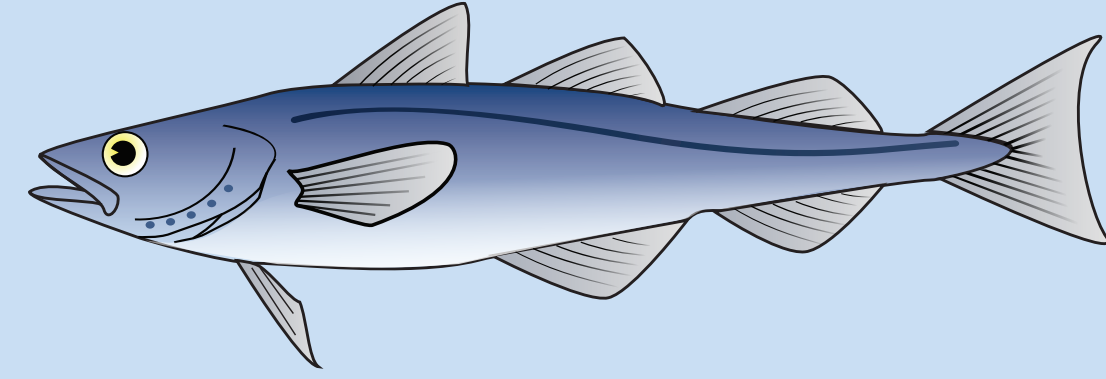


Big data from a big fishery: Using vessel monitoring systems (VMS) to characterize trips by