

Satellite Detection of Whales



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The Nature
Conservancy 



NMFS MMHSRP Permit #18786



@ UC Santa Barbara

RESEARCH ARTICLE

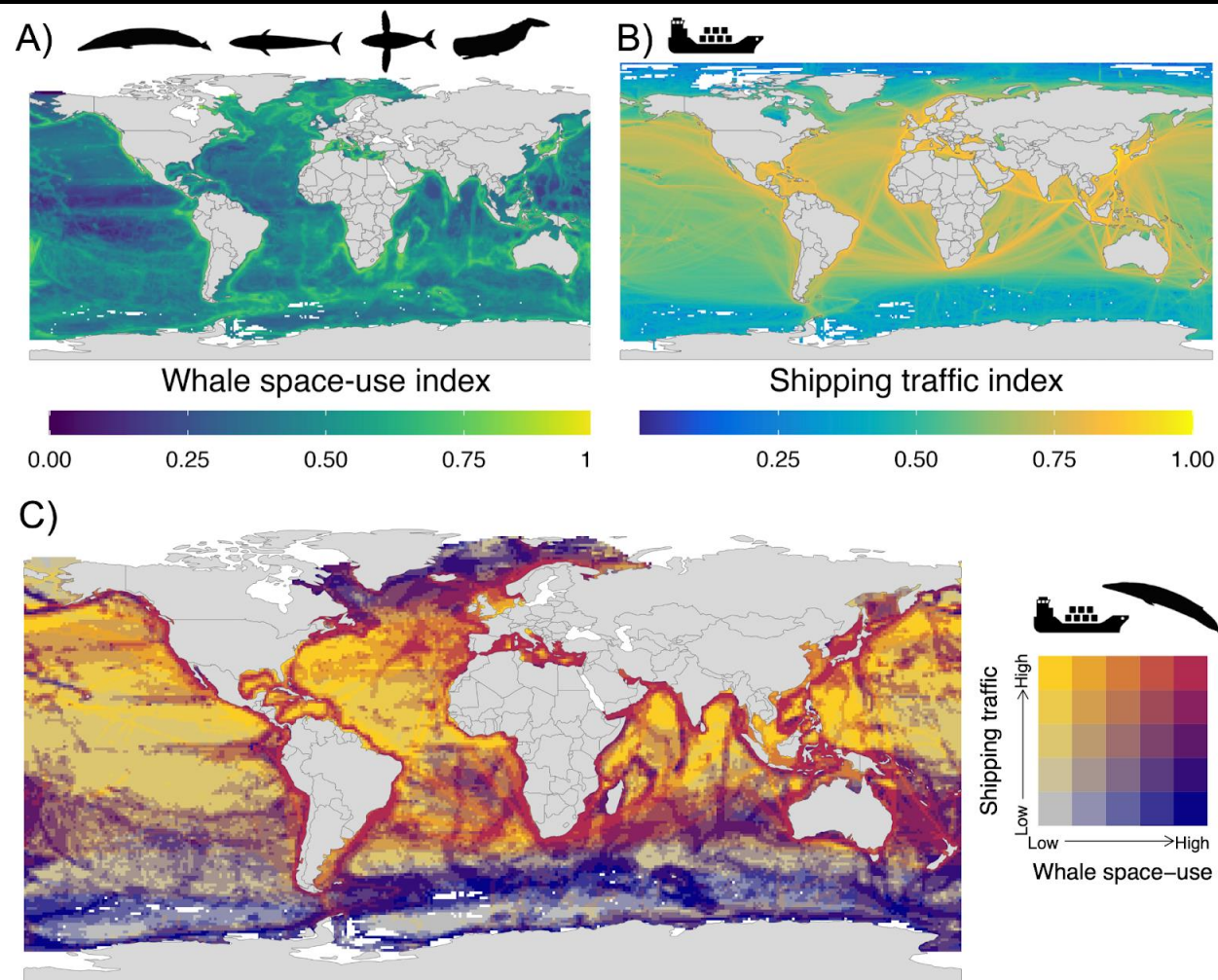
MARINE CONSERVATION

Ship collision risk threatens whales across the world's oceans

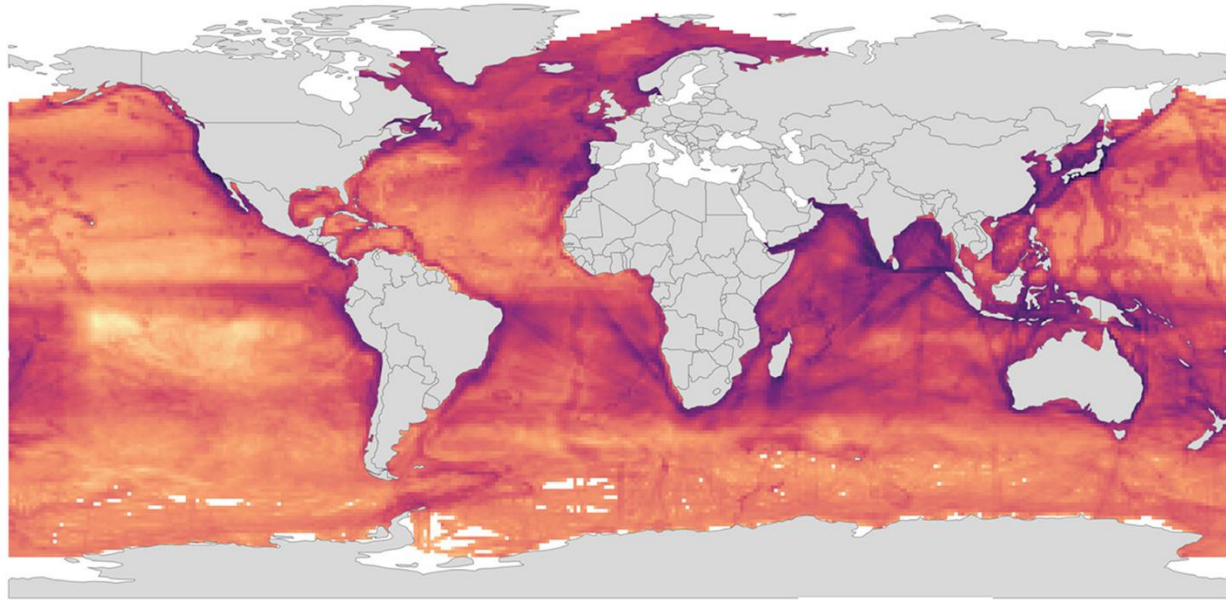
Science

