



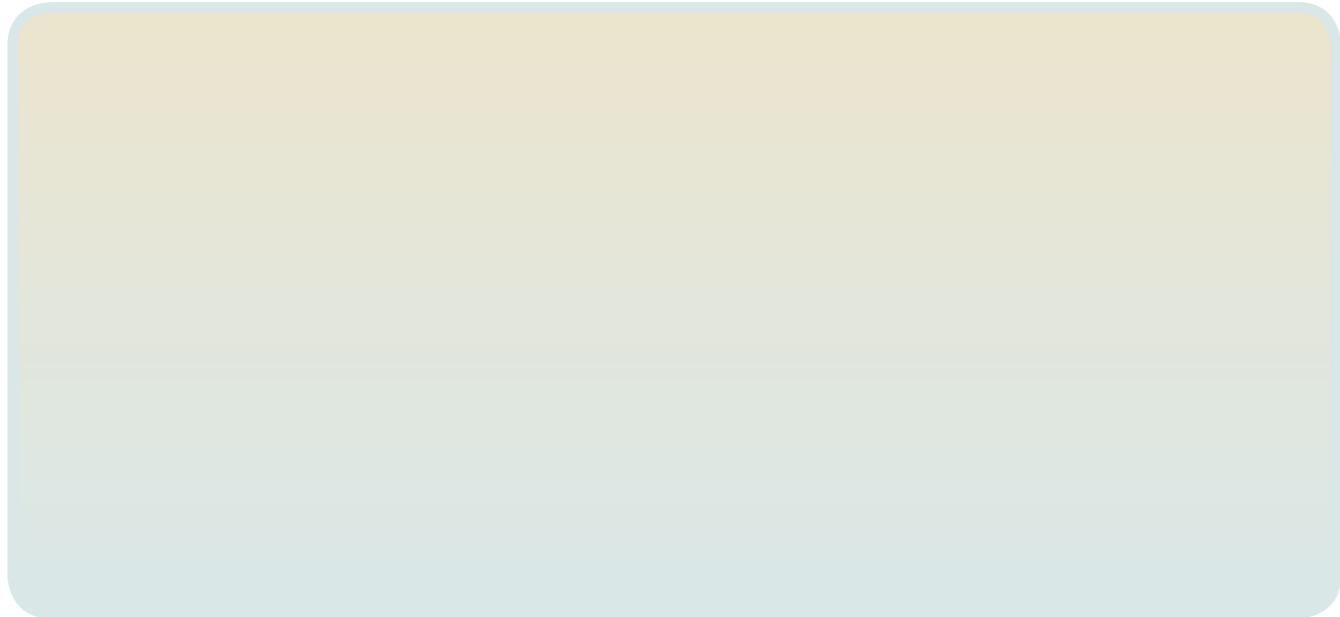
Conservation of
**MARIN
TURTLE**
in the Mediterranean



Helmut
Esteban

18DEKAMER

L`] [mj] fI[gfk] jnYløf kIYlnk'g^E]\d]jjYf] Yf'e Yjfx] lñjldk'k'ZYk] \gf l`] e gkl'mh\YI] \ k[åfIø[
cfgoð_] Yf\ [gfk] jnYløf] gjlk2l' åk'kIYlnk[Yffgl'Z] [gfkå]j



Greece	Southern Kyparissia Bay	9.5	1403
Greece	Laganas Bay, Zakynthos	5.5	938
Turkey	Anamur	12	791
Cyprus	Chrysochou Bay	12	658
Turkey	Belek	16	628
Turkey	Dalyan	4.7	307
Greece	Rethymno, Crete	10.8	275
Cyprus	West Coast	5	249
Greece	Lakonikos Bay		

