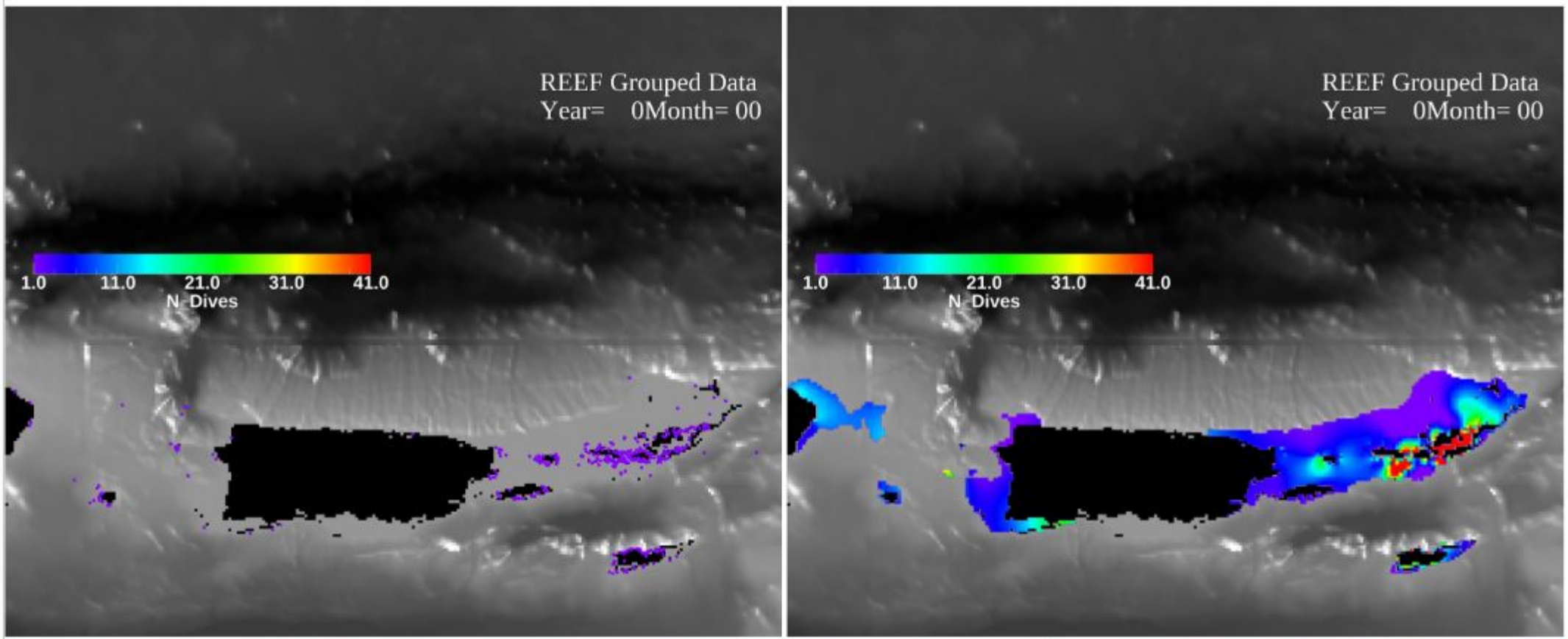
SEFSC Offshore Wind Technical Team Charge:

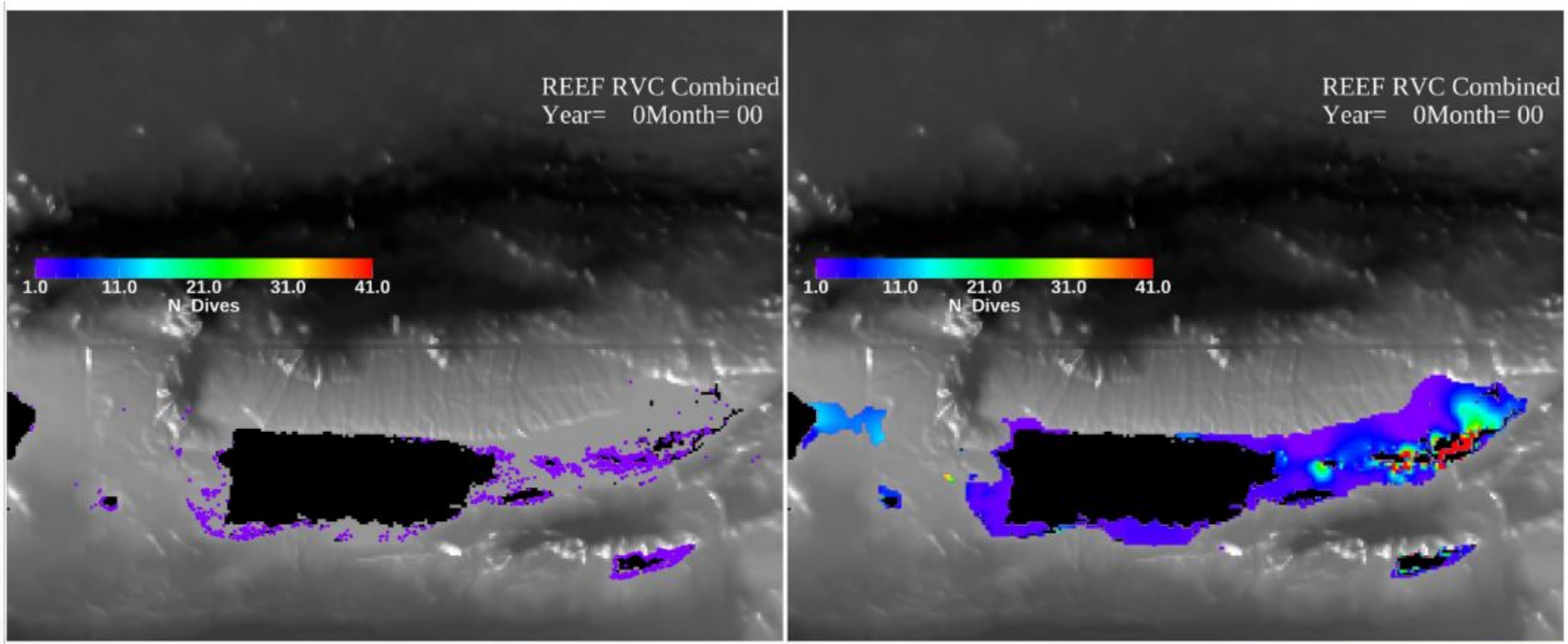
Compile and map US Caribbean spatial data in support of marine spatial planning for potential wind energy and/or aquaculture development

Dr Jiangang Luo, Scientist, RSMAS, University of Miami
(the brains and the brawn)