catcher vessels in the Bering Sea pollock fishery

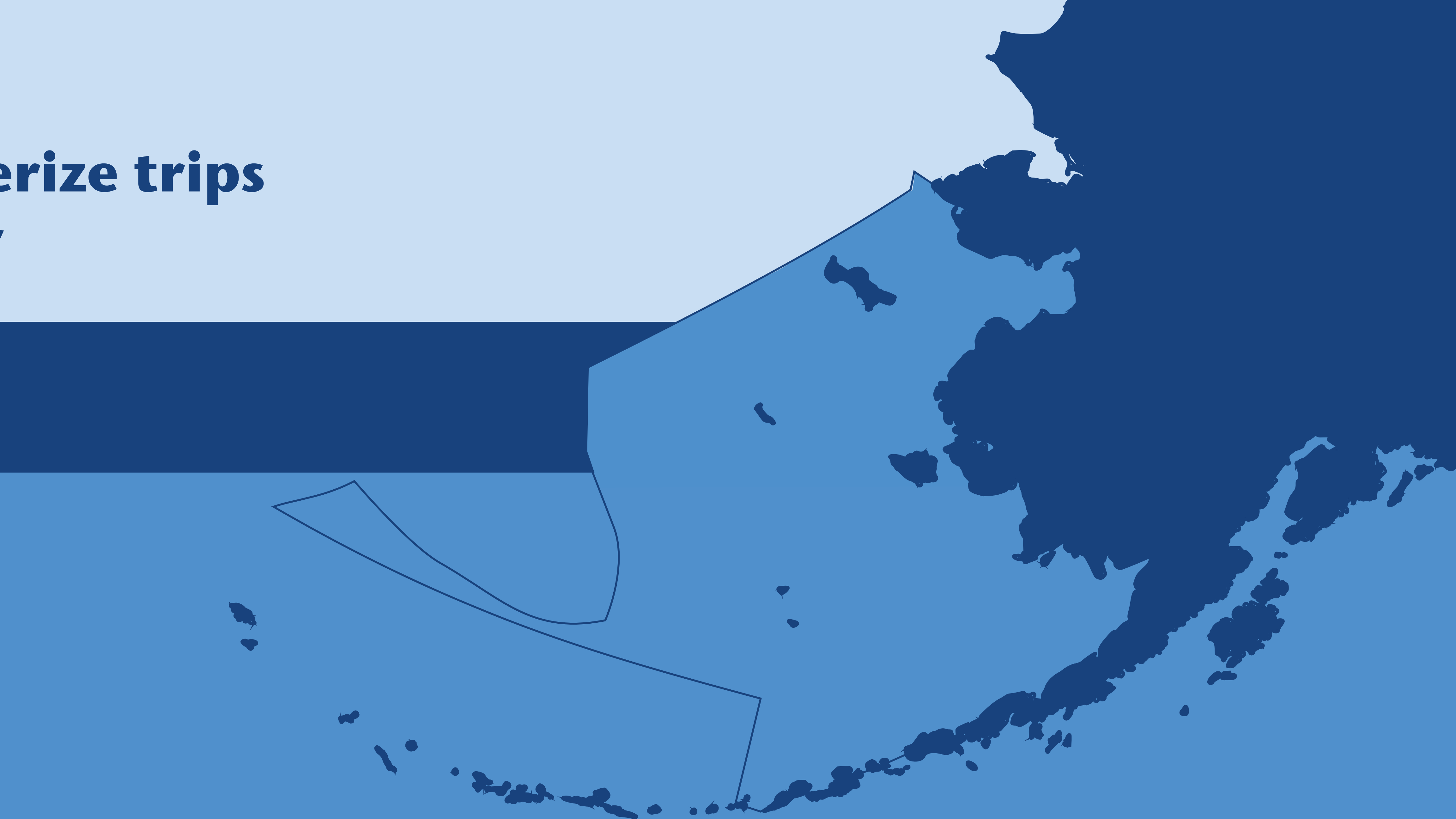
Jordan T. Watson^{1,2} & Alan C. Haynie³