5.5 628



MAIN THREATS affecting marine turtles in the Mediterranean

L`] E] \d] jjYf] Yf `& Y`Zgnf\ahdk] Y\$
Zm` gdk'e Yfq\Yf_] jk`'gj'e Yjf`]
Injlqk&A` Yk`Yj] d\an] dk'ke Ydknj`Y[]`
Yj] YZ\$) (\$((ce `! Zm` e gj] T`Yf))`
e ad\gf h] ghq` dn] Yqf_`dk[gYkl&A`&
Ydkg`gf] g^l`] o gjd@`d\j_] k1`_qZYd
lgmj\k`] k1`f Yl\gf k\$YlljY[l\`_Y@`gk1`Y`
T` j\`g^l`] o gjd@`f1] jf Yl\gf Ydlgnj\k`
] n] jq`q] Yj&9d` gm_` [`YjY[!]j\`]\`Zq`
its beautiful natural and cultural heritage
Yf` j\` Zg\an] jk\q\\$`] E] \d] jjYf] Yf`
`& Ydkg`Yl\gmZd` Yf\`gn] j% phq\`a] \`k] Y\$
o` j] e Yjf` Injlqk`Yj] T` j] Yl] f] \`Zq`Y`
jYf_] g^Y[lgjk&f1] f k] \`n] qhe] f1`\$
gn] jnk] g^l`] e Yjf` Yf\`[gYkl`Ydrgf] k\$
and agriculture are causing degradation

Although physically and physiologically perfectly adapted to live at sea, sea turtles depend on the terrestrial environment during one of the most vital phases of their life cycle: nesting and incubation of their eggs on coastal beaches.

and terrestrial
`YZdYIk\$áf [dnláf_]
disturbance and
destruction of
f] klf_Z] Y[`] k&
; de YI] [`] Yf_] %
driven alterations

with the increase of air and seawater levels. Impacts of storm events are also threats impacting coastal areas. These areas are also vulnerable to factors such as sea level rise, increased frequency and intensity of storms, and changes in precipitation patterns.

F gf] l`] d kk\$_an f l`] l` j] Ylk`lg l`] k] .
kh] [d k\$ka_f d [Yf l`] gjlk`Zq`fYl njYdk lk\$
the general public and administrations
are needed to conserve them for
population of the loggerhead turtle is
[mjj] f l d [d'kk d] \ `Yk`D) Yk l` ; gf [] jf O
mf \] j l`] J] \ Dk l` Zl Dl` [jd] j d`&L` dk`k l Ylnk`
has been achieved and maintained thanks
] f l j] d`l g`d f _%] je [gf k] jnYl g f] gjlk &
Mediterranean green turtle populations
` Yn] `q] l l g`Z] `Ykk] kk] \ &



CONSERVATION MEASURES

The future of marine turtles will depend on the implementation of good management plans for the conservation of these species. Knowledge and creating a more integrated approach to marine and coastal activities are crucial for the survival of sea turtles.

INCREASE EFFORTS IN PRIORITY RESEARCH AREAS AND GAPS

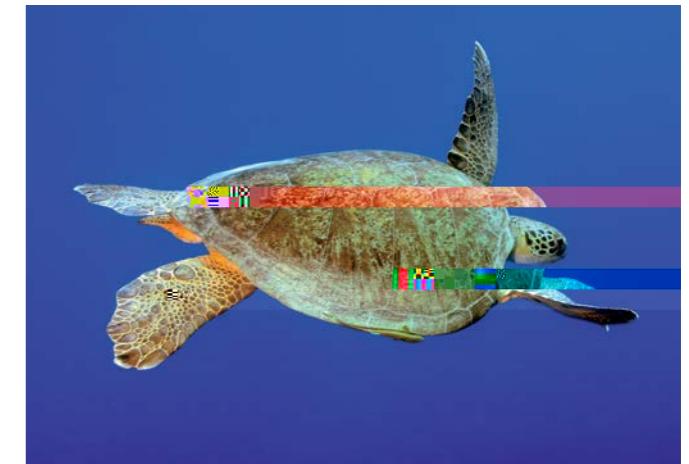
Priority research areas include the distribution of major turtle populations, particularly in geographical areas where data is limited. Research gaps include the lack of datasets for some species, which are not homogeneous and not well understood. The breakdown of the most important actions needed includes:

for research and conservation of sea turtles. The implementation of good management plans for the conservation of these species is crucial. Knowledge and creating a more integrated approach to marine and coastal activities are crucial for the survival of sea turtles.