\$15
22 NOVEMBER 2024
science.org

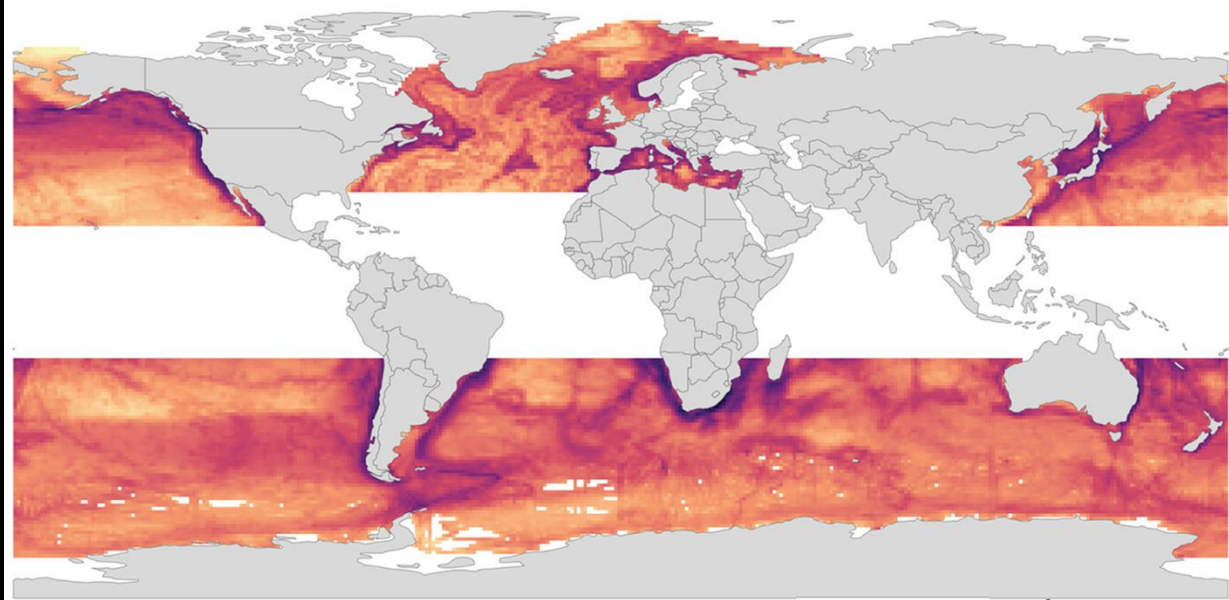
AAAS



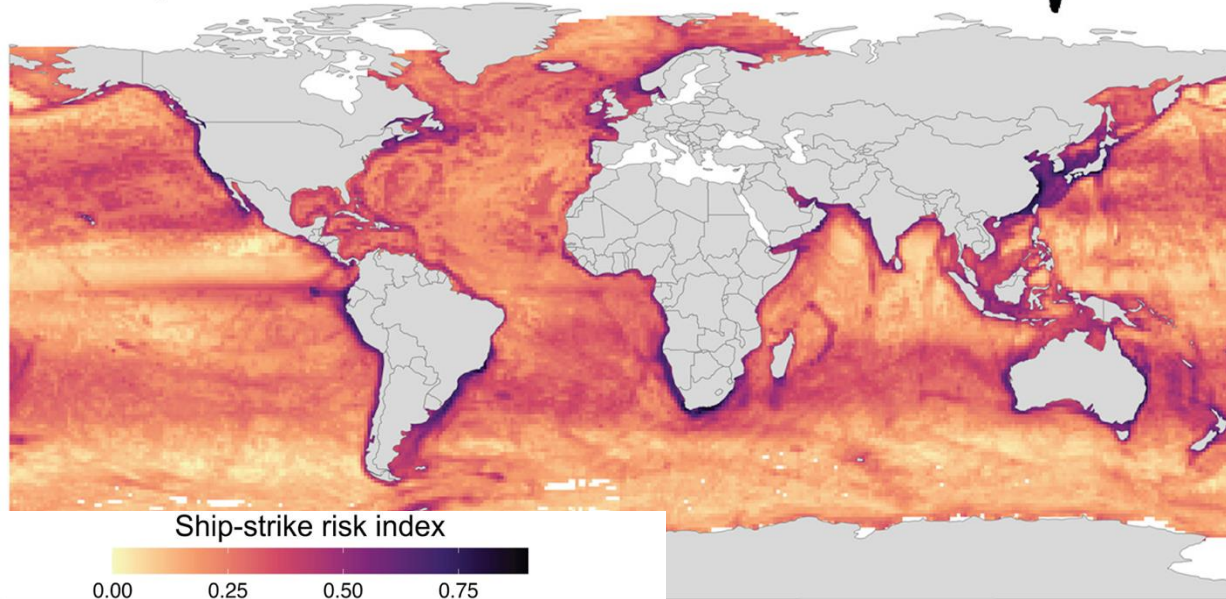
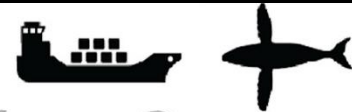
Blue whale



