

# 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	_____
Telephone/ Online call	_____

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

1.5 Date of interview (dd/mm/yyyy): \_\_\_\_\_

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24/11/2021  1

 Global Fishing Gear Loss Assessment  
Quantity, causes and management options

7. Gillnets and entangling nets



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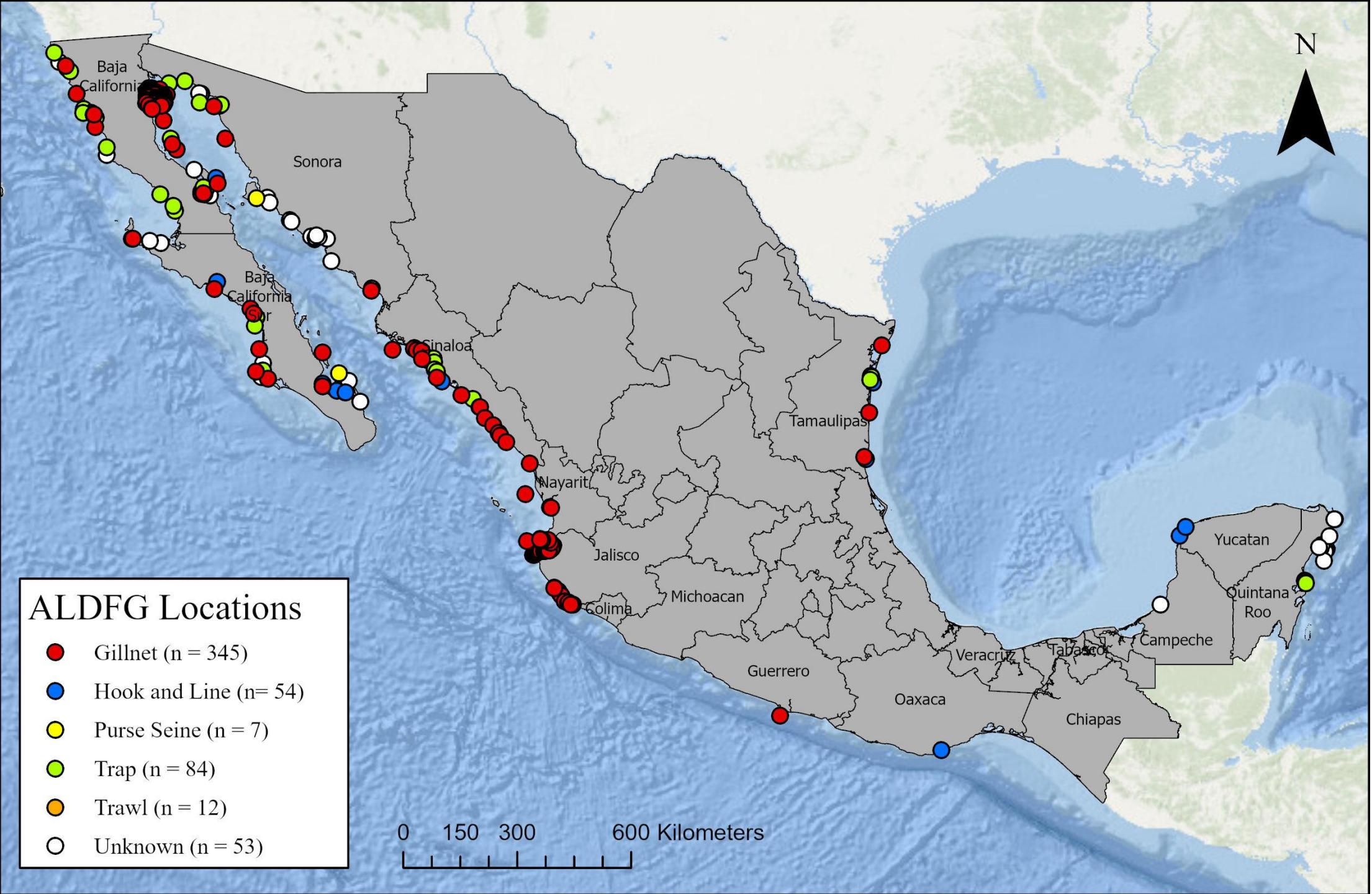
1.5 Date of interview (dd/mm/yyyy): \_\_\_\_\_