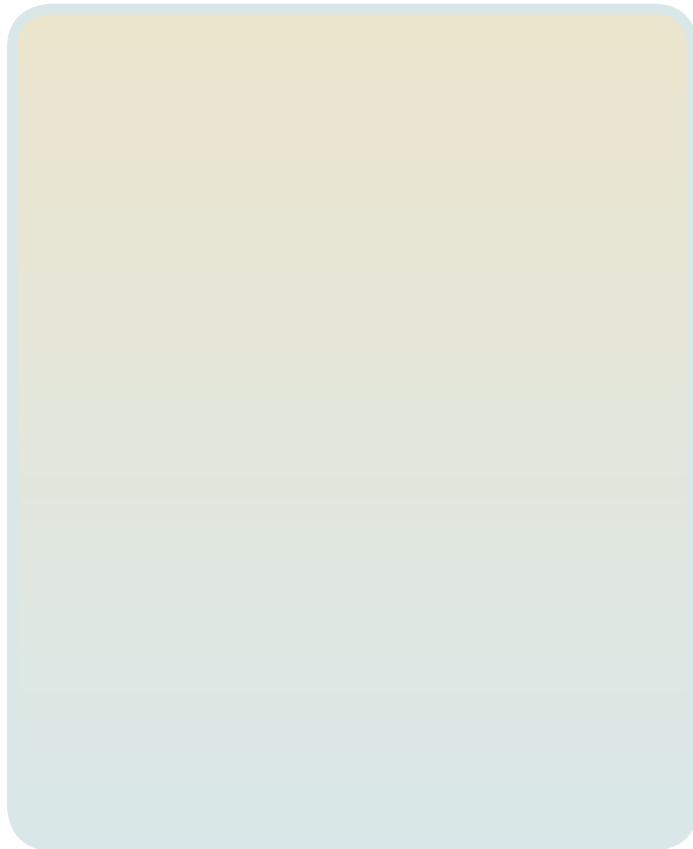
One good and important contribution to the protection of sea turtles is through the implementation of effective management plans. These plans should be based on the best available scientific information and should take into account the needs of both the turtles and the local communities. It is also important to update current information on the status of sea turtle populations and to develop new research priorities to address gaps in knowledge.