REEF Data Base

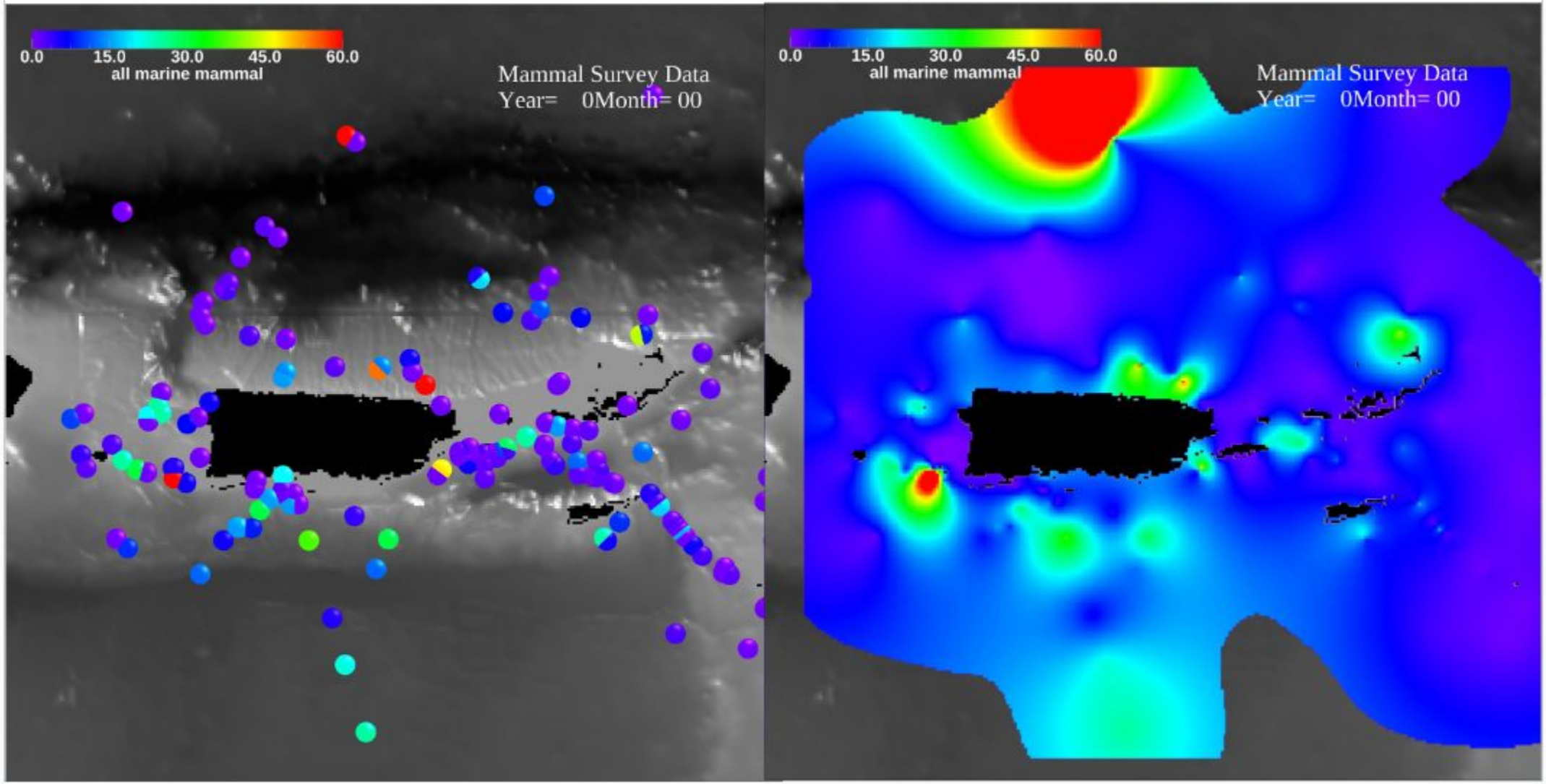
Number of Dives



REEF&RVC Data Combined

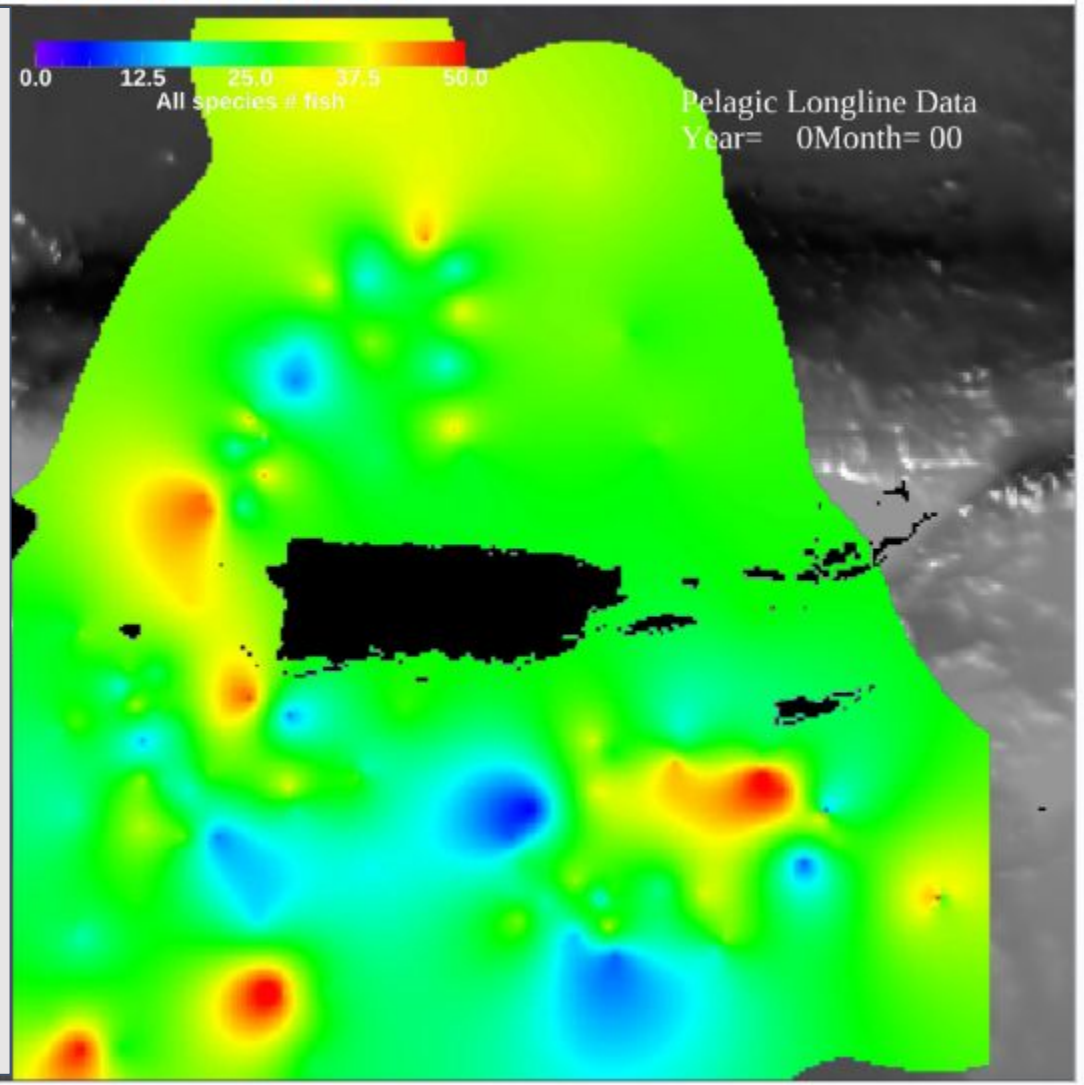
Number of Dives

Mammal DataBase+Seamap: All mammal

