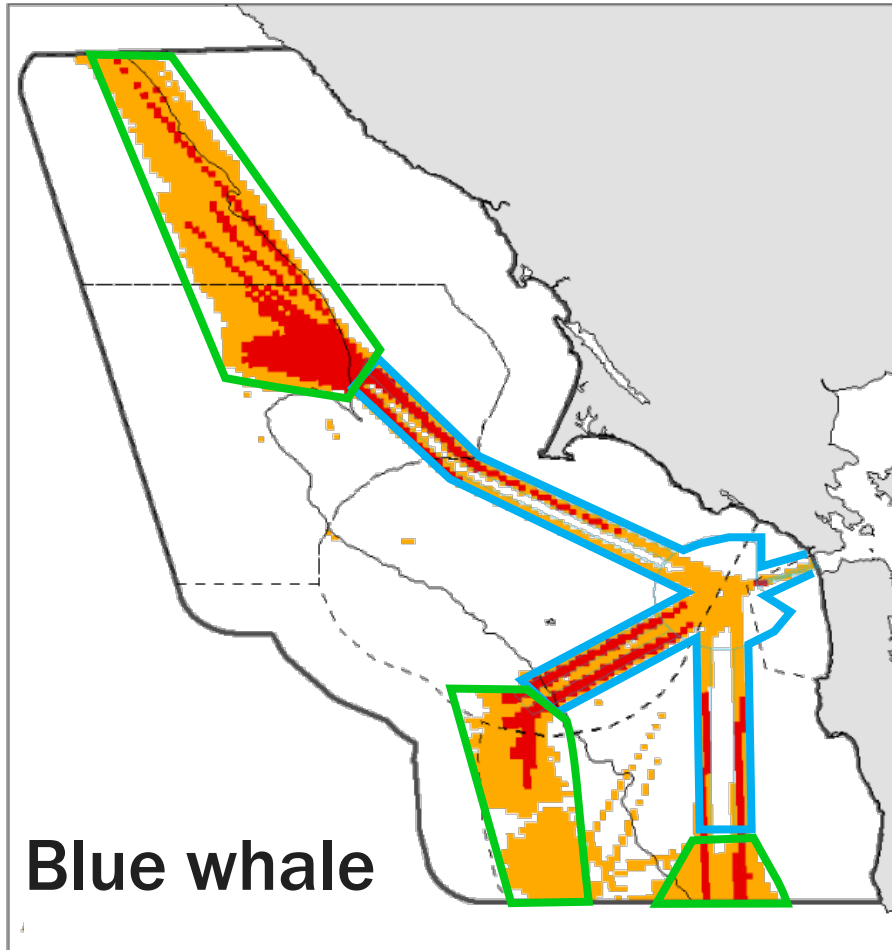
Humpback Whale

7 deaths



--- National Marine Sanctuary
— 200m isobath

Potential areas of focus



Stopping strikes off the Bay

15% decrease in deaths in 2016 & 2017