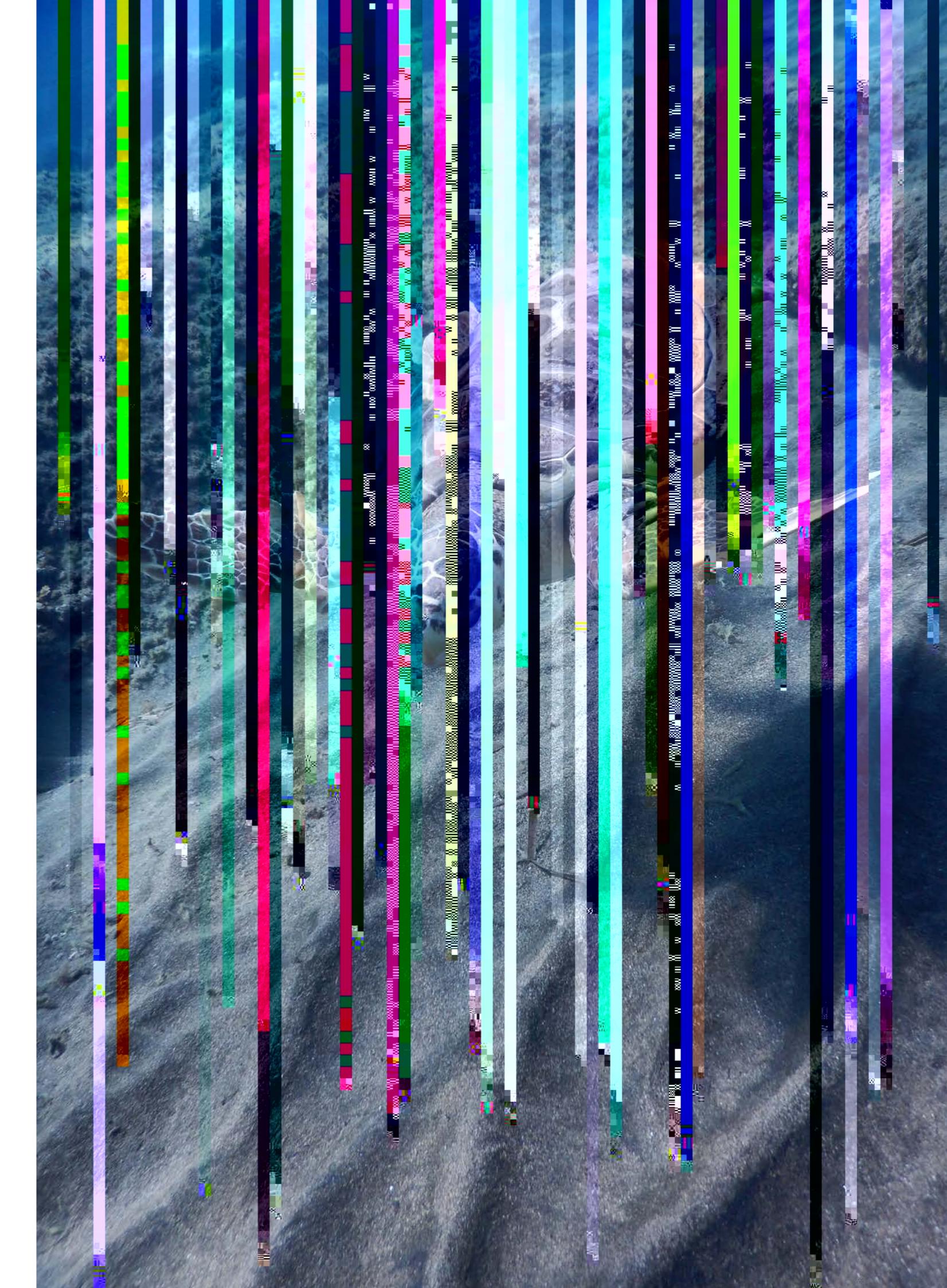
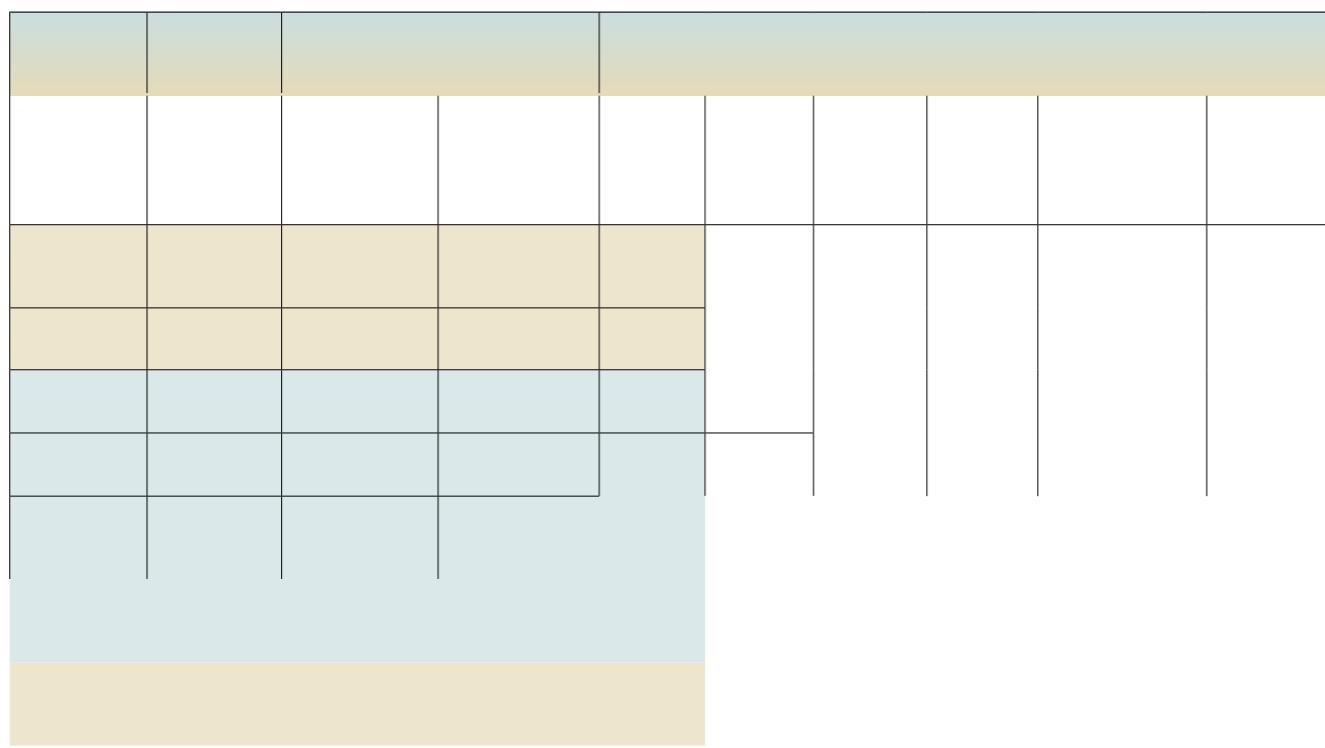
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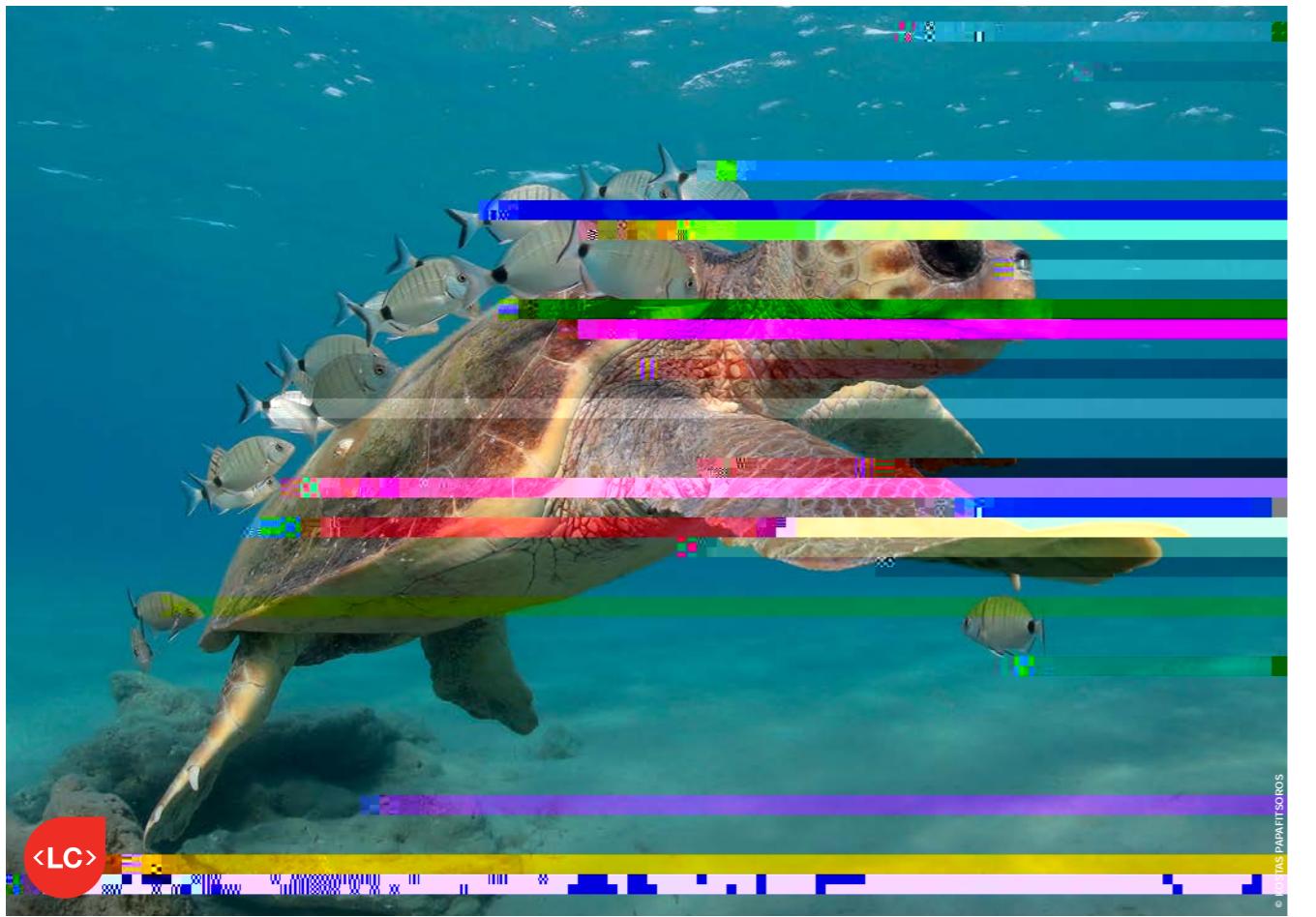
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IMPROVE THE AVAILABILITY AND
COLLECTION OF INFORMATION FOR
ALL MEDITERRANEAN COUNTRIES TO
ASSESS THE STATUS OF POPULATIONS