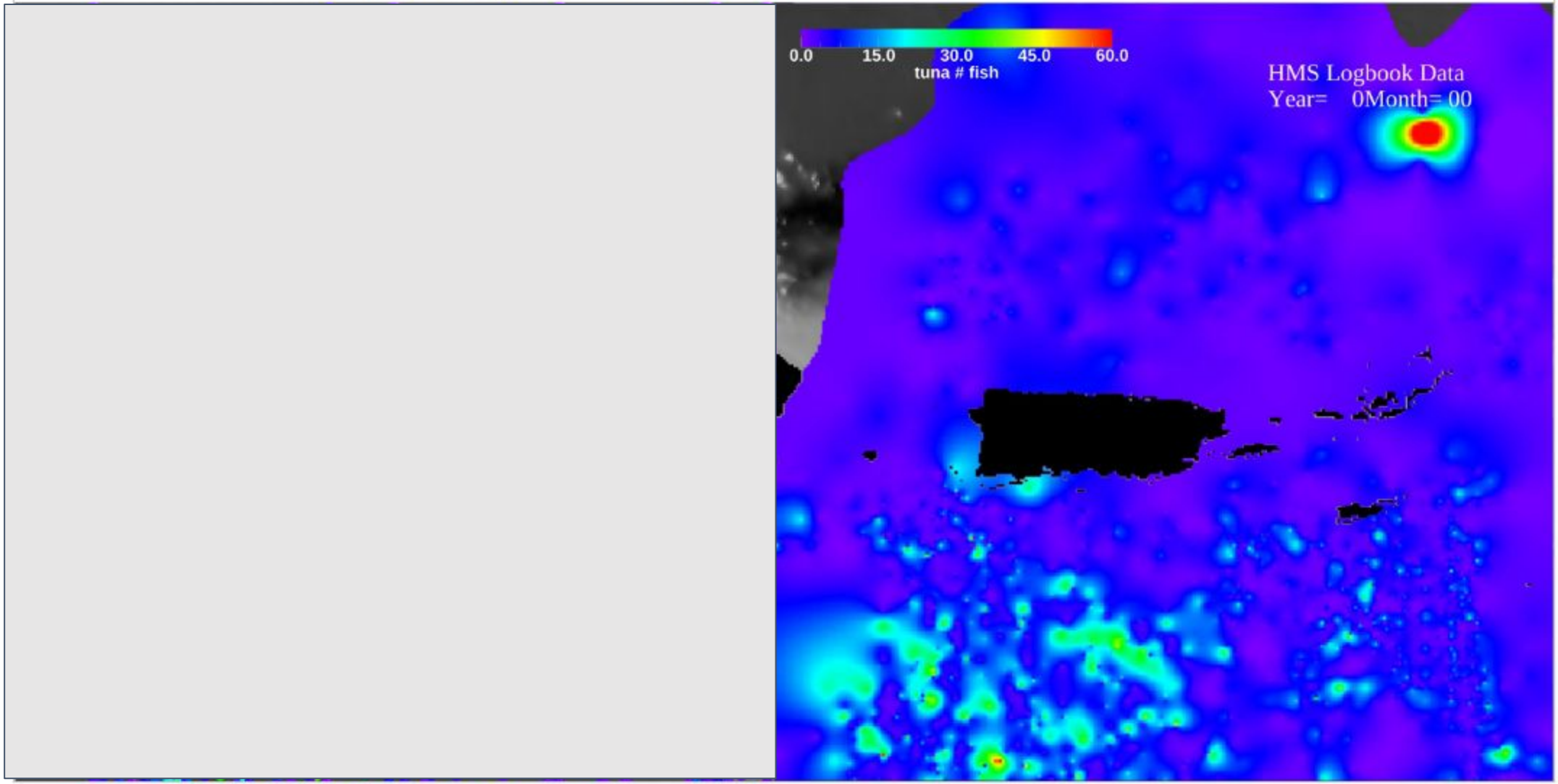


All Species Combined

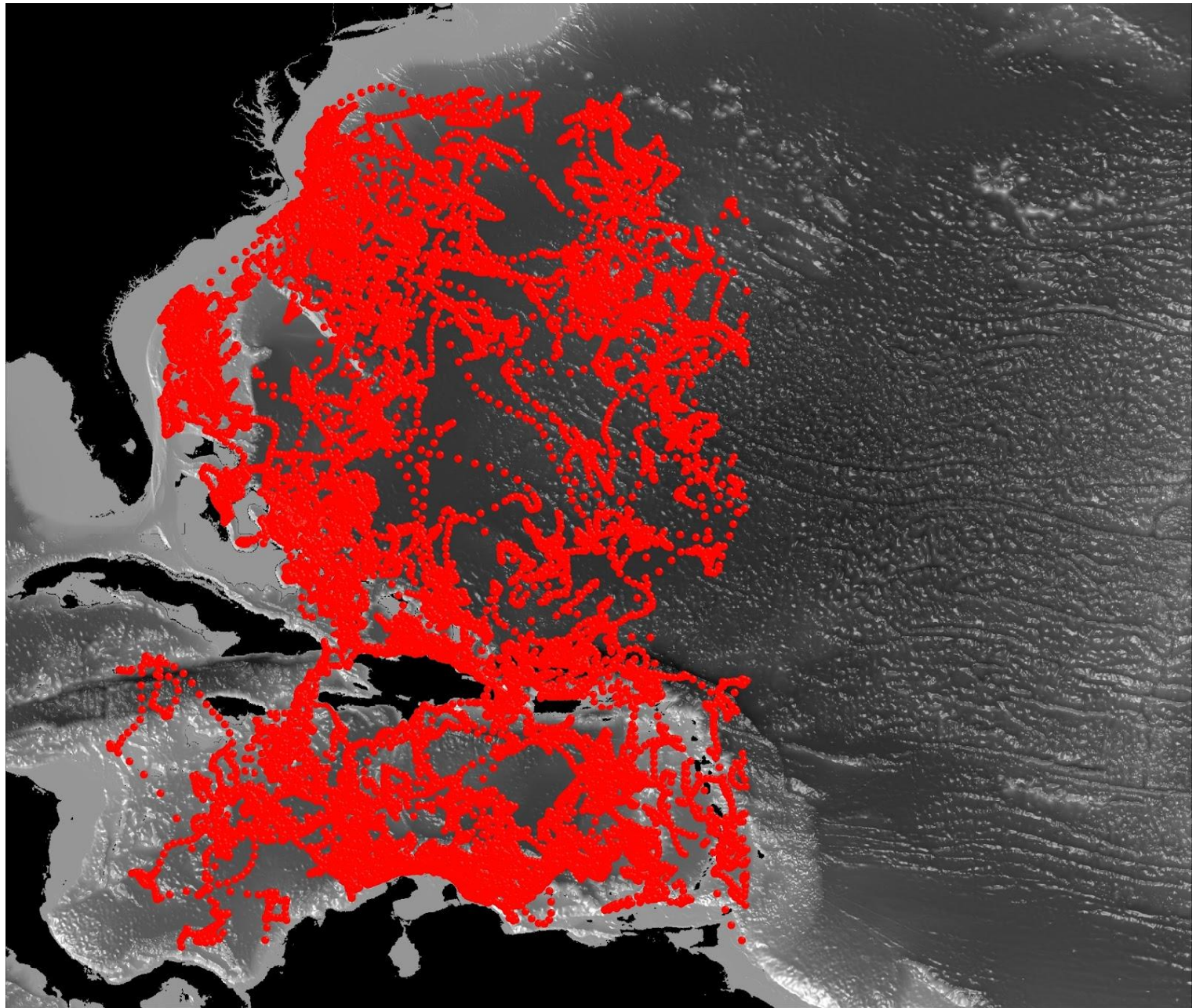
Pelagic Observer Program



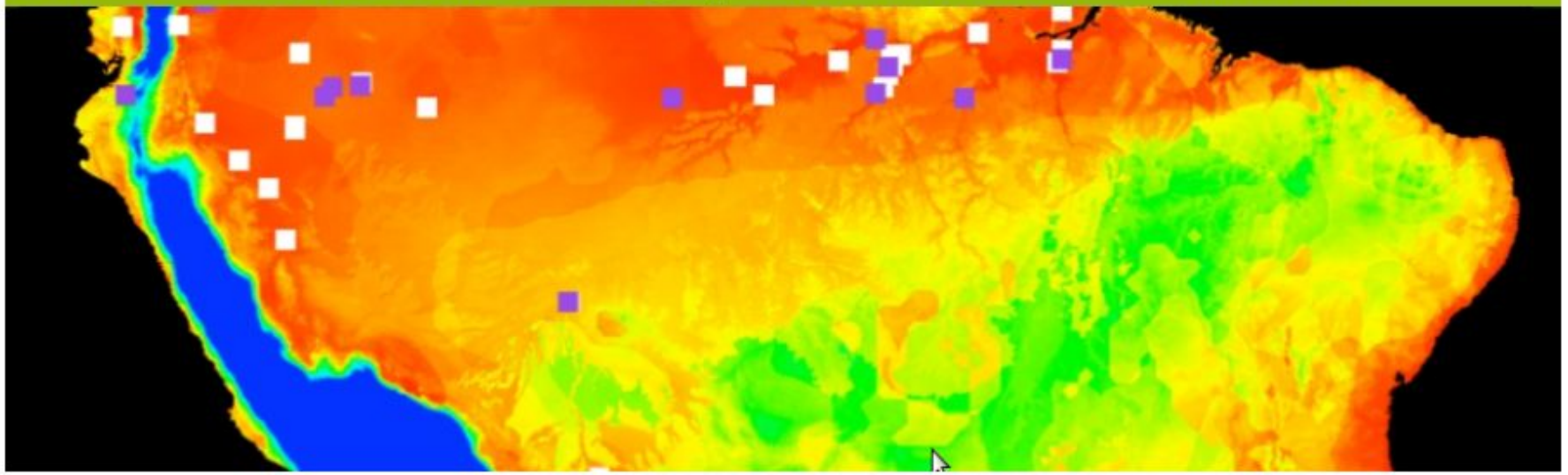