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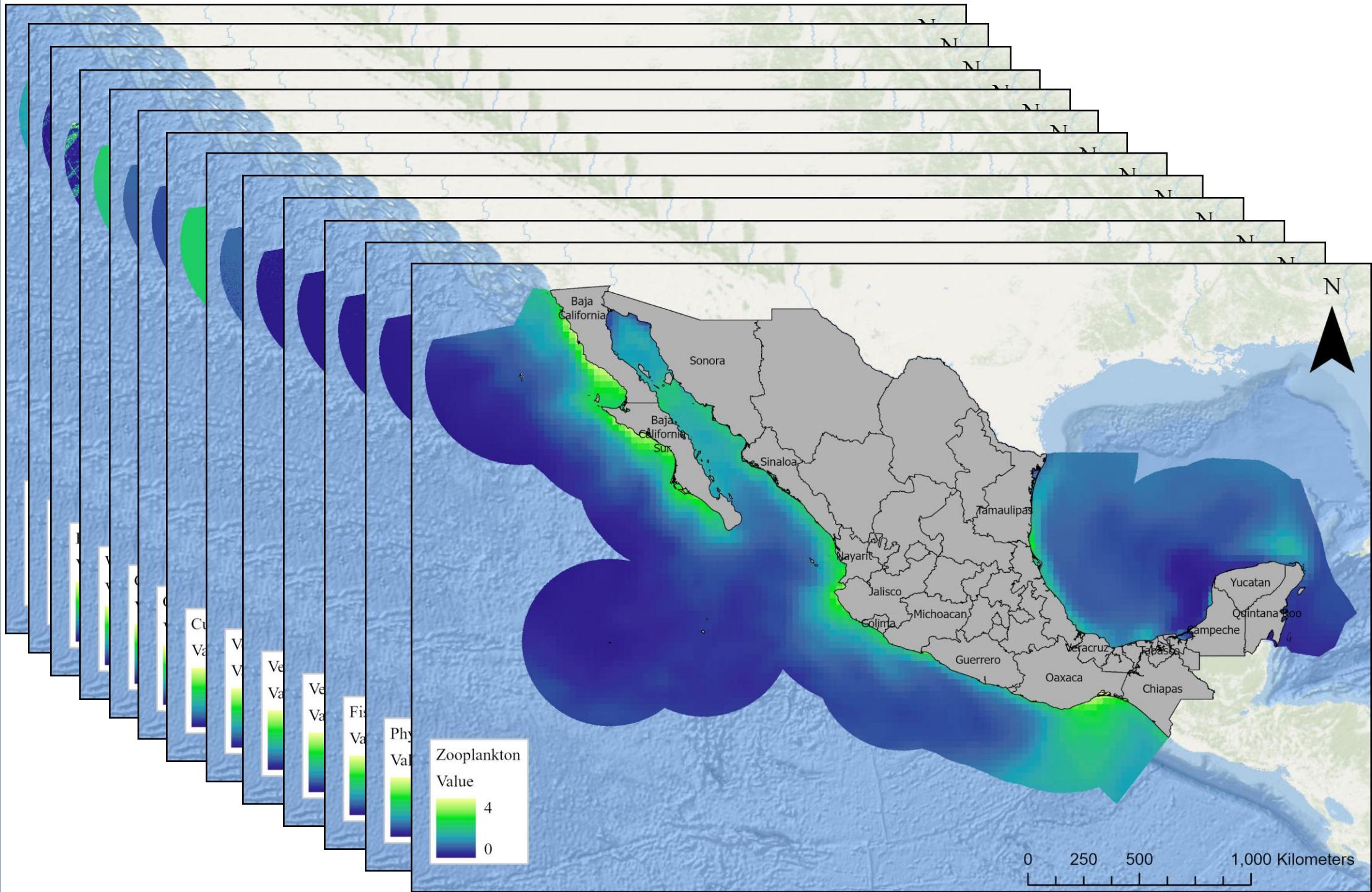
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# Developing the Predictive Model for Mexico: Data Sources