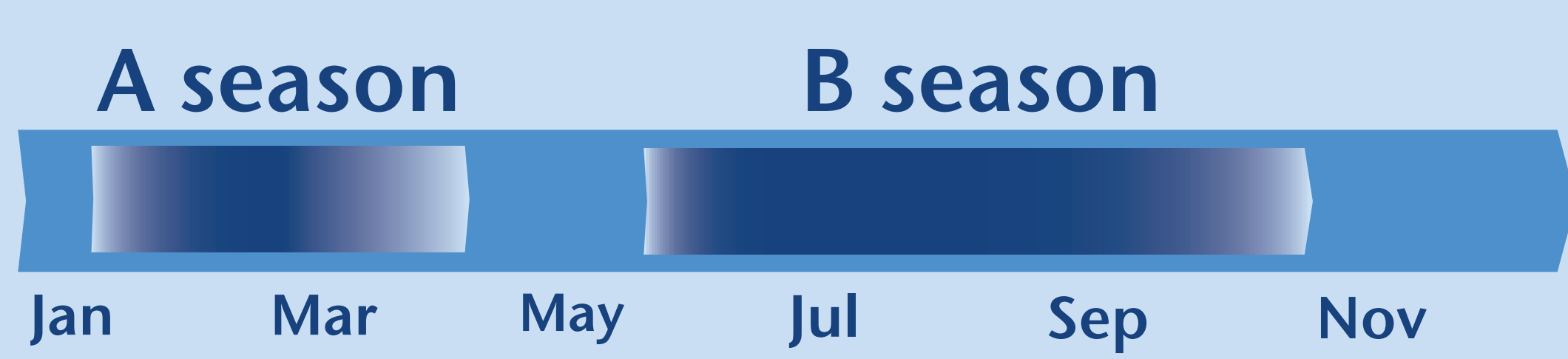
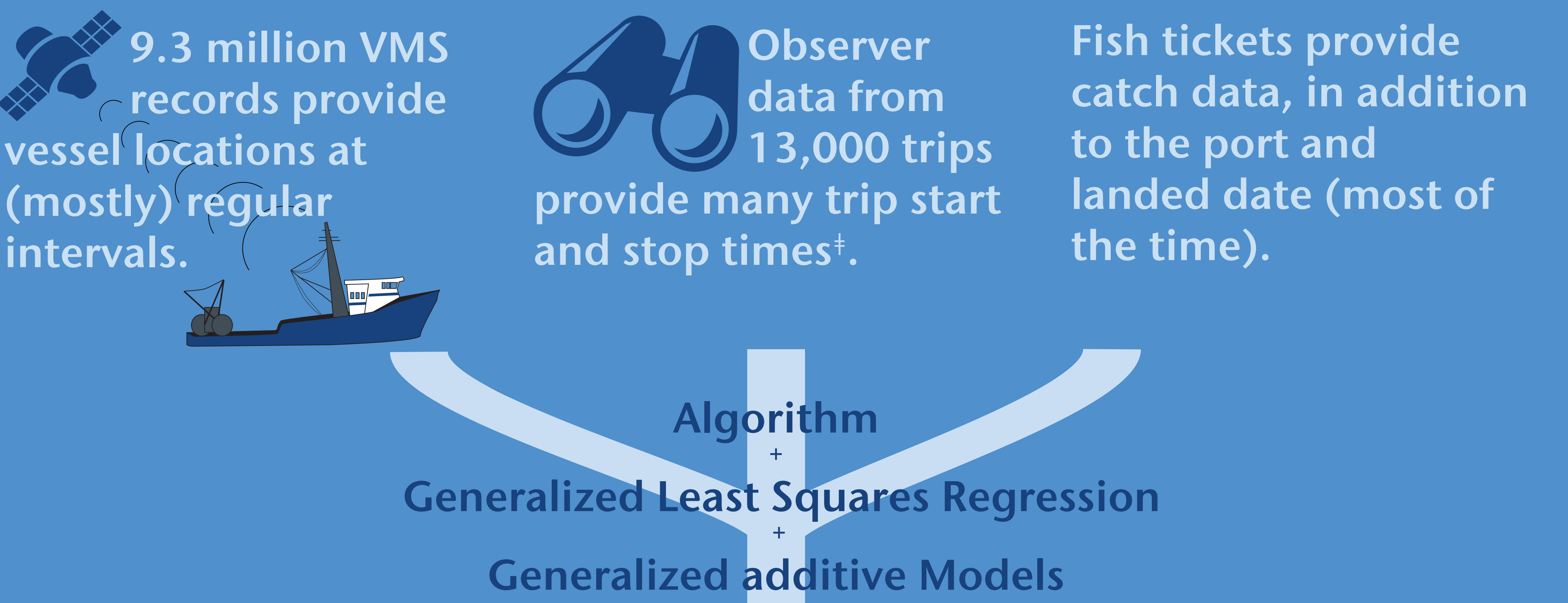
Walleye pollock
(*Gadus chalcogrammus*)