LOGGERHEAD, *Caretta caretta*

Mediterranean loggerheads are the smallest specimens of this species in the Western Mediterranean to the Levantine [gYkl'f''] = Ykl\$o à` Yf''] klaë Ylafg' g^ e gj' T' Yf' O((()) __ [dhl[`] k'dà Yff mYdhl&



Loggerhead turtle population abundance (including adults) is estimated to be 1,197,087 – 2,364,843 individuals. Available data shows a positive trend of nests counts for the species.

Loggerheads can be found throughout the Mediterranean but nesting is concentrated at [] =Ykl] jf 'E] \d] jjYf] Yf \$o \t'] .
` a`] kl fme Z] jk g^f] klk \t?j]]] \$
LmjC q`Yf\ ; qhjnk&DzqY\ hqgZYZ\ Ydkg
important but there is no recent information
YnYd\Yzd\&kjY] dYf\ Lnf \k\Yj] g^k] [gf\Yjq
æ hqjYf [] Yk\Zj]] \f_ _jgmf\k\$Yk\Yj] .
other countries for which there are few or no
j] [] f1\YIY\$km[` Yk= _qhl\Yf\ D] ZYf gf &
Dg__] j`] Y\k] p\ a\ [gf k\k] f\ \qgo
f] klf\ _Y[lndq\q\ n] \k\Yl\ k\kf\ l'] 'O] kl] jf
ZYk\ \f\ >Yf [] \$AY\qSE Yd\Yf\ KhYf\ Zm
numbers in the Eastern Mediterranean are
af [j] Yk\kf\ _=&= [\t\h\l[`] k\Yj] \g[m\] f1] \.
Yff m\Y\q\Yl\ * - e Yl\qj\Yf\ / * e \f\gj\f] klf\ _
k\kf\ k\gf\ 1*. & ce\ g^ [gYkl[\$[gf k\k] jf\ _
e Yl\qj\f] klf\ _k\kf\ k\gf\ gk] o\ \t\ 6*(\f] klk'\
qj\Yf\ 6) (\f] klk'ce\ qj\Yf\ e \f\gj\f] klf\ _
k\kf\ k\Yj] 1\ gk] o\ \t\ 4*(\f] klk'qj\gj\ 4) (\.
f] klk'ce\ qj\&O\ \t\ Yf\] k\ae\ Yl] \t\ \t\h\l[``

J] i m] f[q'g'^*`f] k l k 'h] j`] e Yd 'h] j`k] Ykgf \$
l` d`[gjj] khgf \k`lg Yhhjgpæ YI] d]) \$**`
f] k l f_`] e Yd k 'h] j`q] Yj&9n] jY_] [`d m`
k a] `d)) (] __k Yf \ e] Yf `` YI[`d _`
km[] kk d`Yhhjgp&-. %& L &

MAIN THREATS TO LOGGERHEADS

Juvenile loggerheads forage throughout the Western Mediterranean in open deep waters and the shallow continental shelf. In the Eastern Mediterranean, adults tend to frequent the shallow continental platform of the Northern Adriatic and the Tunisian shelf, while juveniles remain more in open waters. The main threats to loggerheads include coastal development and associated activities as well as predation in all countries where nesting occurs. Killings of turtles are reported for all countries, highlighting the probably significant impact of small

