Reporting under the Habitat Regulations (as amended)[1]

2019-2024

Conservation status assessment for the species:

S1227 - Green turtle

(*Chelonia mydas*)

United Kingdom

[1] Habitat Regulations (as amended):

- The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A
- The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended), Regulation 6A
- Report under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), regulation 3ZA
- The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), regulation 3ZA

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This report was produced by JNCC in collaboration with the UK Country Nature Conservation Bodies (CNCBs) and country governments.

This document should be cited as:

JNCC, Department of Agriculture, Environment and Rural Affairs, Natural England, Natural Resources Wales & NatureScot. (2026). Conservation status assessment for the species: S1227 Green turtle (*Chelonia mydas*).

Important note - Please read

- The information in this document represents the United Kingdom Reporting under the Habitat Regulations (as amended)[1], for the period 2019-2024.
- It is based on supporting information provided by Joint Nature Conservation Committee and UK Country Nature Consevation Bodies (CNCBs), which is documented separately.
- The Habitats Regulations reporting 2019-2024 Approach Document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- Map showing the distribution of the species is included.
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the assessments. Further underpinning explanatory notes are available in the related country reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 National Site Network coverage for Annex II species).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the JNCC website.

Assessment Summary: Green turtle

Distribution Map

Figure 1: United Kingdom map for S1227 - Green turtle (*Chelonia mydas*). The map is based on available species records within the current reporting period.

Table 1: Table summarising the conservation status for S1227 - Green turtle (*Chelonia mydas*). Overall conservation status for species is based on assessments of range, population, habitat for the species, and future prospects.

Overall Conservation Status (see section 11)

Unknown (XX)

Breakdown of Overall Conservation Status

Range (see section 5)	**Unknown (XX)**
Population (see section 6)	**Unknown (XX)**
Habitat for the species (see section 7)	**Unknown (XX)**
Future prospects (see section 10)	**Unknown (XX)**

List of Sections

National Level

1. General information

1.1 Country	United Kingdom
1.2 Species code	S1227
1.3 Species scientific name	*Chelonia mydas*
1.4 Alternative species scientific name	
1.5 Common name	Green turtle
Annex(es)	IV

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2019-2024
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Based mainly on expert opinion with very limited data

2.5 Additional information

No additional information

3. Information related to Annex V Species

3.1 Is the species taken in the wild / exploited?

3.2 What measures have been taken?

a) Regulations regarding access to property
b) Temporary or local prohibition on the taking of specimens in the wild and exploitation
c) Regulation of the periods and/or methods of taking specimens
d) Application of hunting and fishing rules which take account of the conservation of such populations

e) Establishment of a system of licences for taking specimens or of quotas

f) Regulation of the purchase, sale, offering for sale, keeping for sale, or transport for sale of specimens

g) Breeding in captivity of animal species as well as artificial propagation of plant species

Other measures

Other measures description

3.3: Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

Table 2: Quantity taken from the wild during the reporting period (see 3.3a for units). For species with defined hunting seasons, Season 1 refers to 2018/2019 (autumn 2018 to spring 2019), and Season 6 to 2023/2024. For species without hunting seasons, data are reported by calendar year: Year 1 is 2019, and Year 6 is 2024.

	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
b) Minimum	-	-	-	-	-	-
c) Maximum	-	-	-	-	-	-
d) Unknown	-	-	-	-	-	-

3.4: Hunting bag or quantity taken in the wild; Method used

3.5: Additional information

No additional information

Biogeographical Level

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs MATL

4.2 Sources of information

See section 14 References

5. Range

5.1 Surface area (km²)

5.2 Short-term trend; Period

5.3 Short-term trend; Direction	Unknown
5.4 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.5 Short-term trend; Method used	Insufficient or no data available

5.6 Long-term trend; Period

5.7 Long-term trend; Direction	Unknown
5.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	

5.9 Long-term trend; Method used	Insufficient or no data available

5.10 Favourable Reference Range (FRR)

a) Area (km²)	
b) Pre-defined increment	
c) Unknown	Yes
d) Method used	
e) Quality of information	

5.11 Change and reason for change in surface area of range

a) Change	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	
f) Other reason	
g) Main reason	

5.12 Additional information

No additional information

6. Population

6.1 Year or period

6.2 Population size (in reporting unit)

a) Unit	number of individuals
b) Minimum	
c) Maximum	
d) Best single value	

6.3 Type of estimate	
6.4 Quality of extrapolation to reporting unit	
6.5 Additional population size (using population unit other than reporting unit)	
a) Unit	
b) Minimum	
c) Maximum	
d) Best single value	
e) Type of estimate	
6.6 Population size; Method used	Insufficient or no data available
6.7 Short-term trend; Period	
6.8 Short-term trend; Direction	Unknown
6.9 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
6.10 Short-term trend; Method used	Insufficient or no data available
6.11 Long-term trend; Period	
6.12 Long-term trend; Direction	Unknown
6.13 Long-term trend; Magnitude	
a) Minimum	

b) Maximum	
c) Confidence interval	
d) Rate of decrease	
6.14 Long-term trend; Method used	Insufficient or no data available