Improved
cooperation
from ships

=

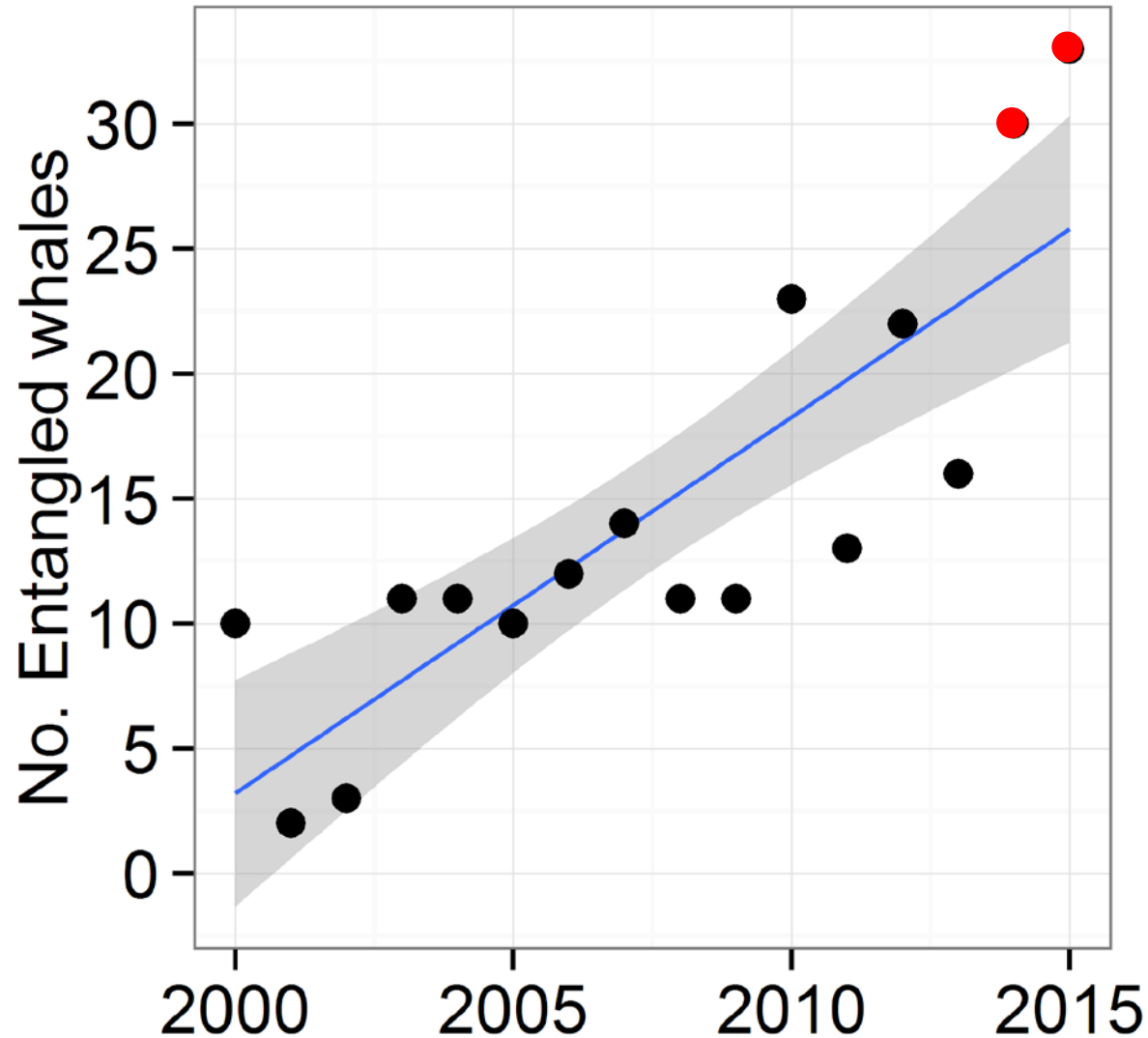
20 – 30%
fewer deaths

Speed limits at
ends of the lanes

=

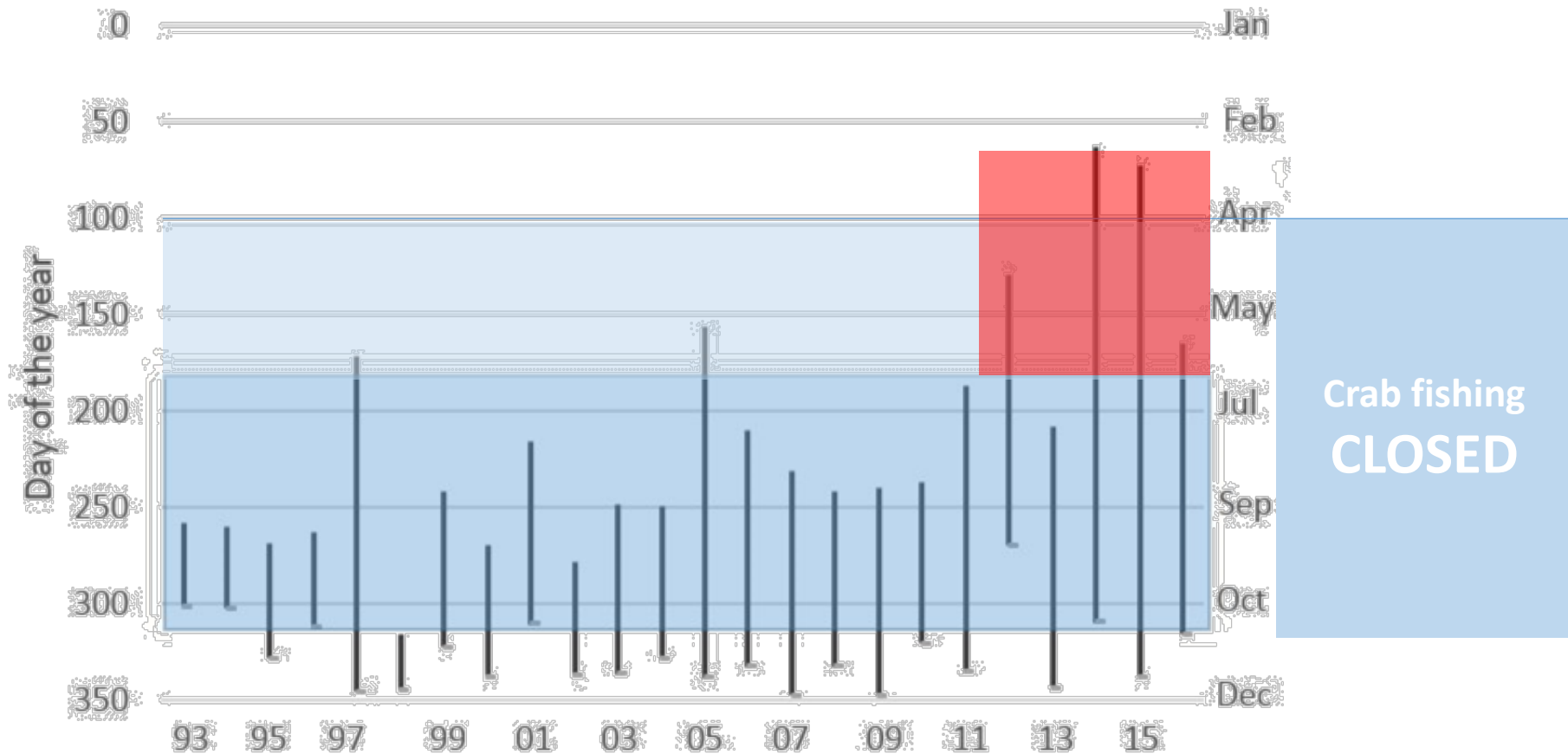
40 – 60%
