

Developing a Predictive Model to Identify Potential High Concentration Areas of ALDFG in the Marine Waters of Mexico


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Engaging Local Communities to Prevent, Reduce and Retrieve Ghost Gear in North America


Presentation on research conducted with Global Ghost Gear Initiative

Fisher Surveys



Global Fishing Gear Loss Assessment
Quantity, causes and management options

8. Traps



The Interviewer

Part 1. Information about the interview

1.1 Interviewer name: [prefilled with registering] _____


1.2 Interviewer email address: [prefilled with registering] _____


1.3 How is the interview done?

Face to face	<input type="checkbox"/>
Telephone/ Online call	<input type="checkbox"/>

1.4 For whom are you collecting data for?
[Prefilled with registering] _____


1.5 Date of interview (dd/mm/yyyy): _____

24/11/2021  1



Global Fishing Gear Loss Assessment
Quantity, causes and management options

7. Gillnets and entangling nets



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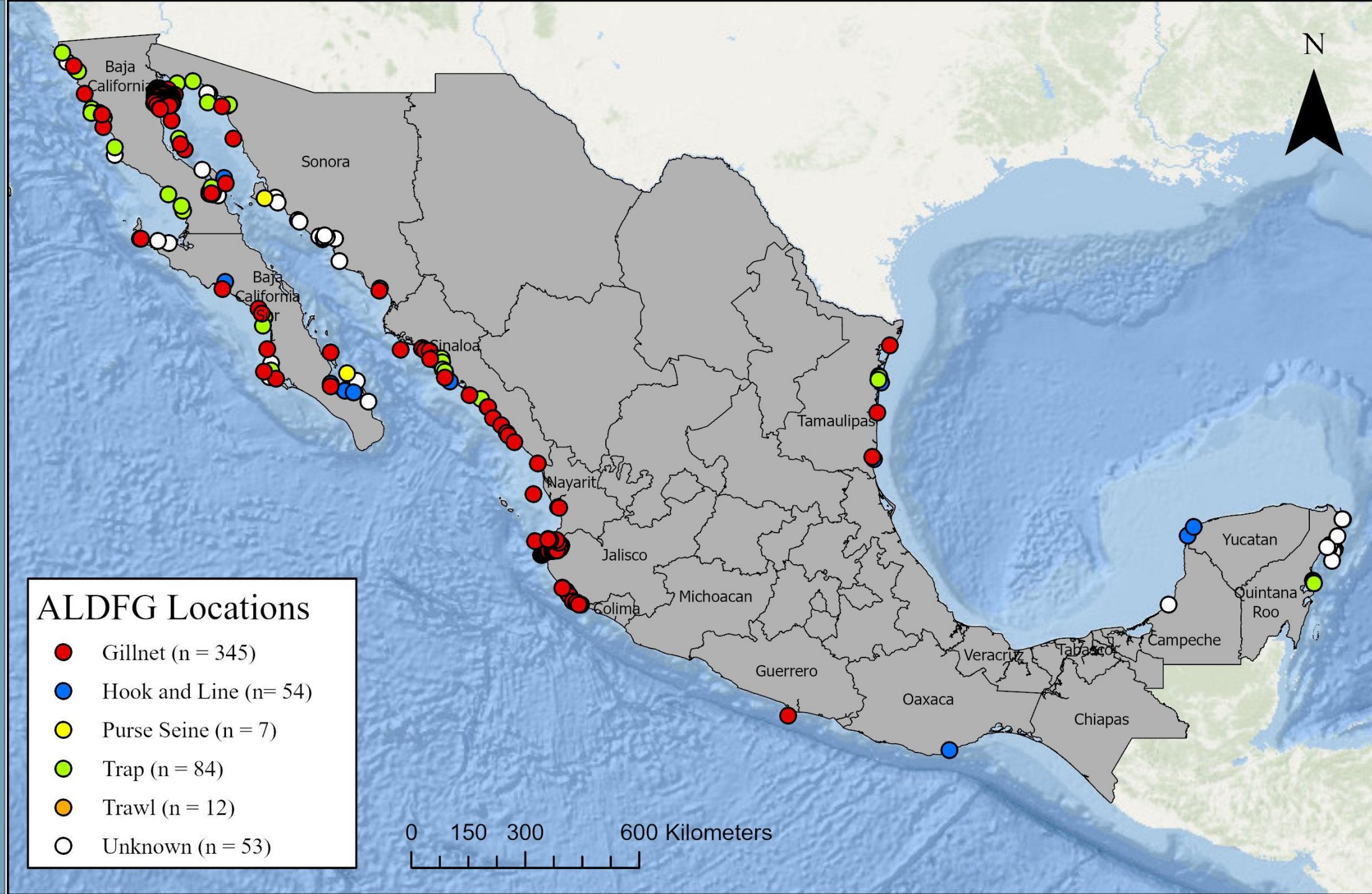
Developing the Predictive Model for Mexico: Data Sources