+ 93 trawlers (80' - 200')
account for ~ 45% of
the annual pollock
allocation

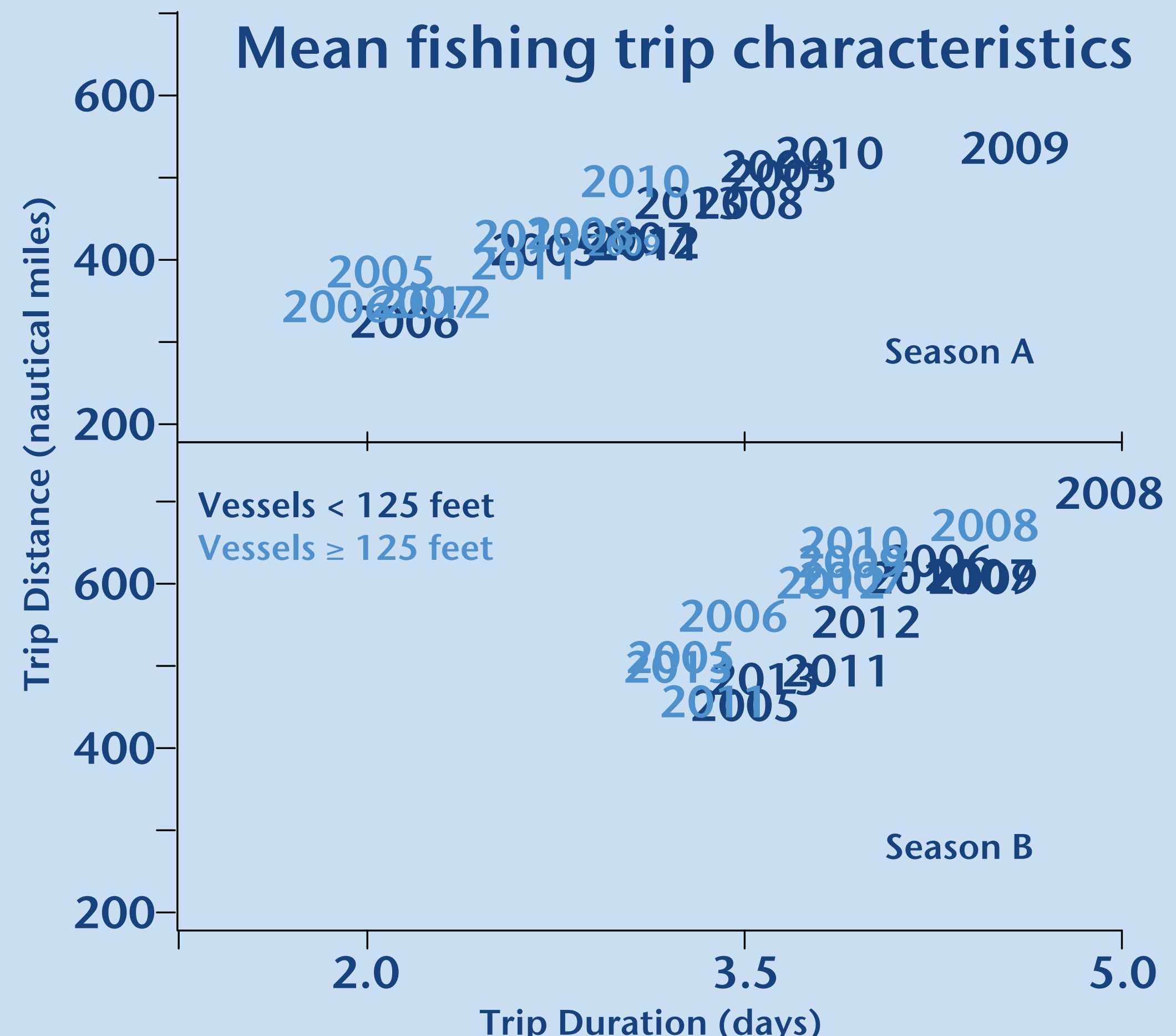
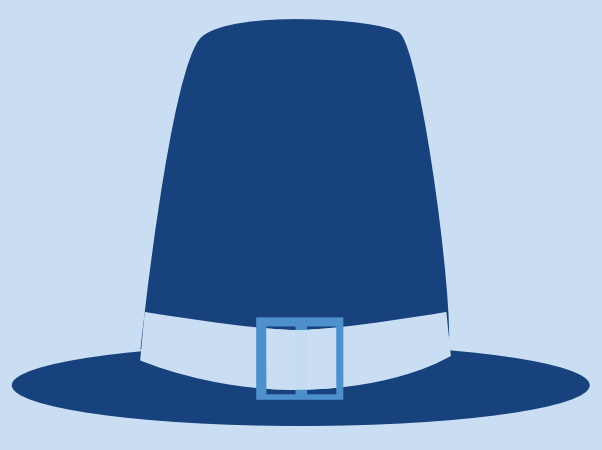
= ~\$590,000,000
Annually*




We sought to identify fishing trips and to resolve trip characteristics (e.g., duration & distance traveled), which may serve as indicators of fishery changes over time.



Seasonal and annual dynamics are driven by economics, biology, oceanography, management, and climate.