fewer deaths

Entanglement in fishing gear is increasing



Humpback whales are arriving earlier

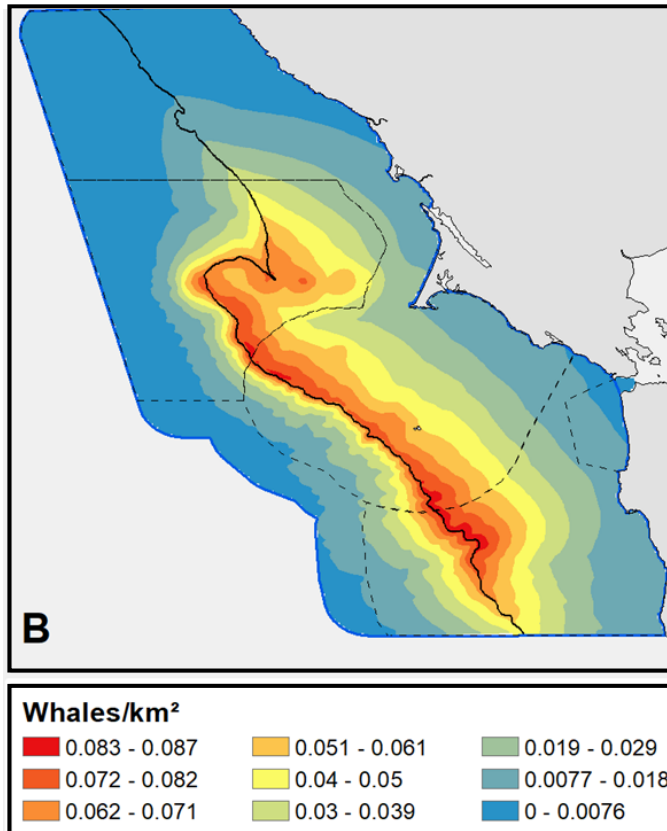
Earlier arrival exposes whales to fishing gear for longer