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



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



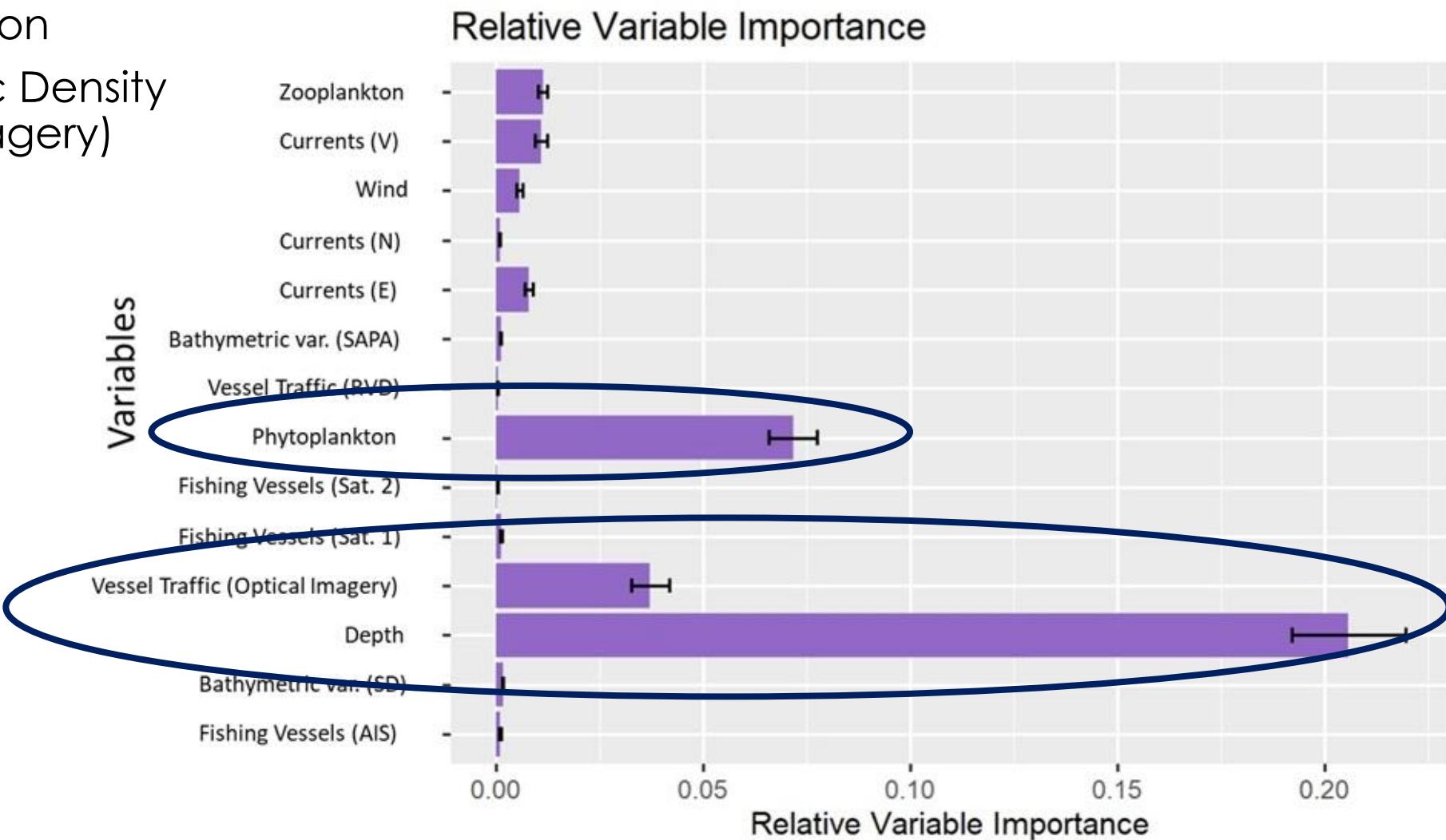
# ALDFG Predictive Models – Performance Metrics