COUNTRY	NESTING SITE	AVERAGE NESTS YR-1 BEFORE 1999	AVERAGE NESTS YR-1 AFTER 2000	CHANGE (%)
?j]][]	RYcqf`l`gk`zDY_YfYk: Yq` Kgm`]jf`CqhYj`kk`Y: Yq` J]l`qe fg\$; j]l` DYcgf`agk: Yq` : Yq`g` ``Yfa`\$; j]l` E]kkYjYk: Yq`\$; j]l`) +() & -O(& +O/&) 1) &)), & -+&) (0, & 10/ */-) 1(/, & . , &	%, & #/(& %1& %, & %, & %, *-&
Lnjc]q	<Yd`Yf` <Yd`e Yf` >]l` a]` HYIYjY` ; q`Yd` :]dc` ? -ekm<]dY`) . - / +) *. - * & +.) * 1& . , &	*. 1 1* & 01&)) /& . & . +0) * +&	#. +& #*. & %/& #), *, & #1- & #+1) & #1) &
qhjmk	9c\]fa:]Y[]k`z gjh` gm: Yq` 9d`Y\`a9d`cYd` =Ykl`[gYkl` F gjl`[gYkl` LYl`kmz9cYf` gm: ; `qkg[` gm: Yq` O]kl`[gYkl`	-1& - - & , (& +/& +(&)) 1& -/ &	0, & -, & , 0& +/& +. & *+1& 10&	#, *-& % /& #) 0& #)* & #) 0& #11& #//* &
Lnf`kk`	Cmj`jl`Akd`f\`) (&) +&	# +* &
TOTAL		3693.6	4667.3	+26.4



GREEN TURTLE, *Chelonia mydas*

? j]] f 'l^mj^d [f] k^lf_ [k^a] k'Yj] [gf b^f] \ lg' l^] ^=Ykl] jf E] \a] jjYf] Yf &

Mediterranean green turtle populations Yj] d^rj_ [d^t] f] l^d Y^dg^dY] \ Y^d gm_ l^] j] e Yq'Z] 'kge] [gff][l^aq'o d^ gl^] j] populations through the movement of e Yd k&Bm] f a] k'Yj] 'cf go f 'lg'mk] [gYkIYd waters during development (see map on l^] [gn] j 'hY_] !&

E gk^l f] k^lk'g[[n^jaf^] qhjm\$Kojar'Yf\ Lmj^c] q\$o a^ ke Yd^rj f m^e Z] jk'f^ =_qhl\$ Aj'Y] dYf\ 'D] ZYf gf 'Yf\ 'khgjY\ q^f] k^lf_ gf^; j] l^] &` j] Yj] 'f g^j] [] f l^ i nYf\ d^] \ YIY'jge =_qhl'gj'D] ZYf gf &9 k^a_d^ k^a] YI'9cqYIYf 'f' Lmj^c] q'knh^hhgjlk' Yhhjgpæ YI] d^t* (L^ g^l^] lglYdf m^e Z] j] of nests in the Mediterranean and is the d^rj_ k^l'cf go f'f] k^lf_ Z] Y[` af^] j] _af^ & =p[] h^lg^fY^df] k^lf_] n] f l^kYj] 'Ydkg^ j] [gj\] \ \$o a^ l^] pYe h^d g^J] l^] qe f g^ Yf\ 'E] kkYjY: Yq'f^; j] l^] Z^j]] !&f^ additional developmental habitat for green l^mj^d k^ Yk'Z]] f 'a] f l^d^] \ af^ DYcfgf a^{gk}^ : Yq'Z^j]] !& njj] f l^'cf go d\ _] k^la] Yl^a Yl^a Yl^a Yl^a Yl^a Yl^a Yl^a Yl^a Yl^a f] k^lf_ [k^a] k^a; qhjm\$Kojar'Yf\ Lmj^c] q& Mediterranean green turtle populations are

