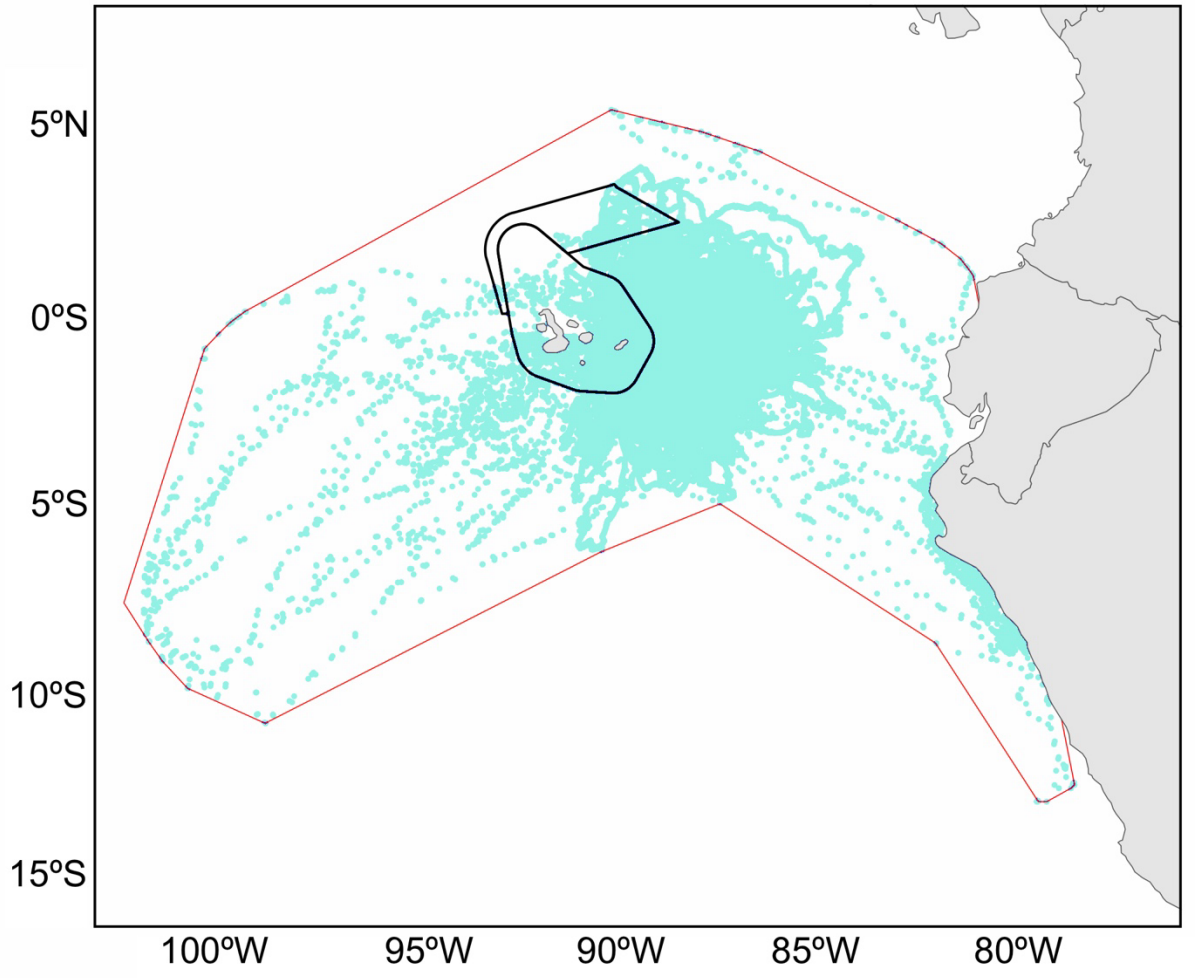
Online Supplementary Material



S1 Figure. Extent of movements of seven Galápagos seabird species during breeding. We aggregated 1,208,559 GPS locations from seven pelagic seabirds that nest in the Galápagos Islands. Black lines are the limits of the of the MPAs. The red line represents a minimum convex hull encompassing all locations. Land mass to the east is continental South America, with the boundaries of Colombia, Ecuador, and Peru shown.