6.15 Favourable Reference Population (FRP)

ai) Population size	
aii) Unit	
b) Pre-defined increment	
c) Unknown	Yes
d) Method used	
e) Quality of information	

6.16 Change and reason for change in population size

a) Change	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	
f) Other reason	
g) Main reason	

6.17 Additional information

No additional information

6.18 Age structure, mortality and reproduction deviation	Unknown

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat (for long-term survival)

a) Is area of occupied habitat sufficient?	Unknown
b) Is quality of occupied habitat sufficient?	Unknown
c) If No or Unknown, is there a sufficiently large area of unoccupied habitat of suitable quality?	Unknown

7.2 Sufficiency of area and quality of occupied habitat; Method used

a) Sufficiency of area of occupied habitat; Method used	Insufficient or no data available
b) Sufficiency of quality of occupied habitat; Method used	Insufficient or no data available

7.3 Short-term trend; Period

7.4 Short-term trend; Direction	Unknown
7.5 Short-term trend; Method used	Insufficient or no data available

7.6 Long-term trend; Period

7.7 Long-term trend; Direction	Unknown
7.8 Long-term trend; Method used	Insufficient or no data available

7.9 Additional information

No additional information

8. Main pressures

8.1 Characterisation of pressures

Table 3: Pressures affecting the species, including timing and importance/impact ranking. Pressures are defined as factors acting currently and/or during the reporting period (2019–2024). Rankings are: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Pressure	Timing	Ranking
PX02: Threats and pressures from outside the Member State	Ongoing and likely to be in the future	Medium (M)

8.2 Sources of information

See section 14 References

8.3 Additional information

No additional information

9. Conservation measures

9.1: Status of measures

a) Are measures needed?	No
b) Indicate the status of measures	
9.2 Main purpose of the measures taken	
9.3 Location of the measures taken	
9.4 Response to measures	

9.5 List of main conservation measures

Table 4: Key conservation measures addressing current pressures and/or anticipated threats during the next two reporting periods (2025–2036). Measures are ranked by importance/impact: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Conservation measure	Ranking
No conservation measures	

9.6 Additional information

This species is not an Annex II species and therefore the designation of SACs is not required, as stipulated in the Habitats Regulations. However, as a European Protected Species, protection is provided throughout UK waters and it is an offence to kill, injure or disturb. The UK funds strandings surveillance system through the Cetaceans Strandings Investigation Programme and the Scottish Marine Animal Strandings Scheme, ongoing since 1990, which aims to: collate, analyse and report data for all cetacean, seal, turtle and shark strandings around the coast of the UK: determine the causes of death in stranded animals, including bycatch and physical trauma and; undertake surveillance on the incidence of disease in stranded animals in order to identify any substantial new threats to their conservation status. Furthermore, the UK Marine Wildlife Bycatch Mitigation Initiative (published August 2022) aims to improve our understanding of bycatch and entanglement of sensitive marine species through monitoring and scientific research, identify 'hotspot" or high-risk areas/gear types/fisheries in which to focus monitoring and mitigation, and develop and implement effective measures to minimise bycatch/entanglement.

10. Future prospects

10.1a Future trends of parameters

ai) Range	Unknown
bi) Population	Unknown
ci) Habitat for the species	Unknown

10.1b Future prospects of parameters

aii) Range	Unknown
bii) Population	Unknown
cii) Habitat for the species	Unknown

10.2 Additional information

These results are based on the current conservation status for each parameter combined with the future trend for each parameter. The future trend is an estimate of how the parameter is likely to progress into the future, using the current trend as a baseline and considering the balance between threats and measures to assess how these are likely to affect that trend over the next two reporting cycles (12 years). For green turtle, the future trend and consequently the future prospects for all parameters

are assessed as Unknown; this is due to there being insufficient data to establish current trends for these parameters.

11. Conclusions

11.1 Range	Unknown (XX)
11.2 Population	Unknown (XX)
11.3 Habitat for the species	Unknown (XX)
11.4 Future prospects	Unknown (XX)
11.5 Overall assessment of Conservation Status	Unknown (XX)
11.6 Overall trend in Conservation Status	Unknown

11.7 Change and reason for change in conservation status

a) Change	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	
f) Other reason	
g) Main reason	

11.7 Change and reason for change in conservation status trend

a) Change	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	

f) Other reason

g) Main reason

11.8 Additional information

Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is unknown; and (ii) the Favourable Reference Range is unknown.