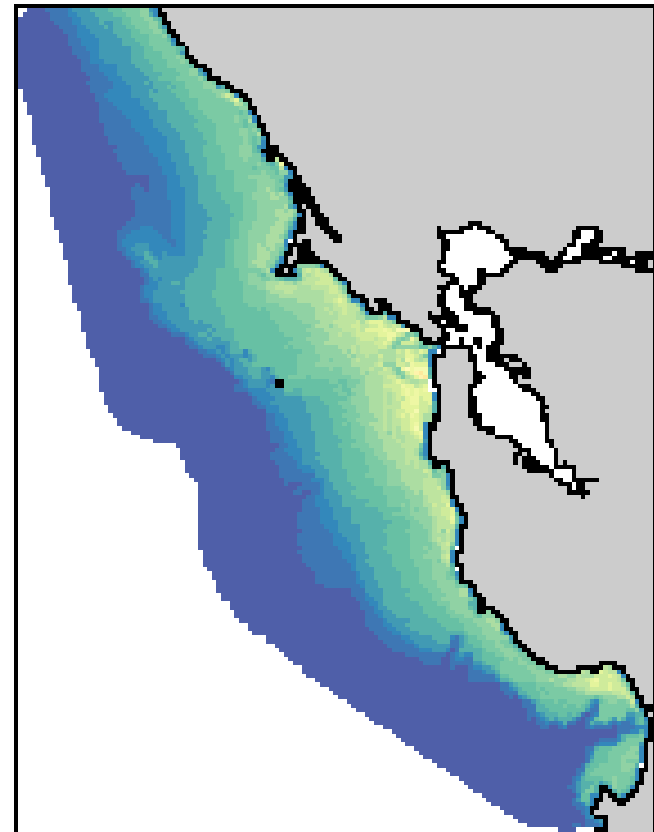
Whale habitat overlaps with crab fishing gear