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

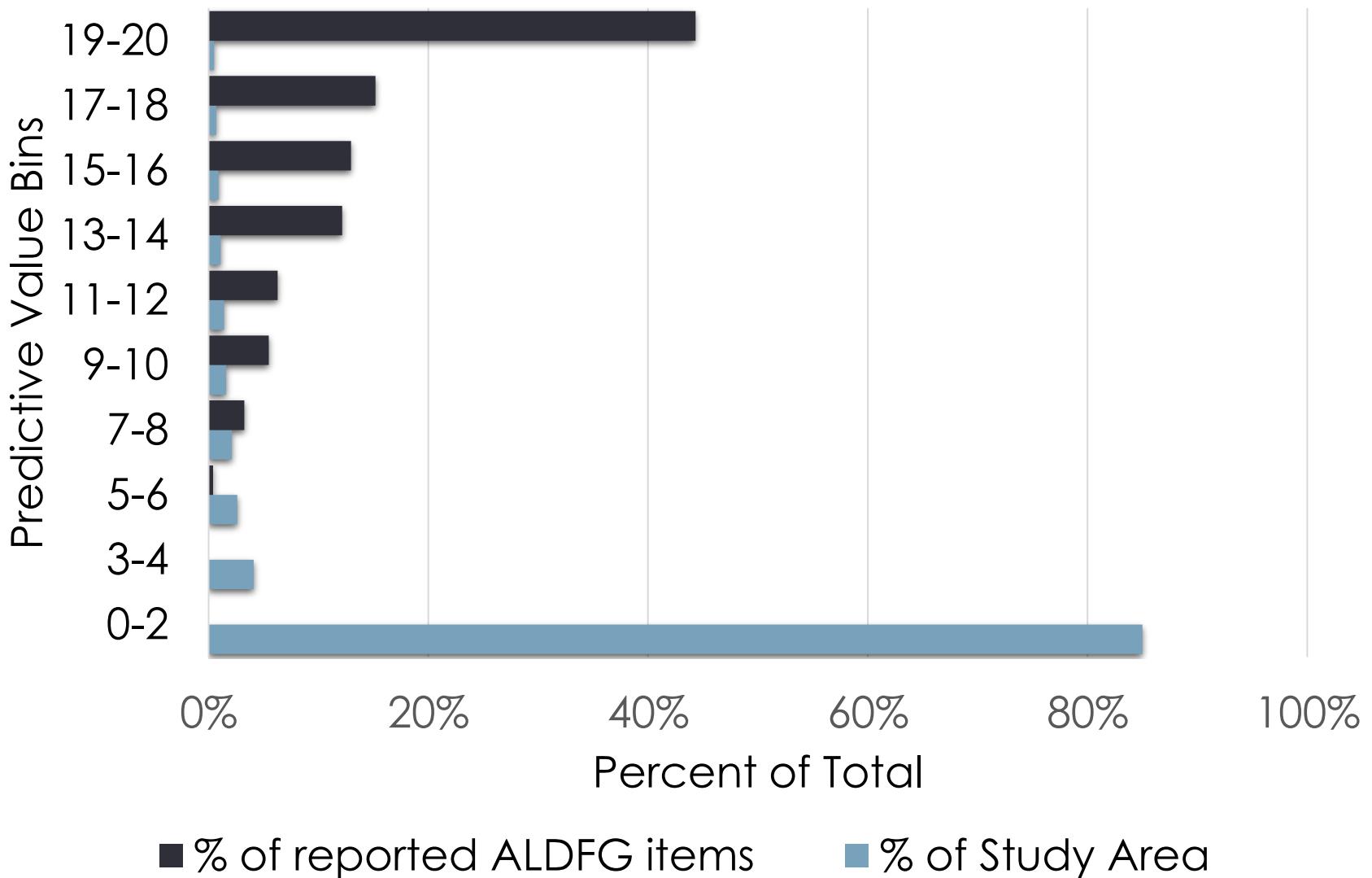


# Important model variables – All