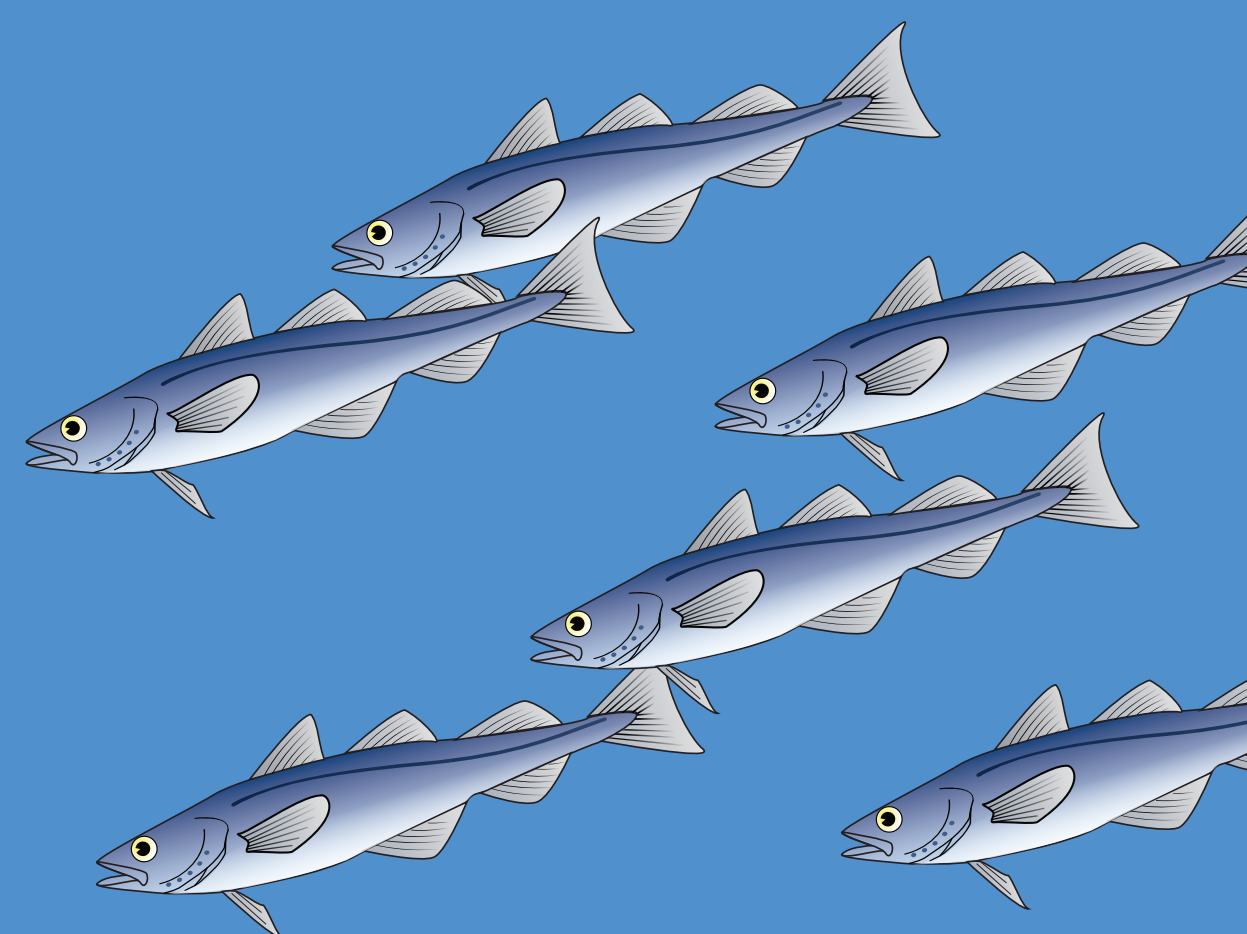
392.4 years of at-sea days
(395 years ago, the pilgrims landed at Plymouth Rock)



19,864,577 nm traveled
That's 95.6 trips to the moon!

32,376 Fishing
49,140 Trips Identified
16,764 Non-Fishing

- Additional on-going steps:
- Quantify dynamics of trip characteristics over time
 - Model fishing trips to identify when vessels are fishing based on how they move.



Acknowledgments & Funding Support NOAA Fisheries Science & Technology, North Pacific Research Board / BSIERP, Franz Mueter, NOAA Fisheries AK Region, Alaska Sea Grant, Patrick Sullivan, North Pacific Observer Program

[†] Observer coverage has varied by year and by vessel size; vessels and trips have been fully observed since 2011.
^{*} Mean shoreside processor first wholesale values (2003 - 2013) - may include some trips from the Gulf of Alaska

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The recommendations and general content presented do not necessarily represent the views or official position of the Department of Commerce, National Oceanic and Atmospheric Administration, or National Marine Fisheries Service.