Source	Gear Type	Count	Subtotal
GGGI/Pronatura	Gillnet/Entangling Net	74	256
	Gillnets & Lines	10	
	Gillnets & Traps	7	
	Traps	69	
	Hook & Line	37	
	Trawl Net	16	
	Surrounding Net	1	
	Not Specified	42	
WWF-Mexico	Hook & Line	1	91
	Nets	17	
	Nets, Hook & Line	73	
CIRVA (2019)	Gillnet	163	163
GGGI Data Portal	Lines	15	18
	Net	3	
ECO NGO	Purse Seine	6	6
COBI NGO	Gillnet	2	19 ²
	Trap	3	
	Hook and Line	14	
Best Practice Framework Workshop	Unknown	14	14
Grand Total		567	

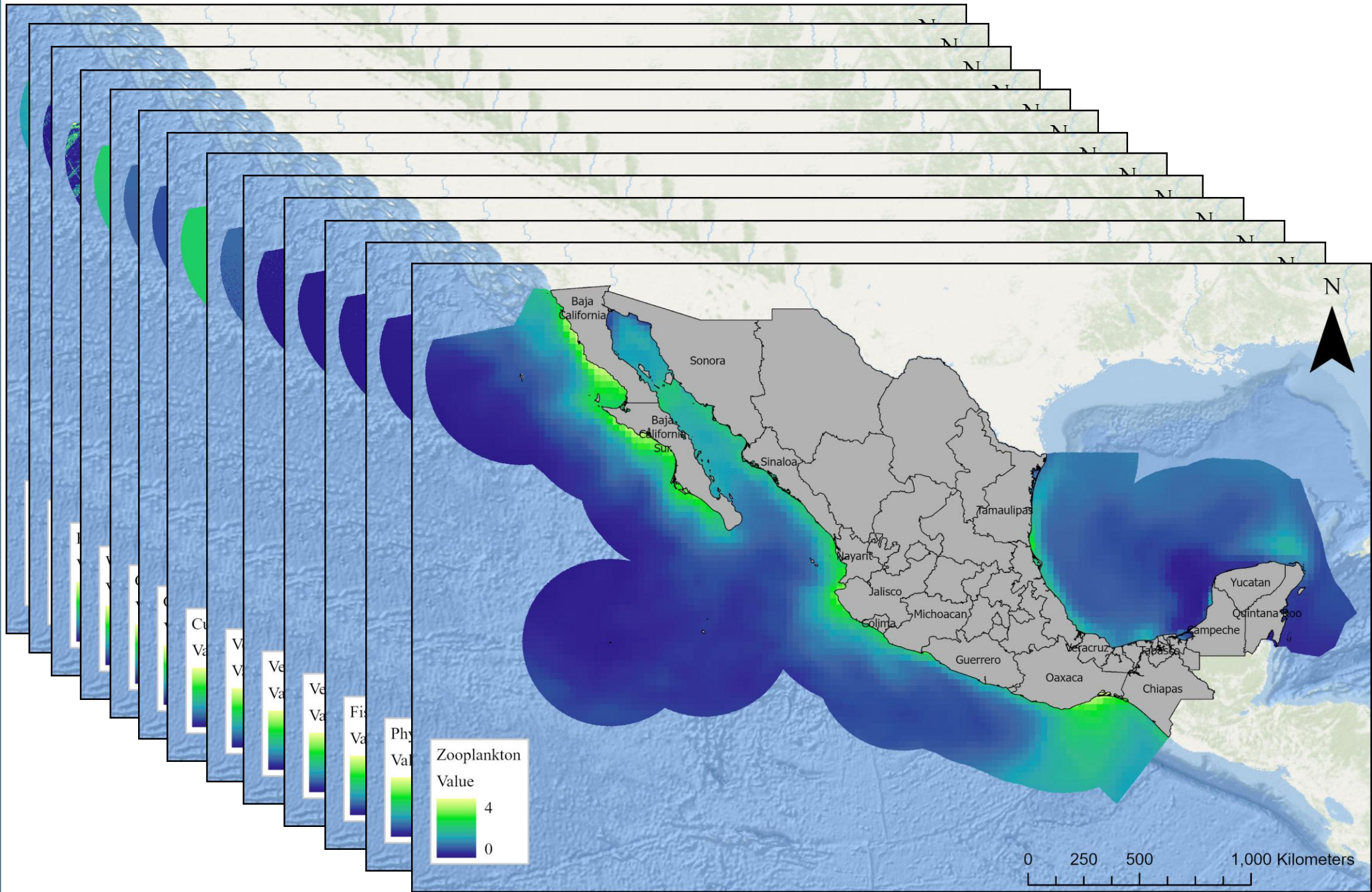
ALDFG Locations

- Gillnet (n = 345)
- Hook and Line (n = 54)
- Purse Seine (n = 7)
- Trap (n = 84)
- Trawl (n = 12)
- Unknown (n = 53)

0 150 300 600 Kilometers

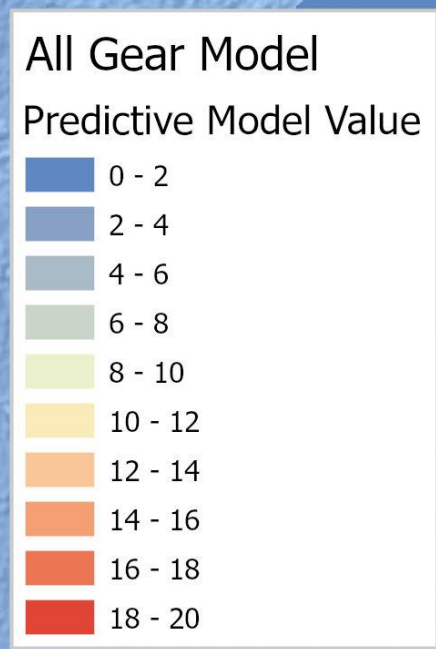


<div> <div>NRC</div>  </div>	Gear Type	Fisher Surveys - Reasons for Gear Loss: Pacific	Fisher Surveys - Reasons for Gear Loss: Atlantic
	Surrounding Nets	Poor weather; damage from large animals; strong currents; discards	NA
	Trawls	Poor weather; discards; damage from large animals; strong currents; improper storage	Damage from large animals; lack of communication between vessels; discards; poor weather; strong currents; improper storage; faulty/damaged gear
	Gillnets	Poor weather; strong currents; damage from large animals; improper storage; snag	Poor weather; strong currents; damage from large animals; improper storage; snag; lack of communication between vessels
	Pots/Traps	Poor weather; strong currents; vandalism; snag; vessel traffic; water depth	Poor weather; damage from large animals; lack of communication between vessels; improper storage; discards
	Hook and Lines	Poor weather; drifting; improper storage; damage by large animals; vessel traffic	Poor weather; lack of communication between vessels; strong currents; damage by large animals; improper storage; drifting