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

Humpback whales

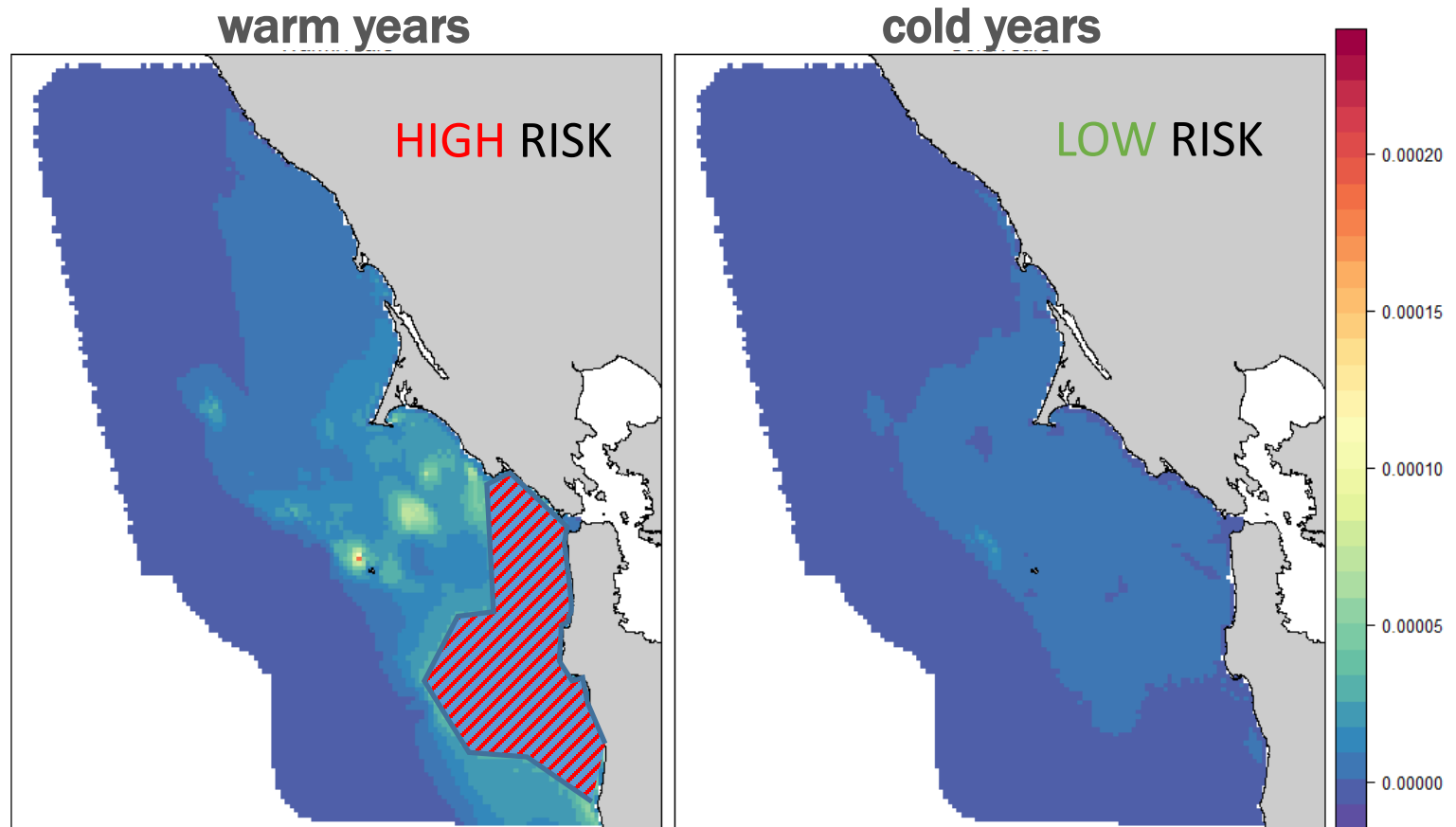