HMS Logbook data: All Tunas combined



Pop-up Satellite Tag Data



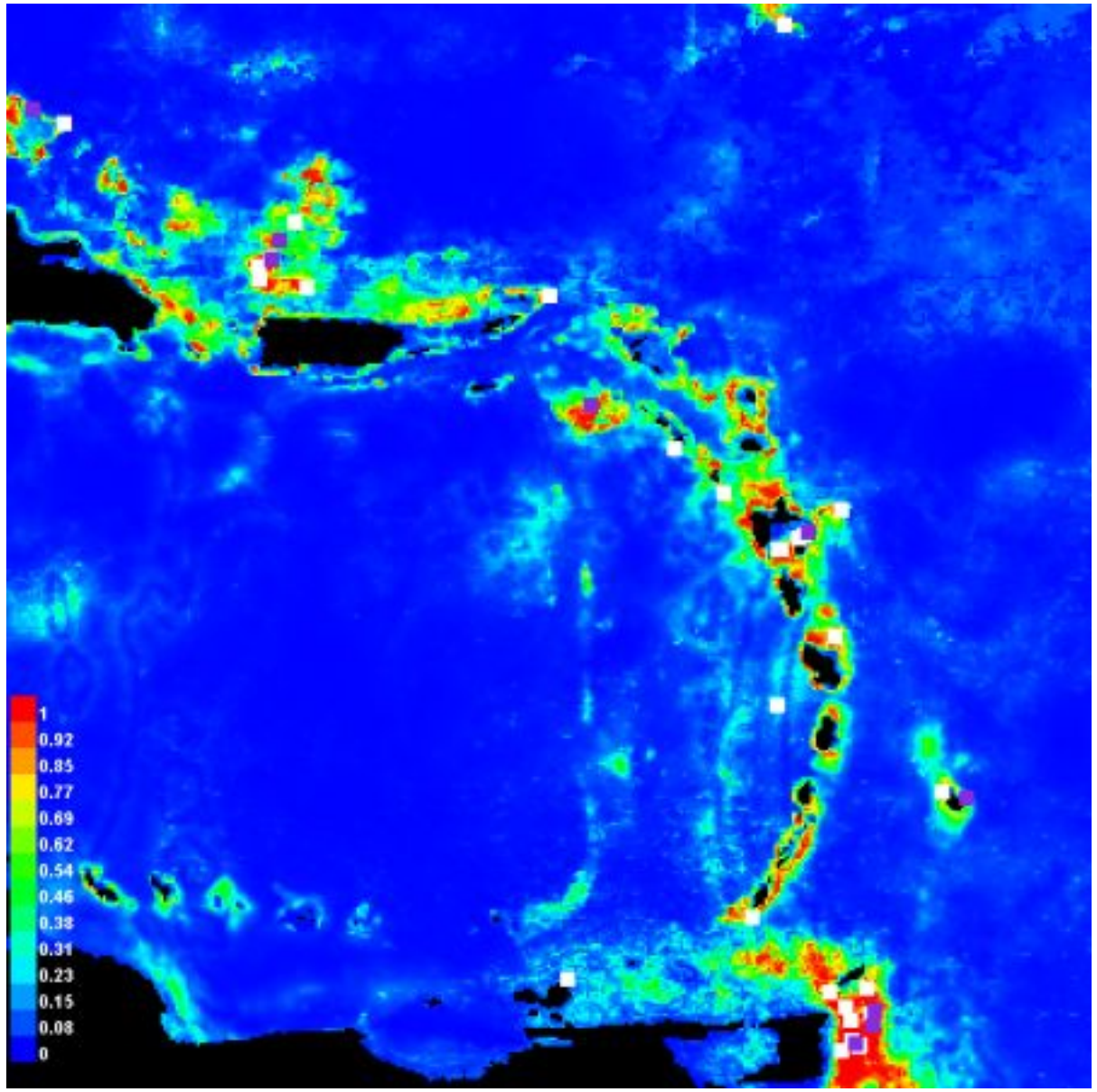
Maxent software for modeling species niches and distributions



Maxent is now open source!