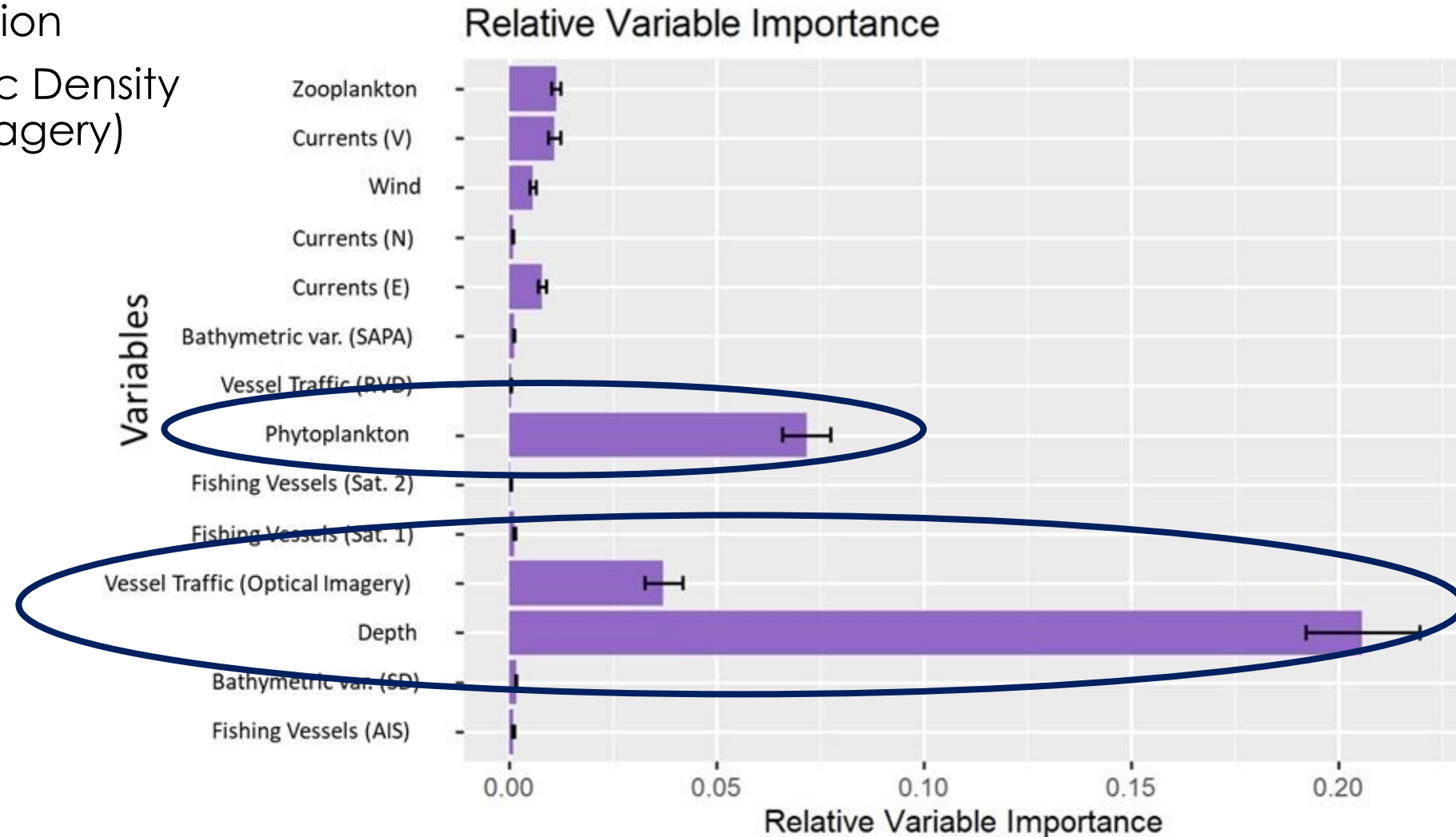
ALDFG Predictive Models – Performance Metrics

Model	AUC	COR	TSS	Deviance
All Gear	0.99	0.90	0.93	0.26
Gillnet	0.99	0.90	0.93	0.20
Pot and Trap	0.98	0.75	0.96	0.18
Hook and Line	0.98	0.77	0.94	0.15