Crab pots

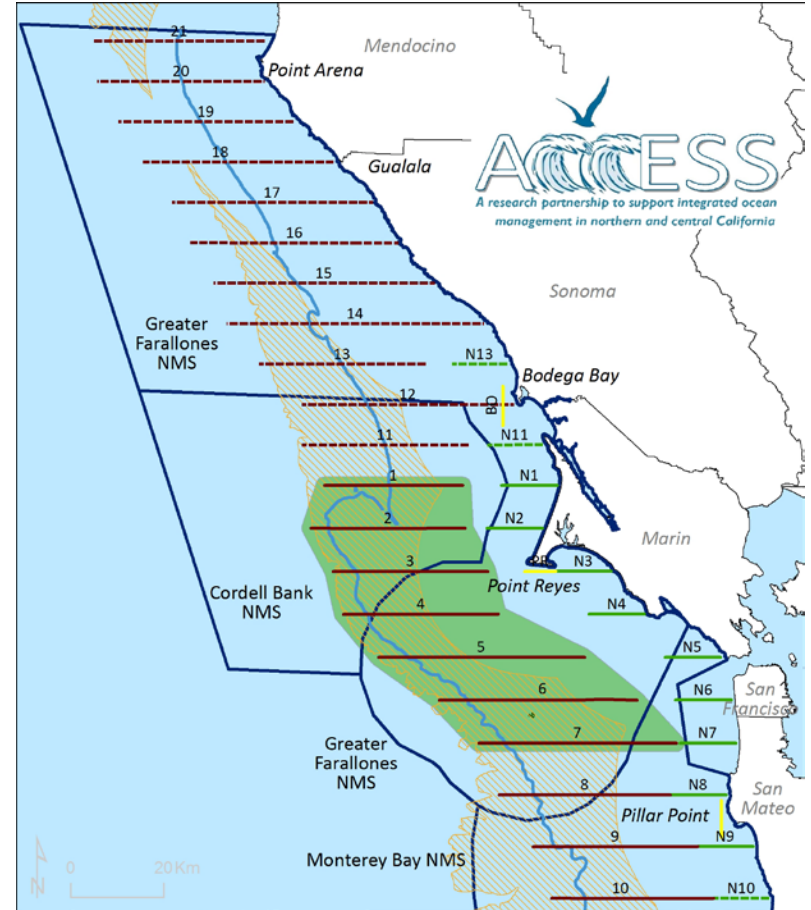
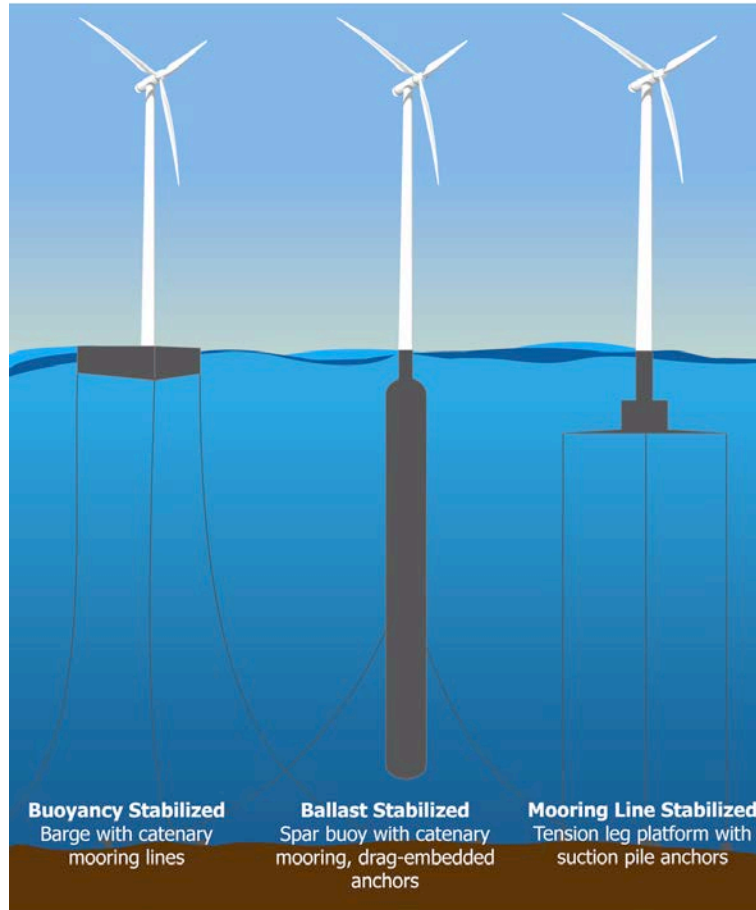