OTHER SPECIES present in the Mediterranean

L`] 'E] \d]jjYf] Yf K] Y'k'Ydkg'j] i n] fI] \'
Zq\mjld k'gja_£Yl£_`ge '9Idfl£_`
Zj]]\f_ Yj] Yk\$£[dñ£_ d£j_] fne Z]jk`
of loggerhead turtles from north American
hghm\lafk\$ge] _j]] f\mjld k'Yf`
d Yl`] jZY[ck&? j]] f\mjld k'£ l`] o Yl]jk`
g^`] O]kl]jf E] \d]jjYf] Yf\$£[dñ£_`
l`] KhYf£` o Yl]jk\$Yj] jYj] \$Yf`
e £g[` gf\j£d< F 9'YfYd£k££\£ Yl] k'l` Yl`
l`] q'g[[Yk£fYd£g[[n]`ge £\an£nYdk`
z Yh£lqh] k!`g^`] f] k£_ Z] Y[`] k'g^`
9}£`Yf '9Idfl£_ hghm\lafk&9'de d] \`
number of leatherbacks (*Dermochelys*
coriacea)

A call to COLLABORATE

in the conservation of marine turtles and the Mediterranean Sea

E Yjſ] ḥmjlđ k'k' gmd' Z] j] _Yj\] \ Zq' Mediterranean people and visitors as a real Zag\an] jkāq'lj] Yknj] &L`] E] \d] jjYf] Yf' & Yf'] p[dđf_ hđr[] 'gj' kge] kh] [d'k'g'^ e Yjſ] ḥmjlđ k\$o a' h̄gkh] [lk'g'^jYf_] phYf kđgf k'Yf\ f] o [gđf a'Ylđf \$Yf\ ' o'] j] 'đf_ %] je [gfk] jnYlđf h̄għ [lk' Yn' achieved stable or even positive population lj] f\k' a' l'] [gmfljā k&@go] n] j\$!`] j] 'đ klđY'đf_ o Yq'lq' g'Z] 'gj] 'e Yjſ] ḥmjlđ k' in the Mediterranean can be considered lg'Z] 'kY' &A\]] \\$e Yf q'e Ylđj T' j] Ylk\$ hYjłđ mđjđ [gYklYdg [mħnYlđf \$hgħmđf' Yf\ \] _j Y\ Ylđf' g'^e Yjſ] ``YZdYlk\$[dđ Yl'] Yf_] %jan] f' Yd] jYlđf k'Yf\ `` a_ 'pk' a_ hj] kkmj] Yk' o] dđYk' Zq[Yl[` \$f]] \ lg'Z] addressed to conserve Mediterranean k] Y'lmjlđ k&L' Yl'] f\ \$Y'kgđf] lo gjc' g'^kIYc] 'đg] jk\$af [dħħaf_ l'] hñZdđ \$ h̄g'] kkđf Yđk' g'^l'] k] Y'Yf\ 'pk'] jk\$ [gfk] jnYlđf dđlk\$] k] Yj[`] jk'Yf\ 'đ[YdYf\ ' f' Ylđf Yd\] [dđg'f% Yc] jk'e mkl [gfl'mn] lg' focus its energies on the actions needed to assure that Mediterranean marine ḥmjlđ k'knjnaj] Yf\ l' jan] 'đlg'l'] 'mħmj] & >gjlmf Yl] dđsl'] E] \d] jjYf] Yf' [gfk] jnYlđf [ge e mħaqq\\$] khā] 'ak'\akh Yjāq'g^ [mħmj] k'

Yf\ 'đf_ mY_] k\$' Yk' gje] \ Y[gfk'gđ Yl] \ Yf\ ' [gđZgj Yl] f] lo gjc' g'^f\ anā mYd\$ institutions and governments dedicated to l' d'ko gjl' q'_gYđ Khgj Ylđf_ 'đf_] Y\ f] klđf_ Y[lānq'gf' Western Mediterranean beaches is not a remnant of a past population but the result g'^f_ %&Yf[] 'đkh] jkYd] n] flk' jge 'Zgħi' E] \d] jjYf] Yf' Yf\ '9idf\ f\ 'ħġiem f\ A' o] Yj] 'o af] kkđf_ f] o [gđf a'Ylđf] n] flk' g'^f] klđf_ Z] Y[`] k\$!` 'đ'k' Yf'] pljYgj\ f' Yjq' Yf\ '] p[dđf_ 'Y[l'so' d' 'ae hđf k' kge] e] Yknj] k'k' gmd' Z] 'n] f\ d'ae hđe] fli] \