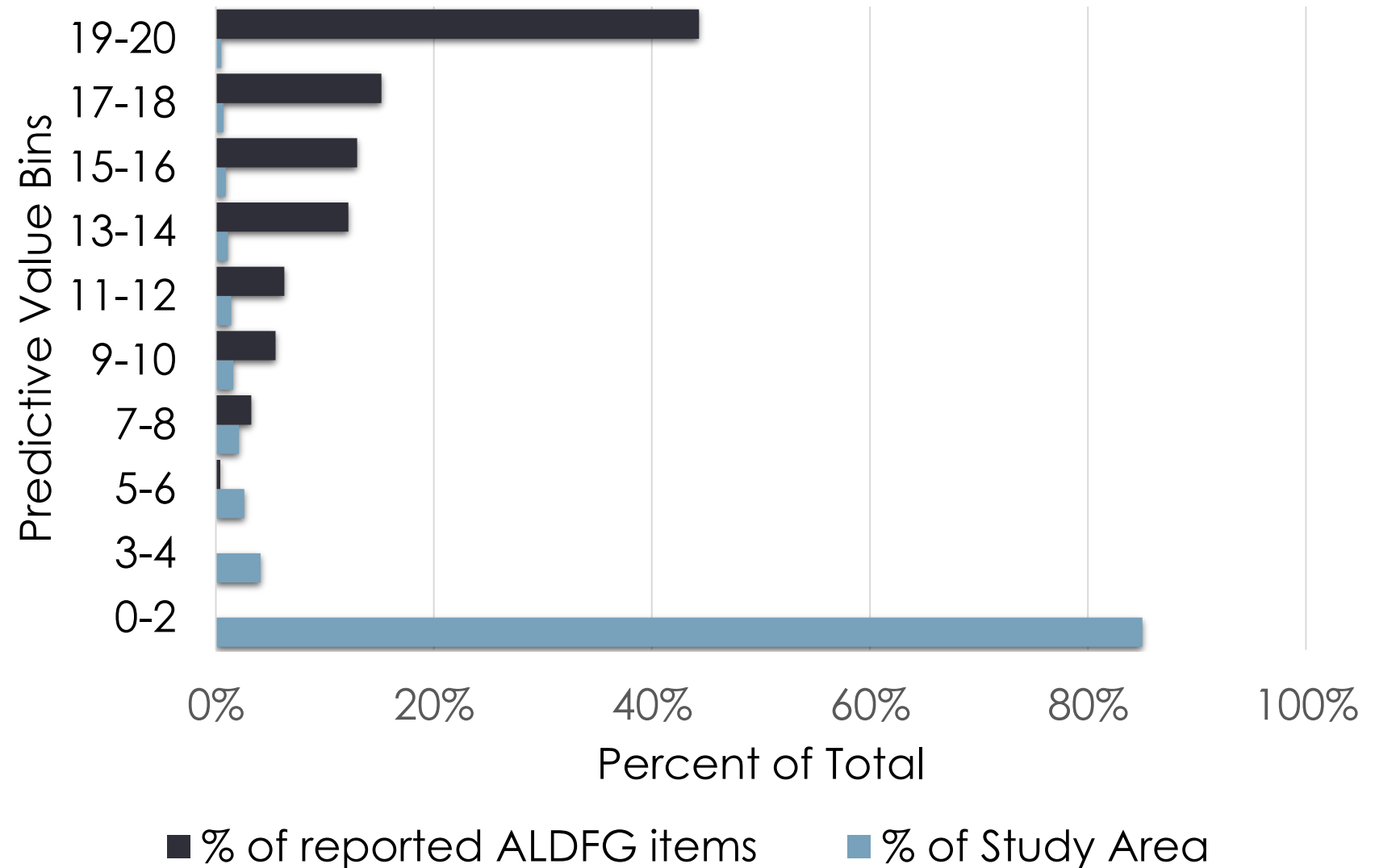


Important model variables – All Gear Model