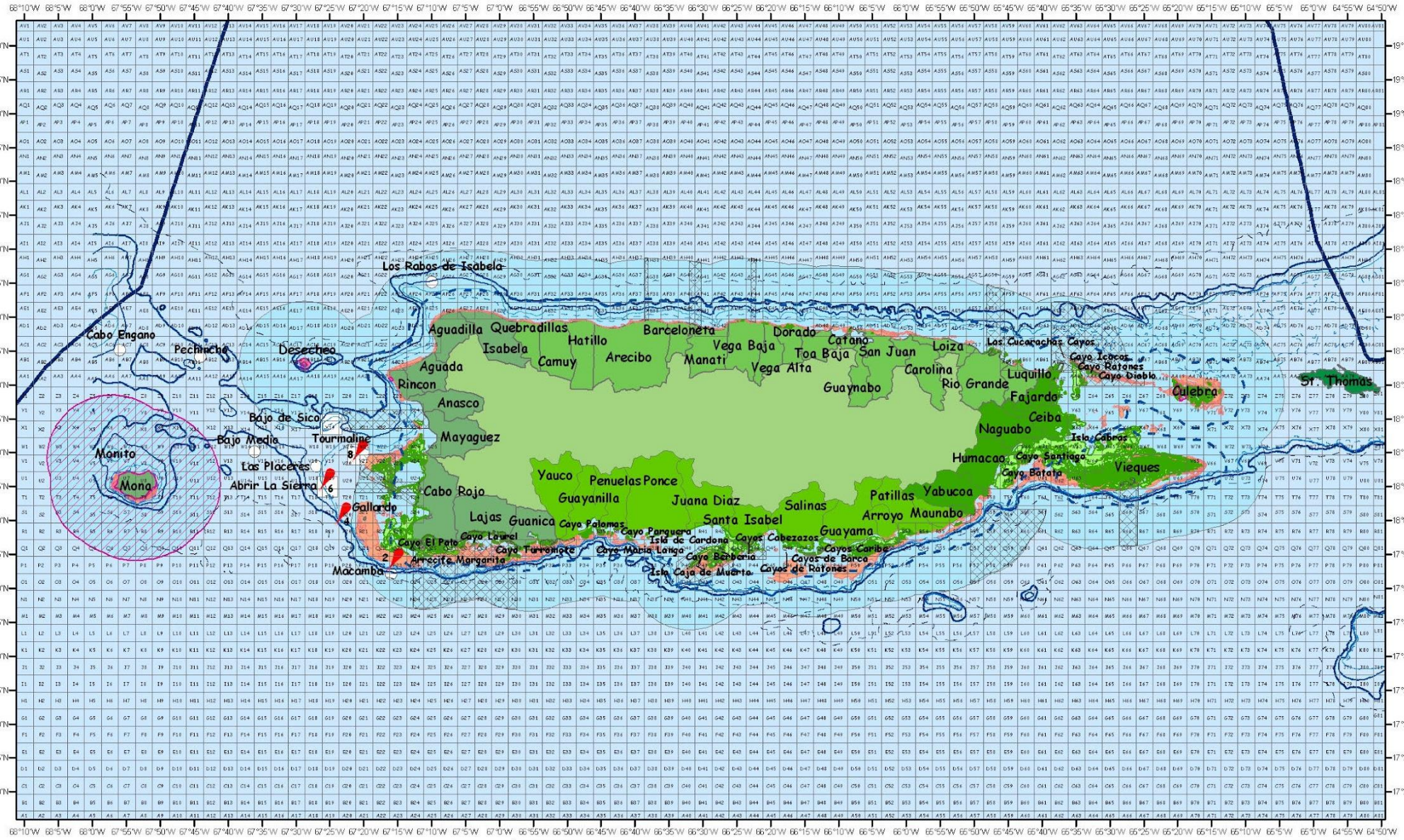
Use this site to download Maxent software for modeling species niches and distributions by applying a machine-learning technique called maximum entropy modeling. From a set of environmental (e.g., climatic) grids and georeferenced occurrence localities, the model expresses a probability distribution where each grid cell has a predicted suitability of conditions for the species. Under particular assumptions about the input data and biological sampling efforts that led to occurrence records, the output can be interpreted as predicted probability of presence (cloglog transform), or as predicted local abundance (raw exponential output).