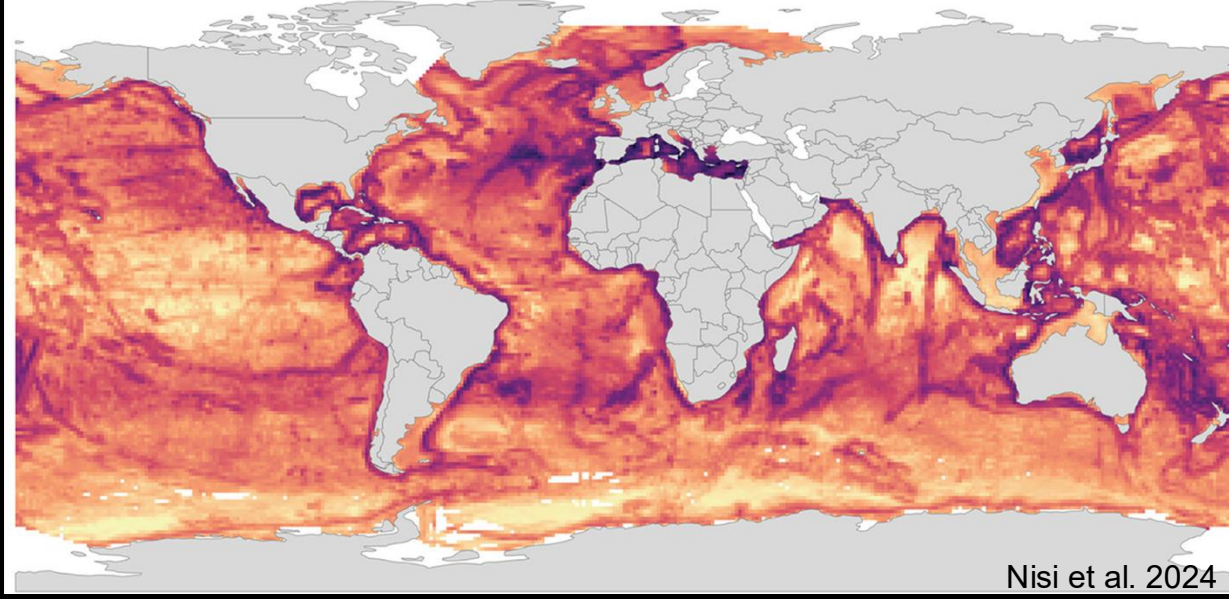
Fin whale



Humpback whale



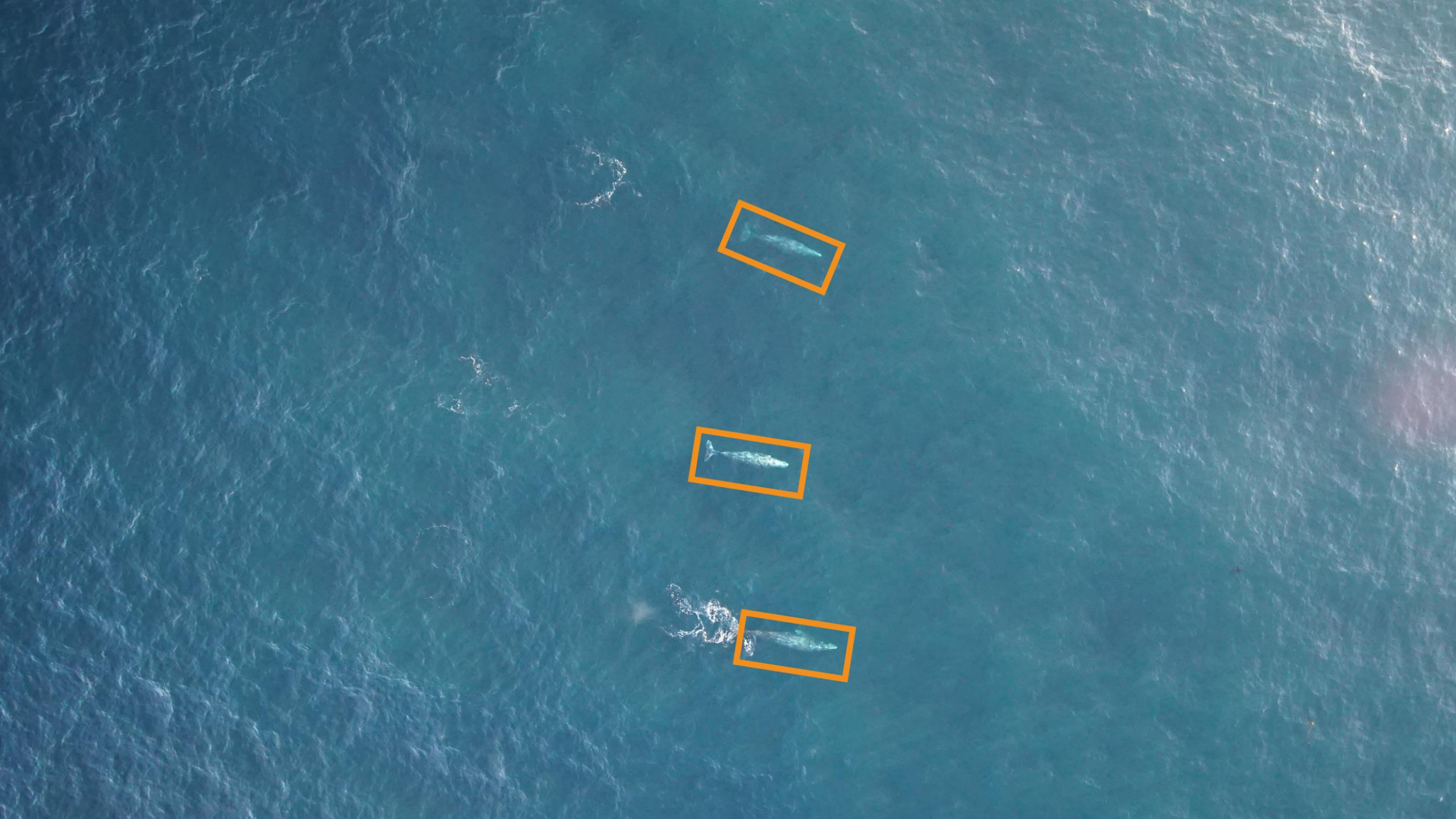
Sperm whale



Ship-strike risk index

0.00 0.25 0.50 0.75





gray whale



gray whale



gray whale



gray whale



gray whale



gray whale



gray whale



gray whale



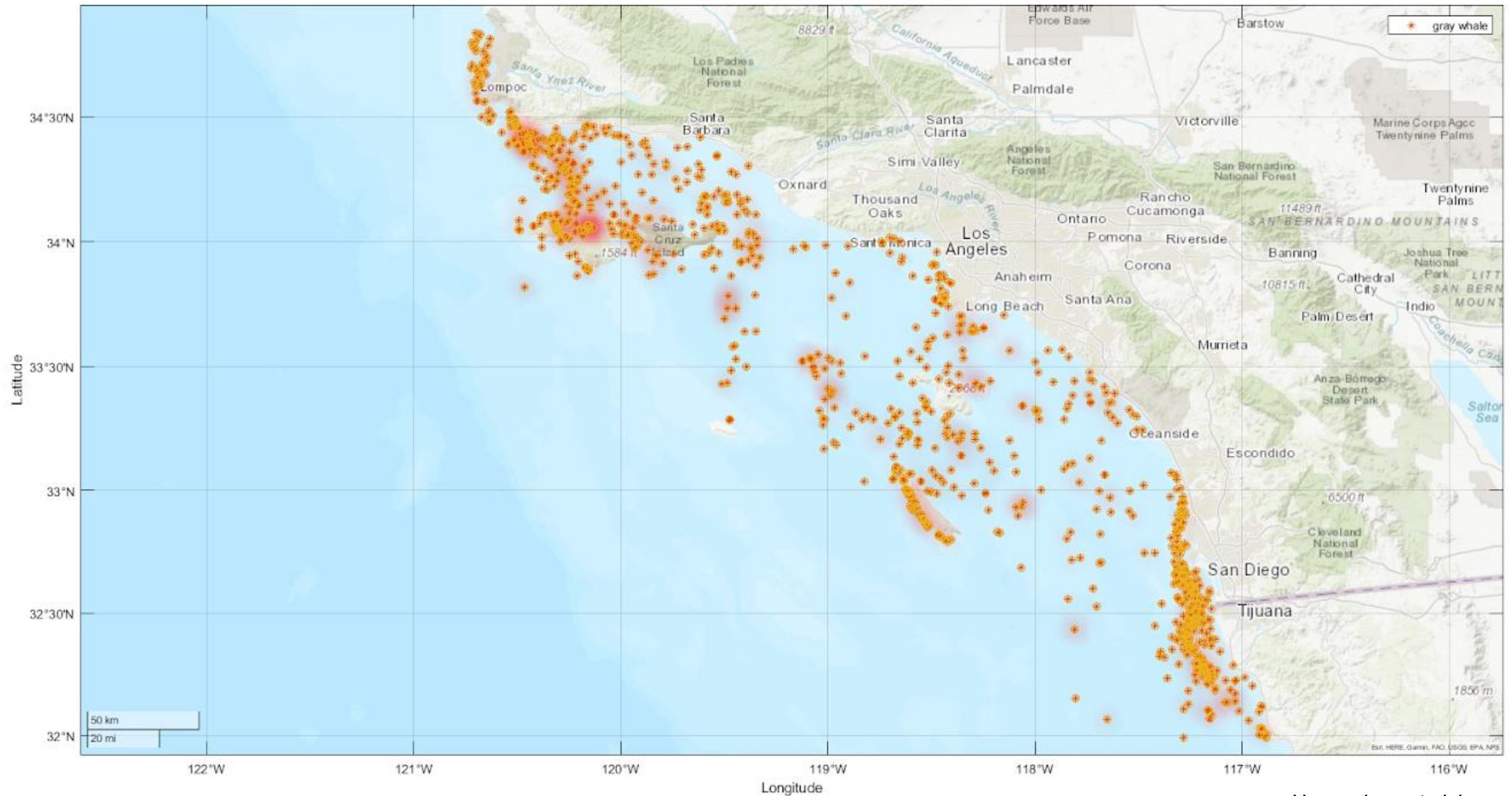
gray whale



gray whale



Gray whale detection sample (2009-2023)





WHALESAI.ORG

Detect whales with satellite imagery

The Nature Conservancy's **WhalesAI.org** application permits validation of whale sightings detected via machine learning models on high resolution MAXAR imagery. Using machine learning models on satellite imagery will improve the state of whale monitoring and conservation by providing fast assessment of their location and pattern of movement at a species level.

Log in to upload imagery and run models, or [view detections](#).

[Learn More](#)[Get Started](#)

Image © Will Turner on Unsplash



Species Detected

151

GRAY

70

HUMPBACK

67

VALIDATED

Show detections from:

My Scenes

All Users' Scenes

- ☐ Show validated detections only
- ☐ Show non-whale detections

SPECIES DETECTIONS

- Humpback
- Gray

NON-SPECIES DETECTIONS ▾

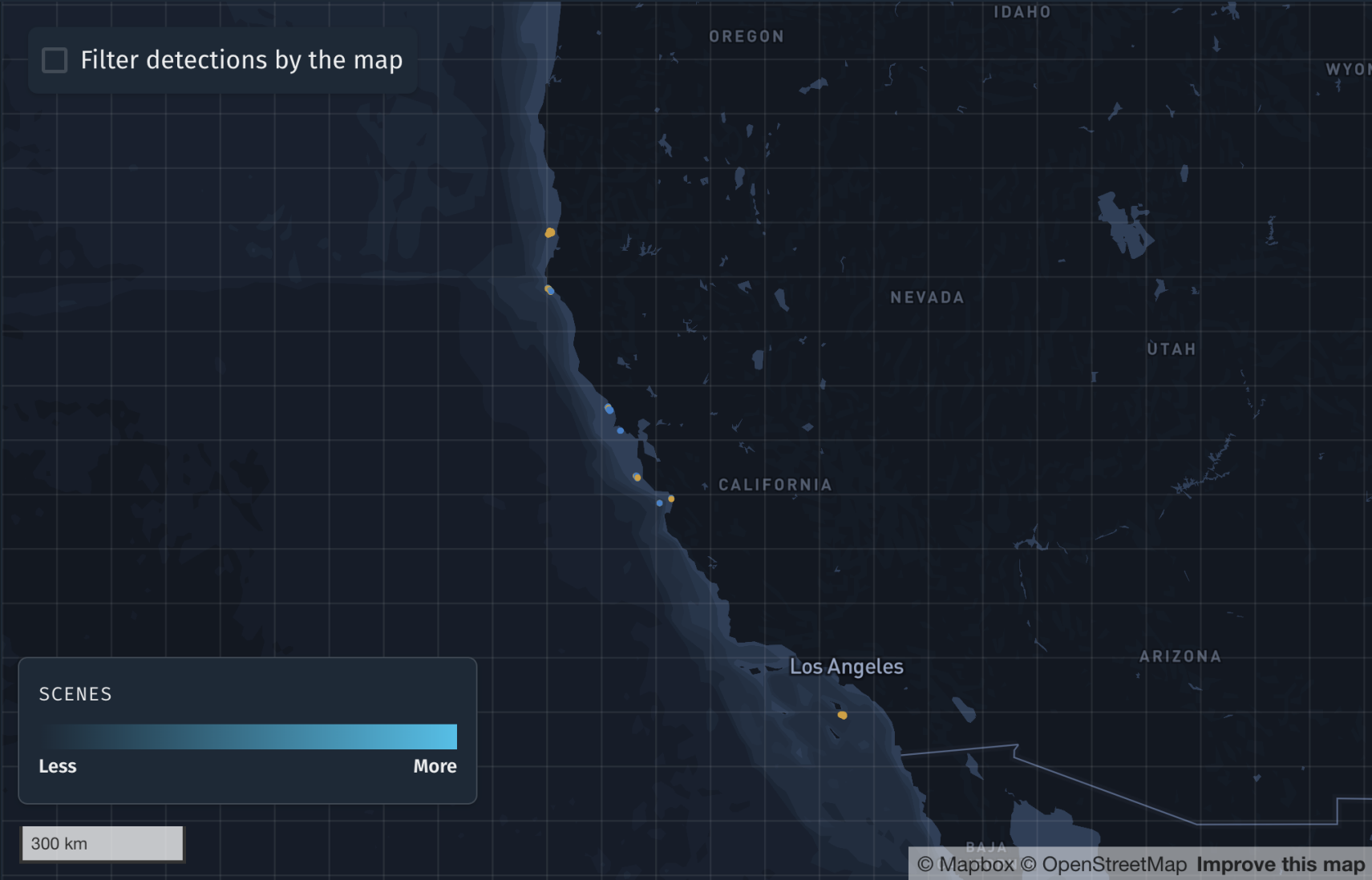
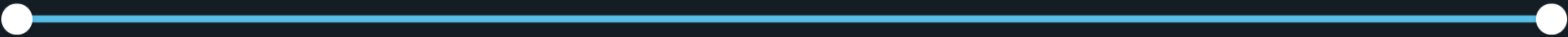
☐ Filter detections by the map

SCENES

Less More

300 km

DATE RANGE: 10/08/2009 - 09/06/2025





Santa Barbara Channel Vessel Speed Reduction Pilot

Time period: March 1 - October 31, 2023