Common Name	Scientific Name	Tagging Site	n	Tracking Years	Deployment Duration (hrs)	Number of Locations	Stage of Breeding	Logger Type	Sampling Intervals (sec)
Nazca booby	*Sula granti*	Española	450	2011–2012, 2014-2017	24–72	848,858	I	GPS	300
red-footed booby	*Sula sula*	Genovesa	46	2009, 2014	24–48	94,330	I, B	GPS	120
blue-footed booby	*Sula nebouxii*	Santa Cruz	45	2011–2013	24–48	54,850	I	GPS	30
waved albatross	*Phoebastria irrorata*	Española	14	2004, 2008	144–288	7,830	B	GPS	5400
Galápagos petrel	*Pterodroma phaeopygia*	Santa Cruz, Floreana	16	2009–2010	72–192	3,737	B	ARGOS PTT	1200–3600
great frigatebird	*Fregata minor*	Genovesa	13	2013–2014	192–240	30,022	B	GPS	300
swallow-tailed gull	*Creagrus furcatus*	Española, Plazas, Genovesa	130	2008–2011	24–48	68,932	I, B	GPS	300

S1 Table. Tracking metadata for seven Galápagos seabird species.

Dataset of seven species of pelagic seabirds nesting in the Galápagos Islands. Tagging Site is the respective breeding colony's island name where tracking devices were deployed. Stage of Breeding reports whether tagged birds were at the egg incubation stage (I) or chick brooding stage (B), or a mix.

Taxon	Data Source	Study Name/DOI	Associated Publications
Procellariiformes, Diomedeidae			
Phoebastria irrorata, Waved albatross	movebank.org (Public)	Galapagos Albatrosses https://doi.org/10.1186/2051-3933-1-3	Awkerman et al., 2013; Dodge et al., 2013
Procellariiformes, Procellariidae			
Pterodroma phaeopygia, Galápagos petrel	movebank.org (Public)	MPIAB Galapagos Petrel	Proaño et al. 2026
Suliformes, Sulidae			
Sula granti, Nazca booby	movebank.org	Nazca Booby, Sula granti Isla Española, Galapagos	Howard et al., 2021; McKee et al., 2023
Sula sula, red-footed booby	Shared by data owner		Mendez et al., 2017
Sula nebouxii, Blue-footed booby	movebank.org	Sula nebouxii Galapagos Islands	
Suliformes, Fregatidae			
Fregata minor, great frigatebird	movebank.org	Great Frigatebird (Fregata minor) Galapagos Islands	Rattenborg et al., 2016
Charadriiformes, Laridae			
Creagrus furcatus, swallow-tailed gull	movebank.org (Public)	Galapagos Swallow-tailed Gullhttp://doi.org/10.5038/2074-1235.53.1.1626	Cruz et al., 2025

S2 Table. Data sources for tracking studies from all seven seabird species in this study.

Taxon	25% UD km²	50% UD km²	90% UD km²	Proportion of UD within GMR			Proportion of UD within HMR			Proportion of UD outside GMR			Proportion of UD outside HMR		
				25% UD	50% UD	90% UD	25% UD	50% UD	90% UD	25% UD	50% UD	90% UD	25% UD	50% UD	90% UD
Procellariiformes, Diomedeidae															
Phoebastria irrorata waved albatross	64578	179839	719375	0%	0%	6%	0%	0%	0%	100%	100%	95%	100%	100%	100%
Procellariiformes, Procellariidae															
Pterodroma phaeopygia Galápagos petrel	85820	274938	1615700	61%	42%	9%	0%	1%	3%	39%	58%	91%	100%	99%	97%
Suliformes, Sulidae															
Sula granti Nazca booby	216792	43434	216792	46%	30%	11%	0%	0%	%	54%	70%	89%	100%	100%	100%
Sula sula red-footed booby	9536	24568	82423	53%	38%	21%	0%	0%	2 %	47%	62%	79%	100%	100%	98%
Sula dactylatra blue-footed booby	77	223	792	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Suliformes, Fregatidae															
Fregata minor great frigatebird	32129	81465	81465	6%	9%	8%	2%	5%	11 %	94%	91%	92%	98%	95%	89%
Charadriiformes, Laridae															
Creagrus furcatus swallow-tailed gull	1069	2794	8992	100%	100%	95%	0%	0%	0%	0%	0%	5%	100%	100%	100%

S3 Table. Utilization distribution area and MPA overlap for Galápagos seabirds at three spatial scales.
Area covered by each species utilization distribution (UD) and proportion of each species' UD falling within and outside the Galápagos Marine Reserve (GMR) and Hermandad Marine Reserve (HMR). Values are shown for 25%, core (50%), and home range (90%) UDs.