Gear Model

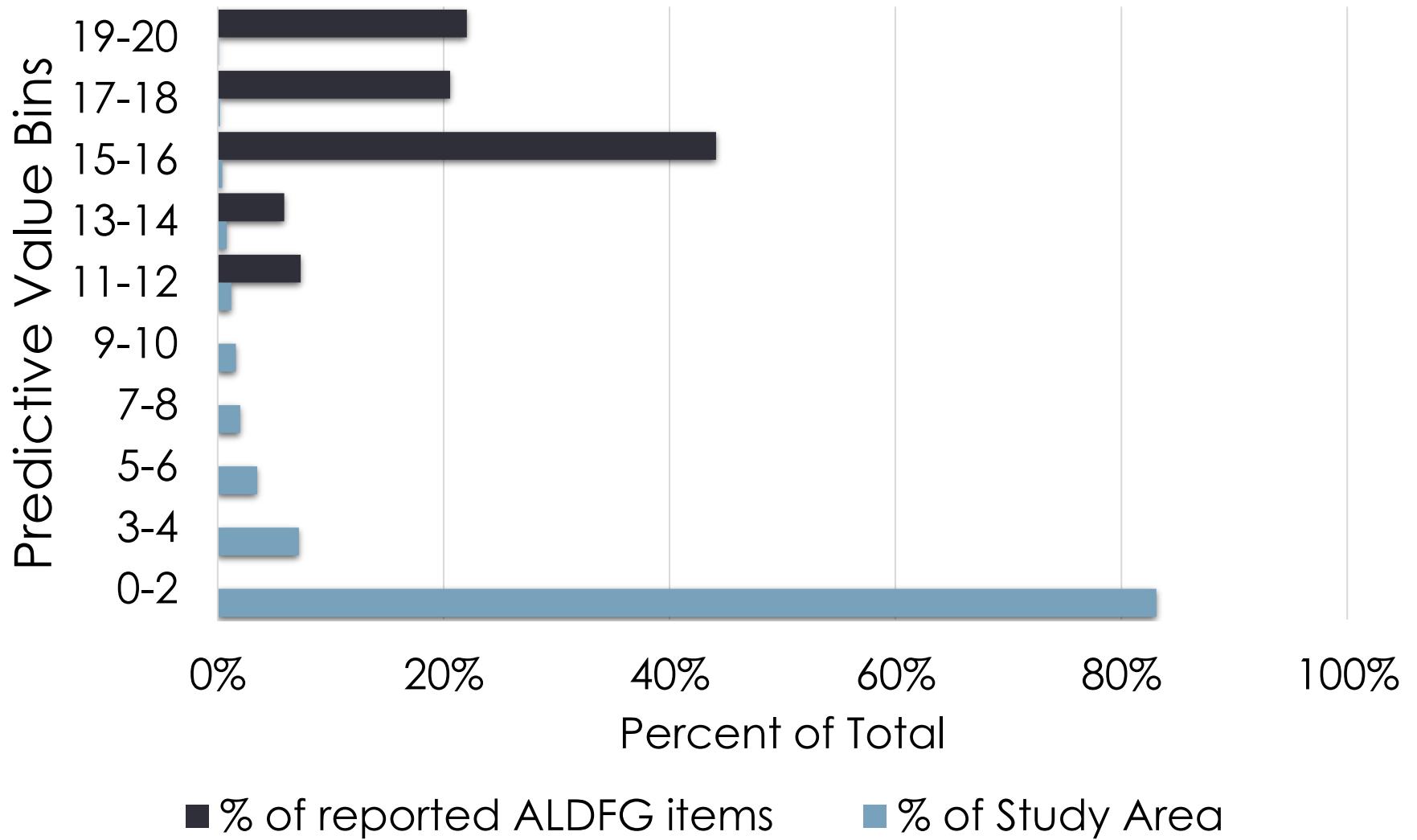
- Depth
- Phytoplankton Concentration
- Vessel Traffic Density (Optical Imagery)