Entanglement risk is greater in warm years

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



Potential offshore energy footprint off SF



Conflicts and trade-offs need to be evaluated

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



California Offshore Wind Energy Gateway

In support of the Intergovernmental Renewable Energy Task Force

[Get Started](#) [Explore](#) [Create](#)


What is the California Offshore Wind Energy Gateway?

What can I do?

How do I start exploring?

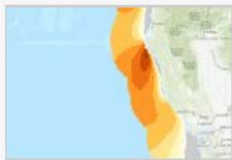
The Offshore Renewable Wind Energy Gateway assembles geospatial information on ocean wind resources, ecological and natural resources, ocean commercial and recreational uses and community values. This information will help identify areas off of California that are potentially suitable for wind energy generation.

[read more](#)



Map

West Coast USA Federal and State Marine Protected Areas




Map

California Offshore Wind Resources



Map

Central California Offshore Use Zones



Map

Central California Offshore Geology and Wind Technology Depth Zones



Map

Central California Offshore Biological Resources



Dataset

Seabird Spring Survey Compilation: Observations from various surveys ...

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

Gordon and Betty Moore Foundation

Battery Powered

Firedoll Foundation





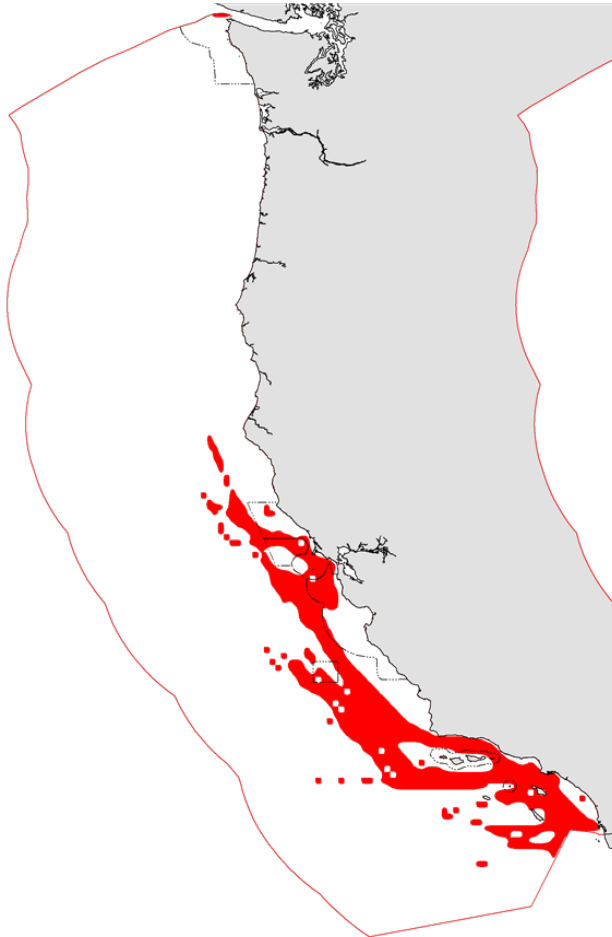
Point Blue
Conservation
Science



Thank You

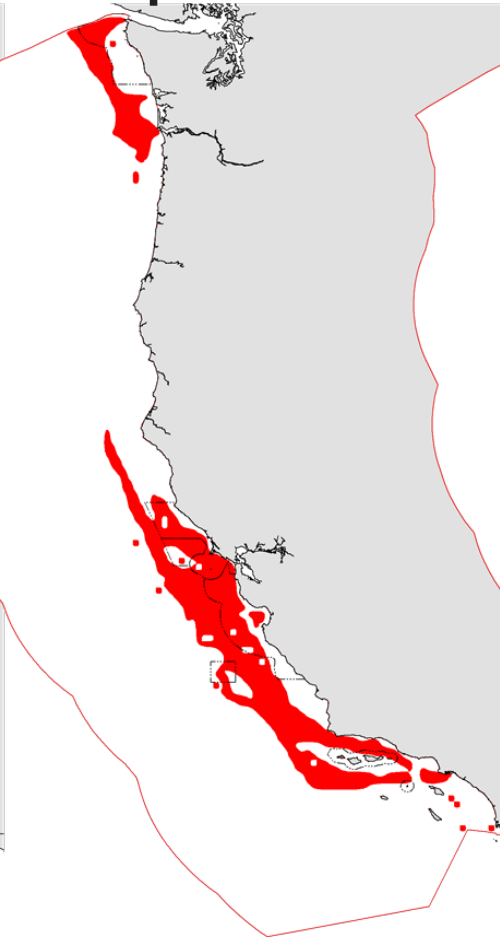
Most mortality is in a limited area

Blue Whale



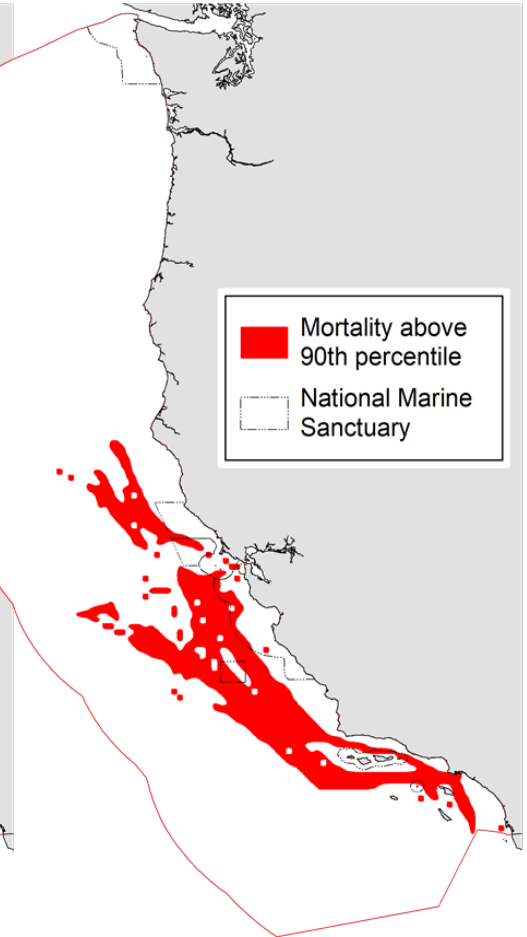
74%

Humpback



82%

Fin Whale



65%