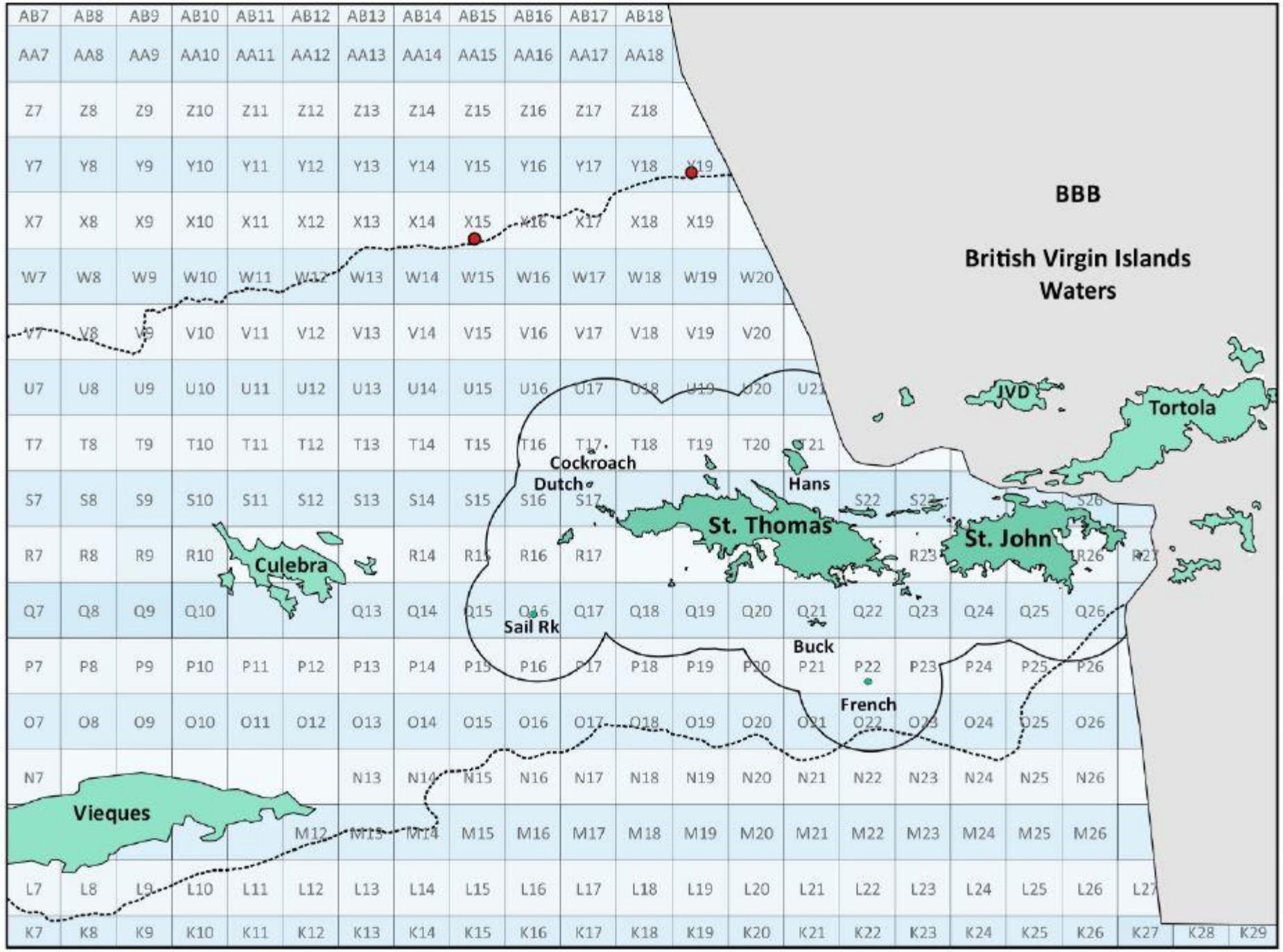
Megaptera_novaeangliae_Humpback_Whale_

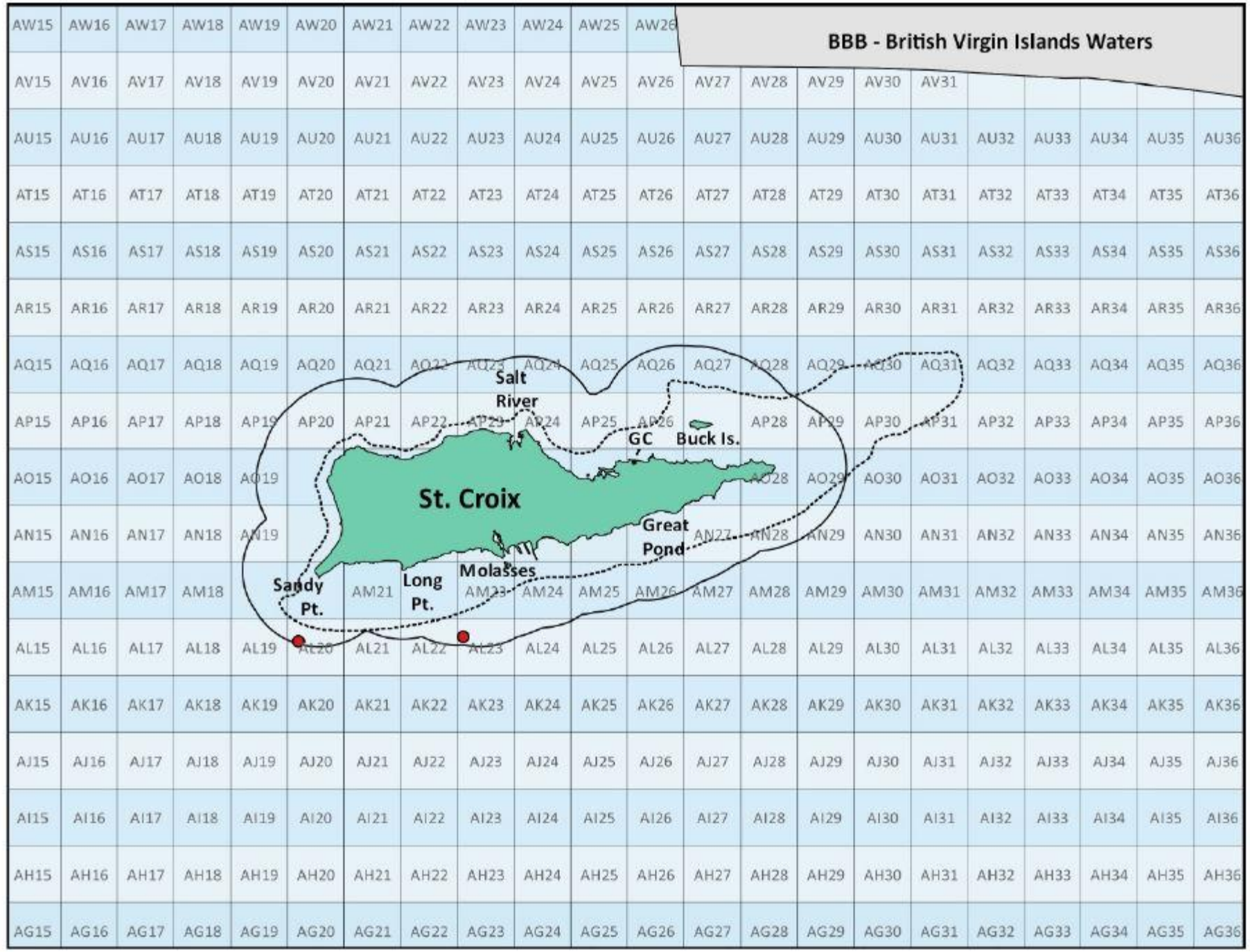


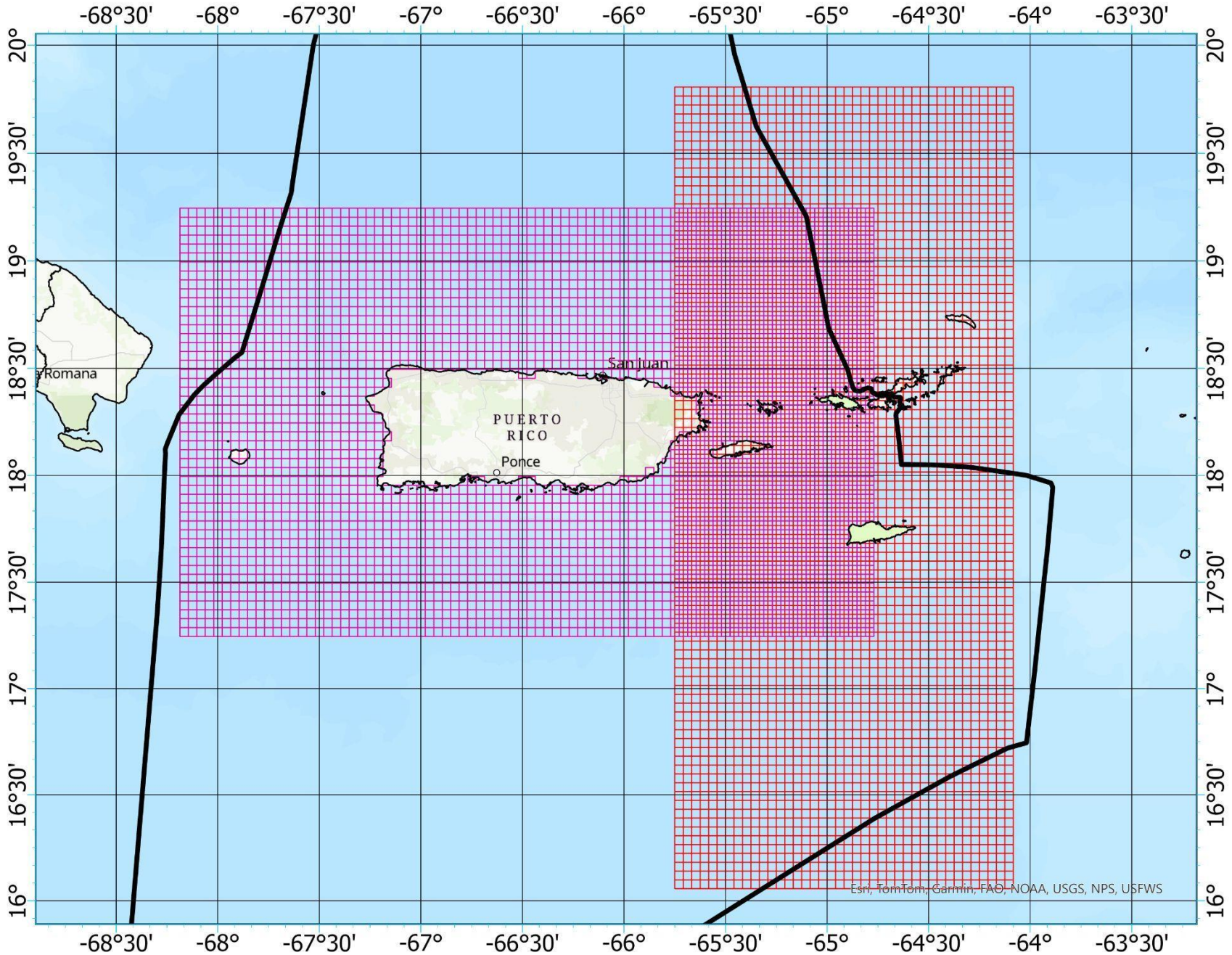
Variable	Percent contribution	Permutation importance
bath02	42.5	27.1
bath1000_dist02	17	1.9
ohc20_03_min	9.3	0.8
slope02	4.4	1.1
pocma_max	4.1	11.9
ohc20_07_min	3.9	3.2
ohc20_01_max	3.7	29.9
ohc20_12_avg	2.8	0.9
ohc20_09_max	2.7	7.4
SST_min	2.6	2.6
ohc20_05_min	2	9.9
chla_min	1.8	1.5
pocma_min	1.3	0.4
ohc20_04_min	0.9	0.5
chla_avg	0.6	1
SST_max	0.5	0.1