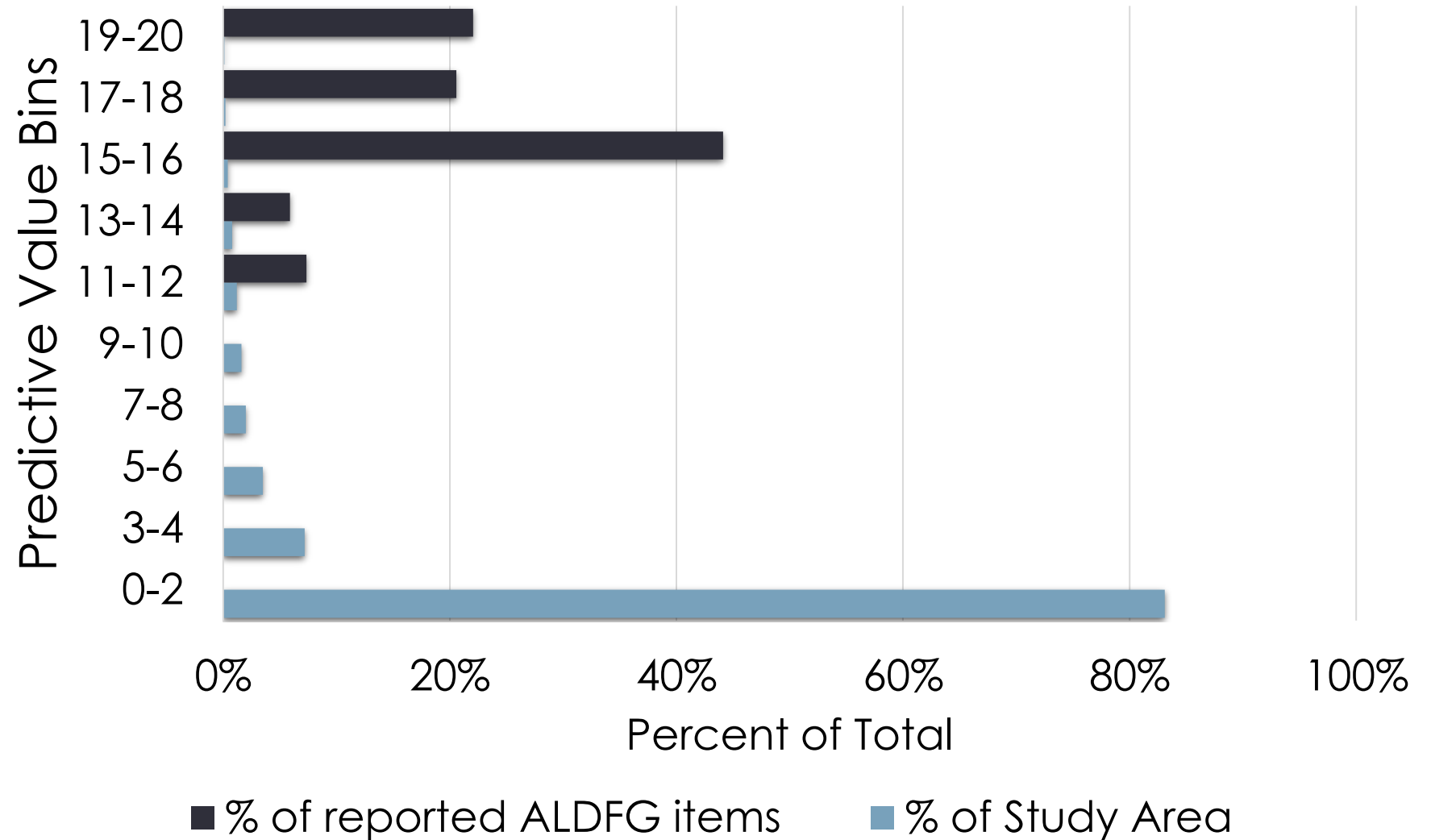
- Depth
- Phytoplankton Concentration
- Vessel Traffic Density (Optical Imagery)

