

Supplementary file 2. Variables tested as predictors for statistical modelling and its characteristics.

Model	Variables	Source	Reference	Product name	Name used in the analysis	Spatial resolution	Temporal resolution	Unit	Model technique
Detectability	Sea-state	Sea-surveys	-	-	sea	-	-	Douglas scale	GAM
	Wind-state	Sea-surveys	-	-	wind	-	-	Beaufort scale	GAM
	Visibility	Sea-surveys	-	-	vis	-	-	1-10 scale ^a	GAM
Spatiotemporal	Latitude	Sea-surveys (GPS)	-	-	lat	-	~10 seconds	Decimal degrees	GAM; MaxEnt
	Day of the year	Date of survey	-	-	day	-	Daily	Day	GAM
Environmental	Depth	GEBCO	GEBCO, 2017	bathy_30arc_second	depth	30 sec	-	Meters (m)	GAM; MaxEnt
	Slope	GEBCO	GEBCO, 2017	-	slope	30 sec	-	Degrees (°)	GAM; MaxEnt
	Distance to coast	-	-	-	dist_coast	-	-	Kilometres (km)	GAM; MaxEnt
	Distance to seamounts	GEBCO	GEBCO, 2017	-	dist_sm	-	-	Kilometres (km)	GAM; MaxEnt
	Sea-surface temperature	MODIS Aqua	NASA, 2017	sst4_4_sst4	sst(4km/9km; 8d/m)	4 km / 9 km	8 day / monthly	Celsius (°C)	GAM; MaxEnt
	Chlorophyll-a	MODIS Aqua	NASA, 2017	CHL_chlor_a	chl(4km/9km; 8d/m)	4 km / 9 km	8 day / monthly	Density (mg m ⁻³)	GAM; MaxEnt
	Mean sea level anomalies	AVISO	AVISO, 2017	MSLA_h_DT_all_sat_merged_0.25	msla(8d/m)	0.25 degree	8 day / monthly	Centimetres (cm)	GAM

^a Visibility scale: 5 - 1 to 2 km; 6 - 2 to 4 km; 7 - 4 to 10 km; 8 - 10 to 20 km; 9 - 20 to 50 km; 10 - > 50 km. Below 5 (1 km of visibility), the survey stopped (off effort).