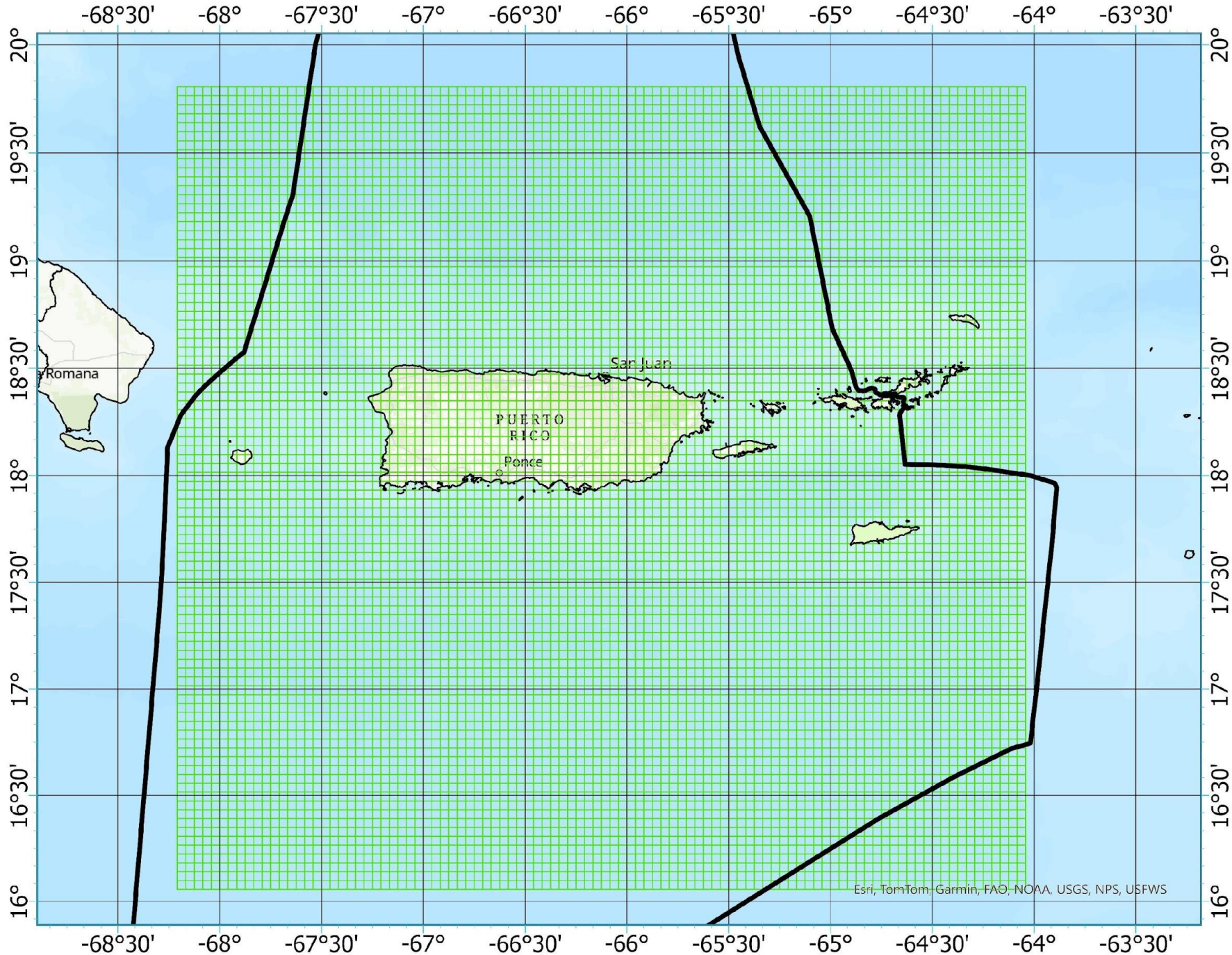
Puerto Rico Biological Grid Map




BBB
British Virgin Islands Waters
JVD
Tortola
Cockroach
Dutch
Hans
St. Thomas
St. John
Culebra
Sail Rk
Buck
French
Vieques


BBB - British Virgin Islands Waters
Salt River
GC
Buck Is.
St. Croix
Great Pond
Molasses
Long Pt.
Sandy Pt.


-68°30'
-68°
-67°30'
-67°
-66°30'
-66°
-65°30'
-65°
-64°30'
-64°
-63°30'
20°
19°30'
19°
18°30'
18°
17°30'
17°
16°30'
16°
Romana
San Juan
PUERTO
RICO
Ponce
Esri, TomTom, Garmin, FAO, NOAA, USGS, NPS, USFWS