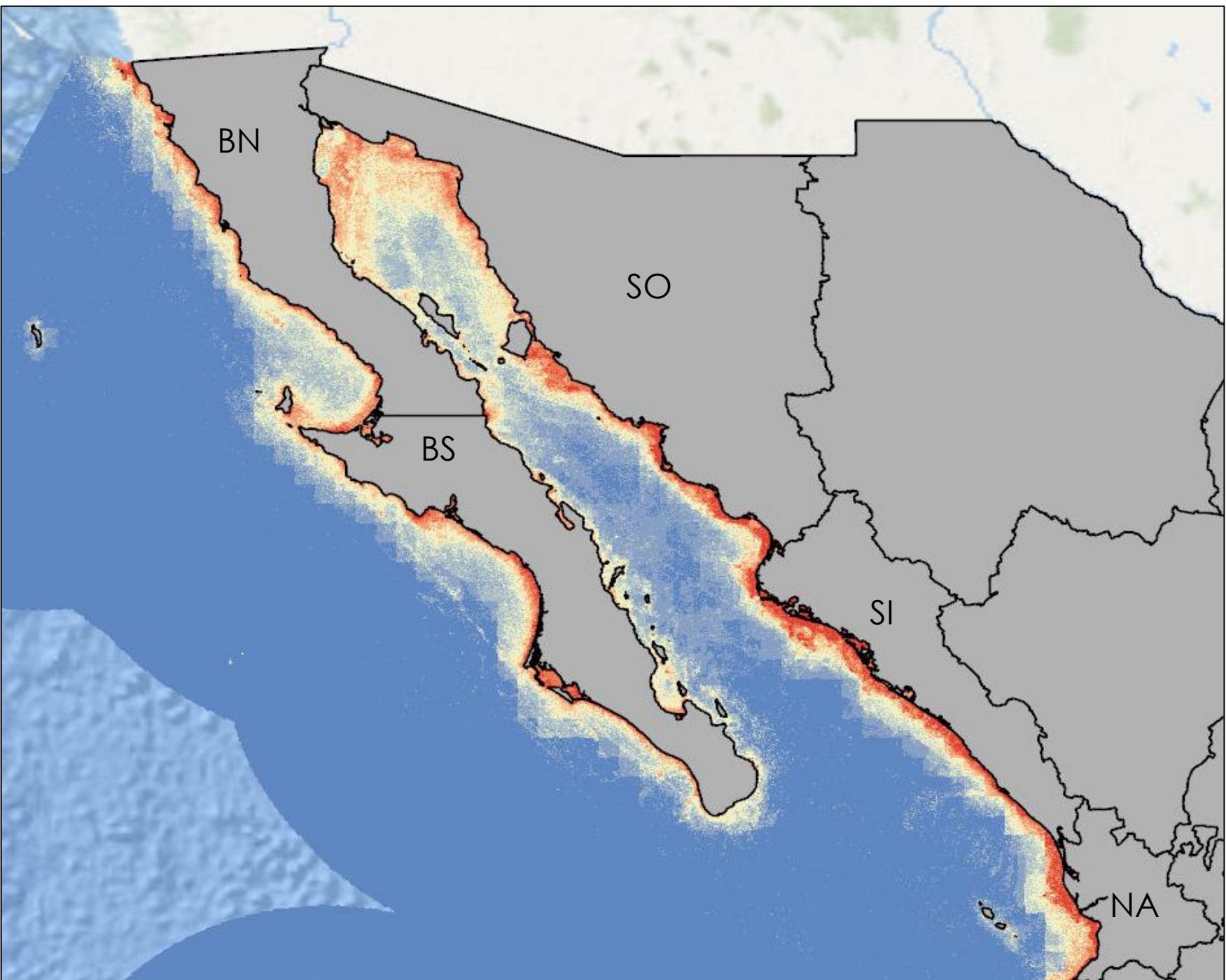


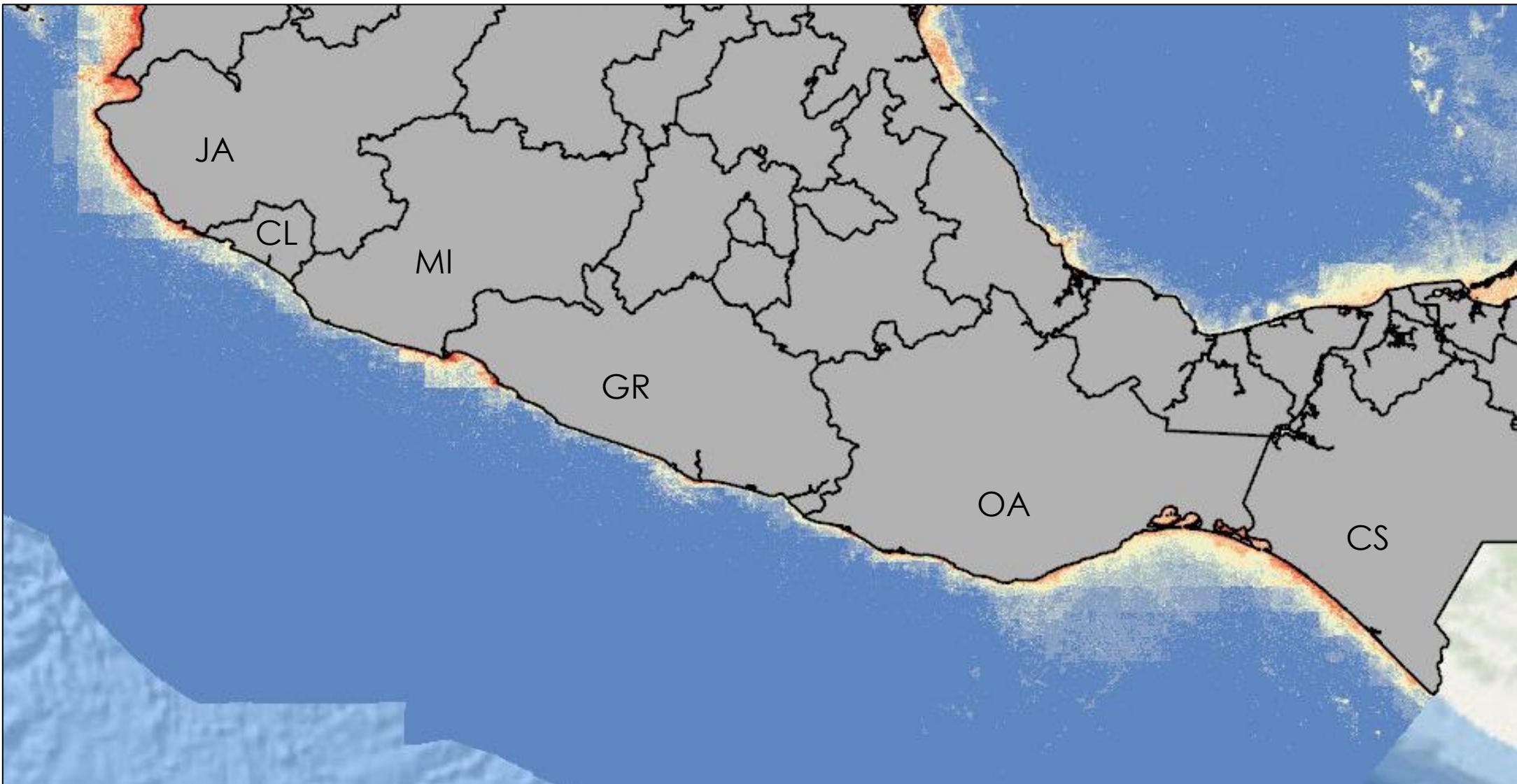
# Predictive Model Results - Pacific

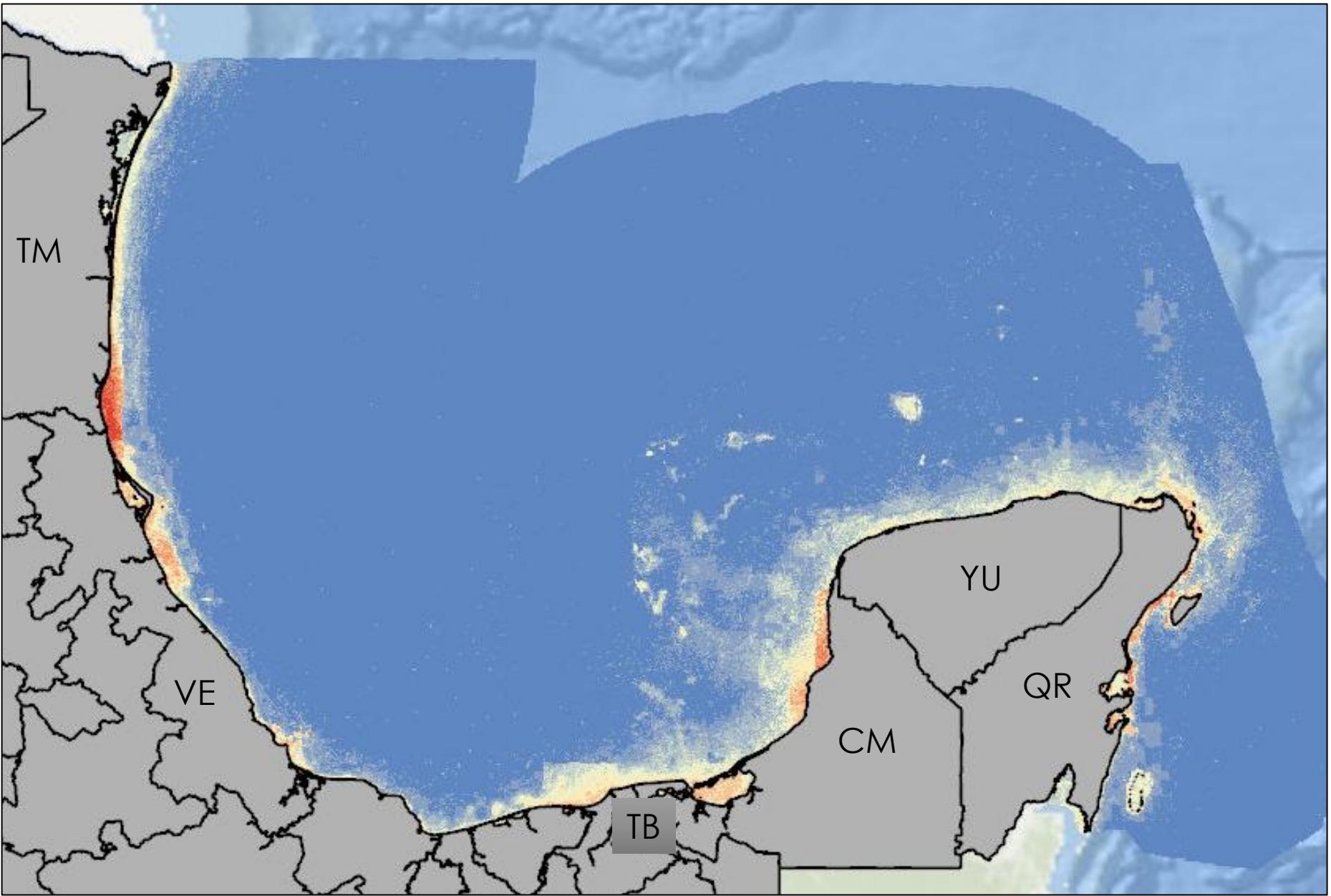


# Predictive Model Results - Atlantic









# Thank You

- Special thanks to GGGI and the Government of Mexico for the opportunity to collaborate on this project. Thanks to Conapesca, Datamaras, 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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