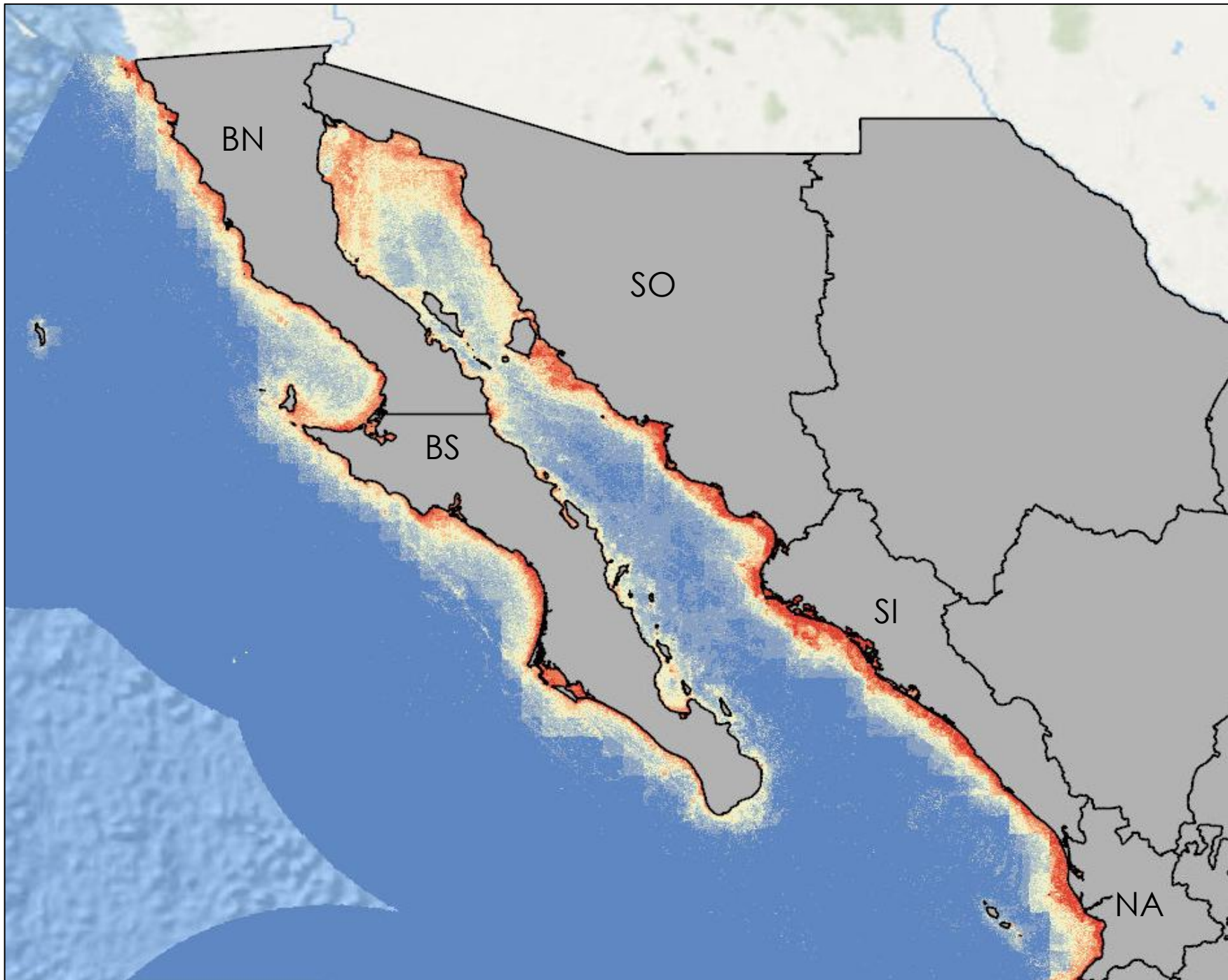


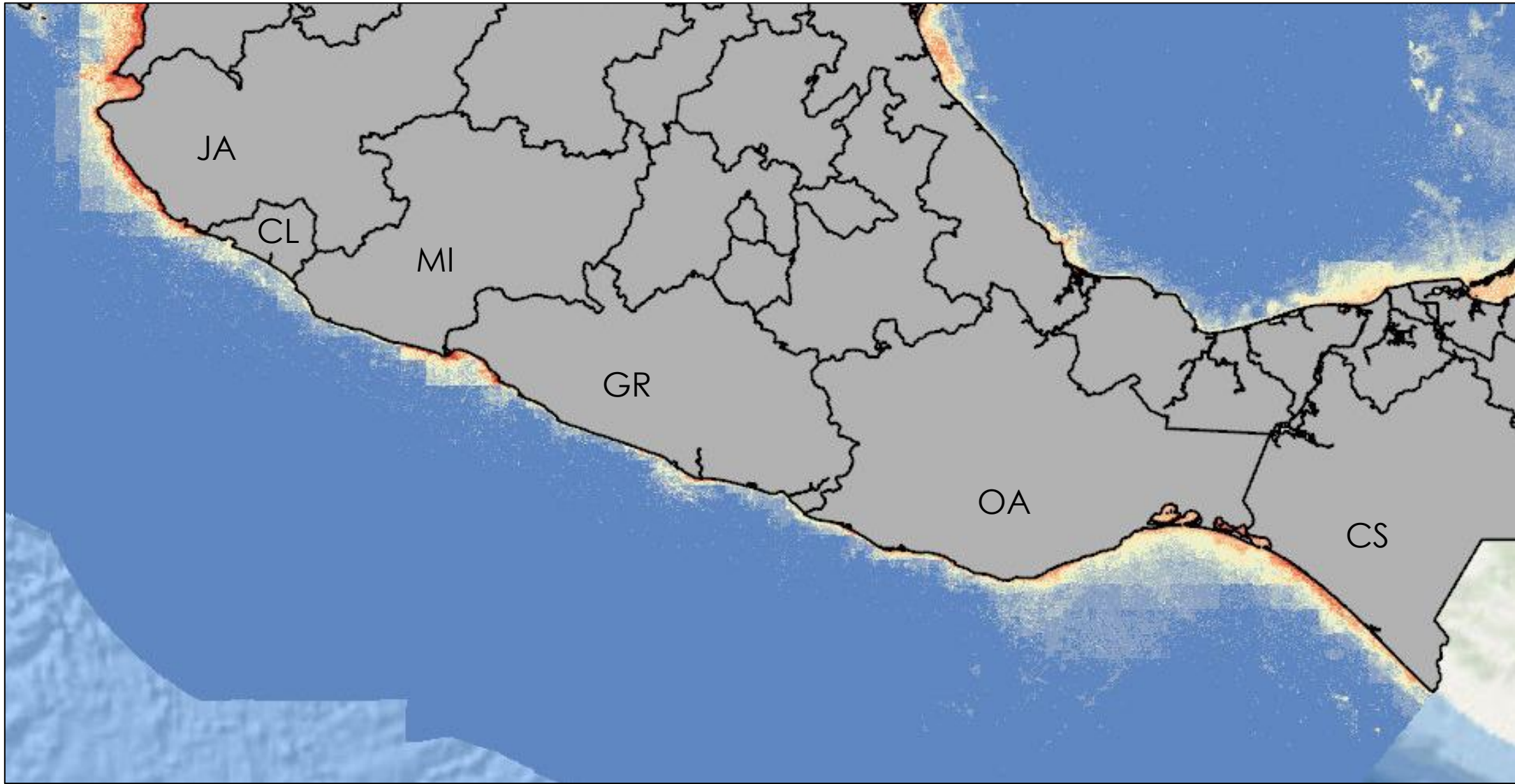
Predictive Model Results - Pacific

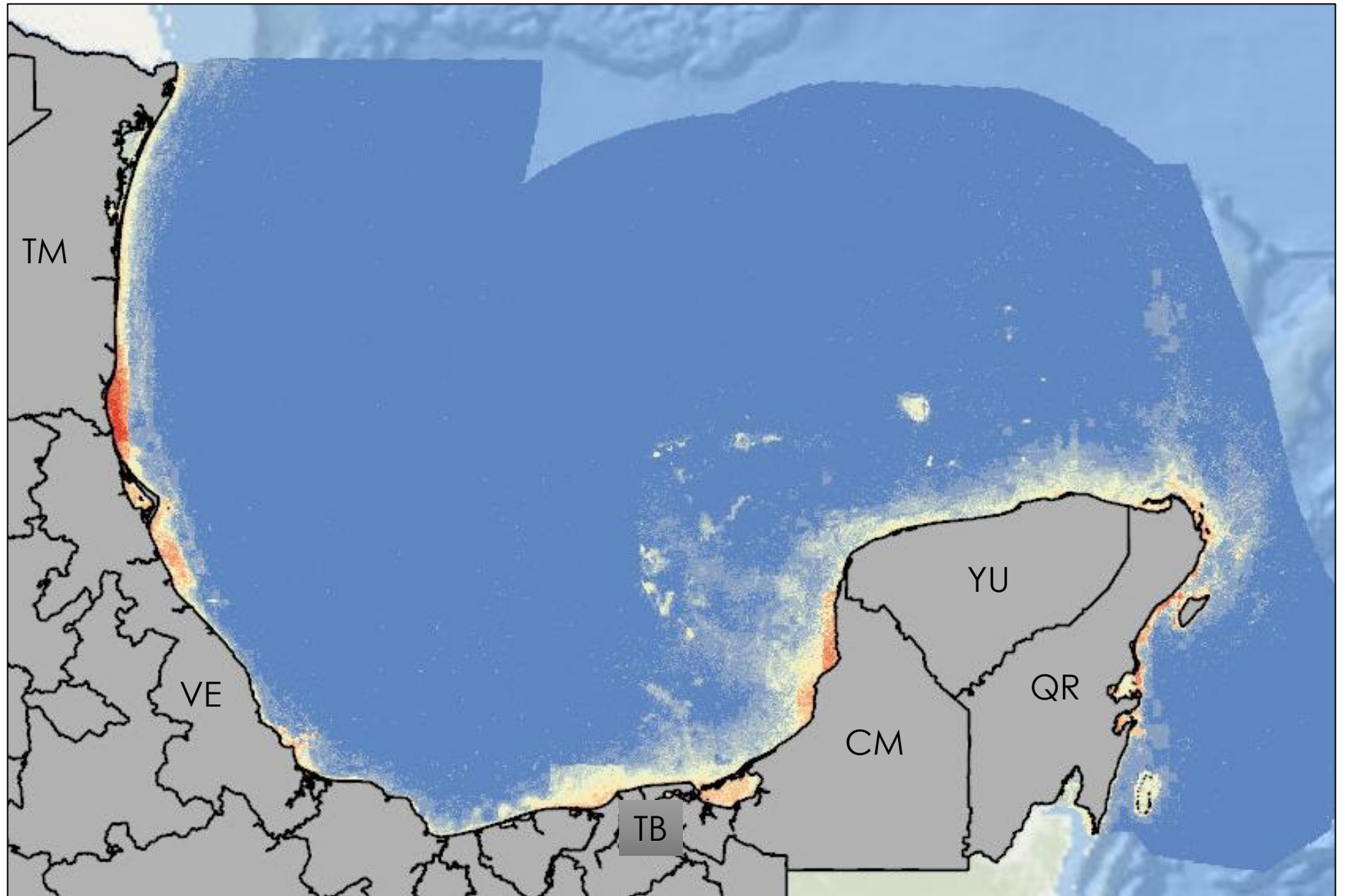


Predictive Model Results - Atlantic









Thank You

- Special thanks to GGGI and the Government of Mexico for the opportunity to collaborate on this project. Thanks to Conapesca, Datamares, Pronatura, WWF-Mexico, COBI, and ECO for information and data.
- For any questions about this research please refer to the final report, or contact us through the project leads at GGGI

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