

Table S1. Number of haplotypes of stranded loggerhead sea turtles found in the different regions of the eastern Mediterranean Sea. DLYDAL: Dalyan-Dalaman, TKW: Western Türkiye, EMED: Eastern Mediterranean.

Management unit		CC-A2.1	CC-A3.1	CC-A3.4	CC-A2.8	CC-A50-1	CC-A31.1	CC-A53.1	*CC-A66.2	*CC-A77.1
DLYDAL	Dalyan	148	85	4	1			1		
	Dalaman	10	31							
EMED	Samandağ	1								
	Mersin	27	17							
	Antalya	2								
	Cyprus	114	8				1		1	
TKW	Çıralı		1							
	Kabak	1								
	Fethiye	32	10							
	İnlice	1	2							
	Sarıgerme		2							
	Ekincik	1	1							
	Marmaris	4	1							1
	Datça	3								
	Bodrum	9	1			1				
	Didim	1								
	Aydın	11	1							
	Çeşme	1								
	İzmir	3	2							
	Çanakkale	1								
TOTAL		370	162	4	1	1	1	1	1	1

Table S2. Demonstration of genetic differences between populations. **Hs:** Heterozygosity, **Ks:** Synonymous Substitution Rate, **Kxy:** Non-synonymous Substitution Rate, **Gst:** Genetic Differentiation, **DeltaSt:** Total Genetic Differentiation, **GammaSt:** Net Genetic Differentiation, **Nst:** Number of Subpopulations, **Fst:** Fixation Index, **Dxy:** Average Pairwise Nucleotide Difference, **Da:** Net Nucleotide Substitution Rate.

Population 1	Population 2	Hs	Ks	Kxy	Gst	DeltaSt	GammaSt	Nst	Fst	Dxy	Da
DLYDAL	EMED	0,42188	0,43688	0,48764	0,07921	0,00005	0,08343	0,1689	0,16889	0,00061	0,0001
DLYDAL	TKW	0,48421	0,5034	0,50879	0,02582	0,00002	0,03044	0,07726	0,07725	0,00064	0,00005
EMED	TKW	0,31289	0,31911	0,34317	0,00797	0,00001	0,01058	0,01295	0,01295	0,00043	0,00001

Table S3. Presents Bayesian estimates of the contribution of stranded individuals from Western Türkiye, Dalyan-Dalaman, and the Eastern Mediterranean to Mediterranean stocks. The management units (MUs) referenced are TKW (Western Türkiye), DLYDAL (Dalyan-Dalaman), and EMED (Eastern Mediterranean, including Middle and Eastern Türkiye, Cyprus, Israel, and Lebanon), as defined by Shamblin et al. (2014). The "Stock" column indicates the locations where the stranded individuals were found. The acronyms used for these locations are as follows: CAL (Calabria), CRT (Crete), CYP (Cyprus), DLY (Dalyan), DAL (Dalaman), ISR (Israel), LEB (Lebanon), MIS (Misurata), SIR (Sirte), TKE (eastern Türkiye), TKM (middle Türkiye), TKW (western Türkiye), WGR (western Greece). The higher contributions were given as bold in the Table. The color of the stocks refers to the different units described by Shamblin et al. (2014).

TKW					DLYDAL					EMED				
Stock	Mean	SD	2.5%	97.5%	Stock	Mean	SD	2.5%	97.5%	Stock	Mean	SD	2.5%	97.5%
MIS	0.0257	0.1032	0.0000	0.3215	MIS	0.0113	0.0432	0.0000	0.1442	MIS	0.0171	0.0652	0.0000	0.2200
SIR	0.0017	0.0072	0.0000	0.0192	SIR	0.0005	0.0020	0.0000	0.0057	SIR	0.0009	0.0035	0.0000	0.0105
ISR	0.0007	0.0061	0.0000	0.0031	ISR	0.0002	0.0019	0.0000	0.0004	ISR	0.0006	0.0043	0.0000	0.0055
LEB	0.0353	0.1464	0.0000	0.651	LEB	0.0062	0.0398	0.0000	0.0669	LEB	0.0042	0.0248	0.0000	0.0630
CYP	0.2062	0.1739	0.0000	0.6284	CYP	0.0201	0.0536	0.0000	0.2084	CYP	0.1050	0.1787	0.0000	0.5867
TKE	0.0416	0.1287	0.0000	0.5101	TKE	0.0293	0.0631	0.0000	0.2302	TKE	0.0638	0.1521	0.0000	0.5833
TKM	0.0226	0.065	0.0000	0.2288	TKM	0.0744	0.0970	0.0000	0.3448	TKM	0.0120	0.0343	0.0000	0.1154
TKW	0.3311	0.3749	0.0000	0.9508	TKW	0.0622	0.1194	0.0000	0.4252	TKW	0.6855	0.3255	0.0000	0.9966
DAL	0.0487	0.1163	0.0000	0.3929	DAL	0.4548	0.2633	0.0000	0.8212	DAL	0.0013	0.0068	0.0000	0.0170
DLY	0.2515	0.3092	0.0000	0.8648	DLY	0.2118	0.3481	0.0000	0.9352	DLY	0.0744	0.1501	0.0000	0.5054
CRT	0.0033	0.0126	0.0000	0.0388	CRT	0.0115	0.0221	0.0000	0.0742	CRT	0.0082	0.0358	0.0000	0.0767
WGR	0.0314	0.0511	0.0000	0.1858	WGR	0.1176	0.0922	0.0000	0.3441	WGR	0.0266	0.0471	0.0000	0.1811
CAL	0.0000	0.0009	0.0000	0.0000	CAL	0.0000	0.0005	0.0000	0.0000	CAL	0.0006	0.0045	0.0000	0.0044