-68°30'
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Romana
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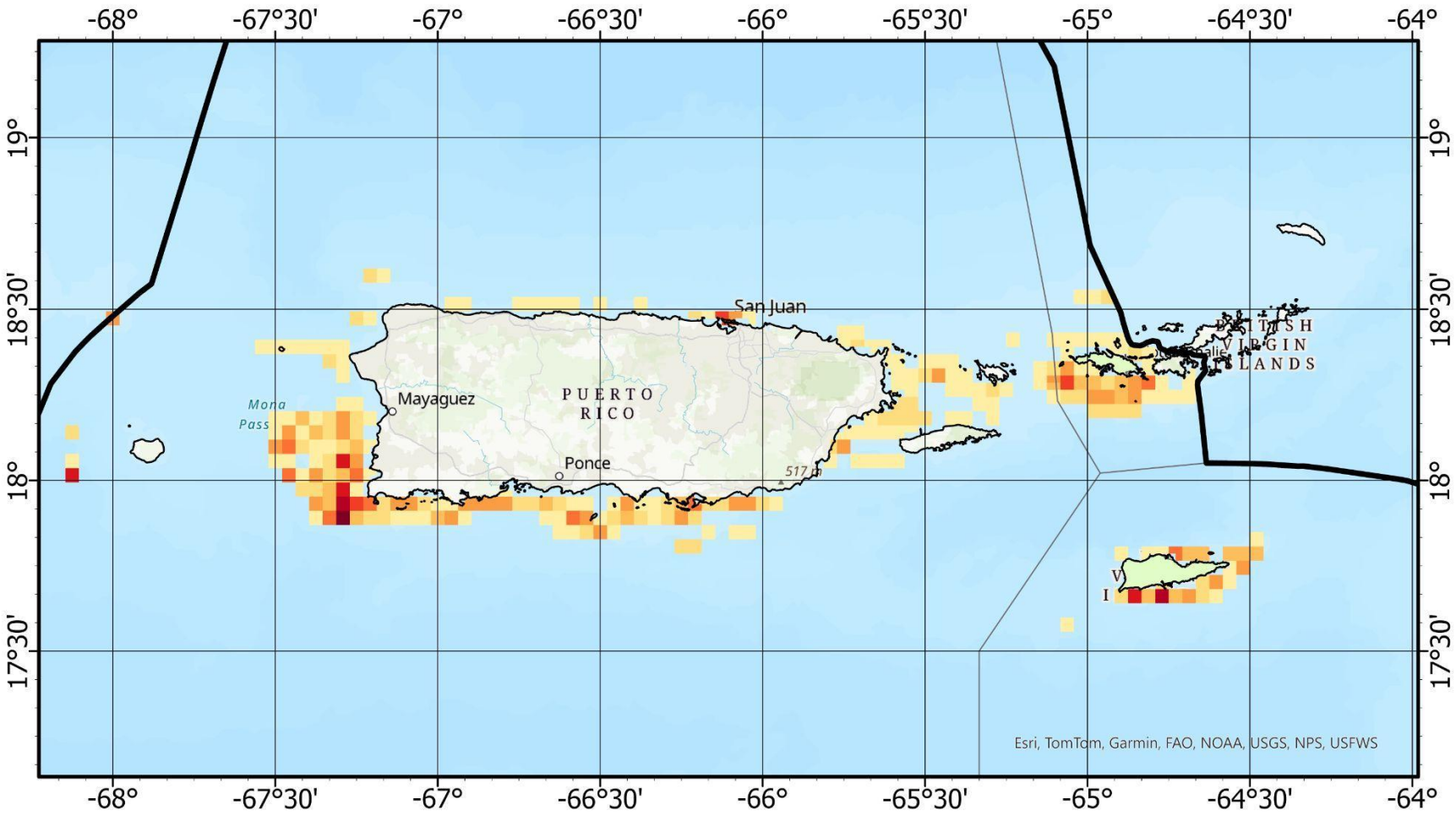


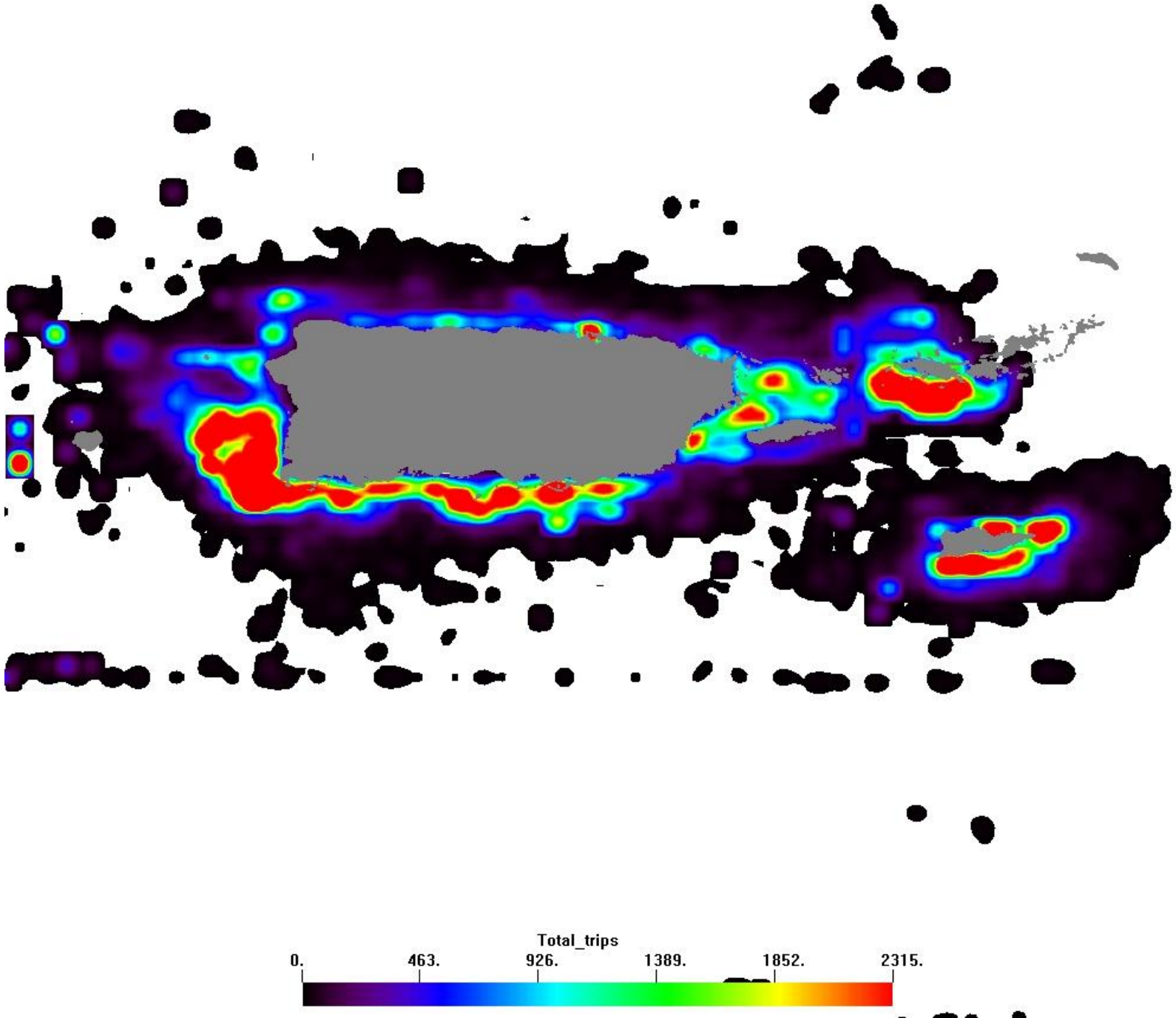
Legend

- PRVI_EEZ
- World Political Boundaries
- St_Thomas&St_Croi

Total Trips 2012-2022/1_25sq

- 0.00 - 1000
- 1000.01 - 2000
- 2000.01 - 3000
- 3000.01 - 4000
- 4000.01 - 5000
- 5000.01 - 6000
- 6000.01 - 7000
- 7000.01 - 8000
- 8000.01 - 10000
- 10000.01 - 11788

- US Caribbean_GCS_WG


Total_trips
0.
463.
926.
1389.
1852.
2315.