Conclusion on Population reached because: (i) the FRP is unknown; and (ii) the short-term trend direction in Population size is unknown; and (iii) the current Population size is unknown.

Conclusion on Habitat for the species reached because: (i) the area of habitat is unknown and (ii) the habitat quality is unknown for the long-term survival of the species; and (iii) the short-term trend in area and sufficiency of habitat is unknown.

Conclusion on Future prospects reached because: (i) the Future prospects for Range are unknown; (ii) the Future prospects for Population are unknown; and (iii) the Future prospects for Habitat for the species are unknown.

Overall assessment of Conservation Status is Unknown because all of the conclusions are Unknown.

Overall trend in Conservation Status is based on the combination of the short-term trends for Range - unknown, Population - unknown, and Habitat for the species - unknown.

12. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network

a) Unit

b) Minimum

c) Maximum

d) Best single value

12.2 Type of estimate

12.3 Population size inside the network; Method used

12.4 Short-term trend of population size within the network; Direction

12.5 Short-term trend of population size within the network; Method used

12.6 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Direction

12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used

12.8 Additional information

No additional information

13. Complementary information

13.1 Justification of percentage thresholds for trends

No justification information

13.2 Trans-boundary assessment

No trans-boundary assessment information

13.2 Other relevant information

No other relevant information

14. References

Biogeographical and marine regions

4.2 Sources of information

Beber, I., Sellés-Ríos, B. and Whitworth, A., 2024. Future sea-level rise impacts to Olive Ridley (Lepidochelys olivacea) and Green Sea Turtle (Chelonia mydas) nesting habitat on the Osa Peninsula, Costa Rica. Climate Change Ecology, 7, p.100085.

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de Kock, W., Mackie, M., Ramsøe, M., Allentoft, M.E., Broderick, A.C., Haywood, J.C., Godley, B.J., Snape, R.T., Bradshaw, P.J., Genz, H. and von Tersch, M., 2023. Threatened North African seagrass meadows have supported green turtle populations for millennia. Proceedings of the National Academy of Sciences, 120(30), p.e2220747120.

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Laloë, J.O. and Hays, G.C., 2023. Can a present-day thermal niche be preserved in a warming climate by a shift in phenology? A case study with sea turtles. Royal Society Open Science, 10(2), p.221002.

Mashkour, N., Jones, K., Kophamel, S., Hipolito, T., Ahasan, S., Walker, G., Jakob-Hoff, R., Whittaker, M., Hamann, M., Bell, I. and Elliman, J., 2020. Disease risk analysis in sea turtles: A baseline study to inform conservation efforts. PloS one, 15(10), p.e0230760.

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Reyes-López, M.A., Camacho-Sánchez, F.Y., Hart, C.E., Leal-Sepúlveda, V., Zavala-Félix, K.A., Ley-Quiñónez, C.P., Aguirre, A.A. and Zavala-Norzagaray, A.A., 2021. Rediscovering kemp's ridley sea turtle (Lepidochelys kempii): molecular analysis and threats. In Natural history and ecology of Mexico and Central America. IntechOpen.

Sinaei, M., Zare, R., Talebi Matin, M. and Ghasemzadeh, J., 2021. Marine debris and trace metal (Cu, Cd, Pb, and Zn) pollution in the stranded Green Sea Turtles (Chelonia mydas). Archives of environmental contamination and toxicology, 80, pp.634-644.

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Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
8.1: Characterisation of pressures	PX02 Threats and pressures from outside member states. Green turtles are exposed to a wide variety of different fishing types and gears and thus bycatch across their range poses a risk (de Farias et al., 2019; Kakai, 2019; Mashkour et al., 2020; Hurtado-Pampin, 2024). Marine debris may also pose a threat; floating plastic could be confused for prey and reports of entanglement in plastic debris or abandoned, lost and discard fishing (ALDFG) are increasing (de Farias et al., 2019; Peake, 2020; Duncan et al., 2021; Reyes-Lopez et al., 2021; Sinaei et al., 2021). In addition, climate change is likely to result in changes in the timing of nesting and population sex ratio due to increasing temperatures (Laloe & Hays, 2023), increased risk of nest flooding or destruction through increased storms and higher sea levels, changes in foraging habitat and migration routes (Beber et al., 2024; de Kock et al., 2023; Becker et al., 2019; Mashkour et al., 2020), and increased harmful algal blooms (HABs) due to changes in ocean currents, heavier precipitation and increasing run off, and rising sea surface temperatures (Reyes-Lopez et al., 2021). Coastal developments may be compounding impacts of climate change and affecting critical turtle habitats (e.g. human alteration of coastal environments due to construction, dredging, light pollution or beach modification) (Reyes-Lopez et al., 2021). Green turtle populations may also be affected by direct take from humans (of either animals or eggs for human consumption or commercial products) (Pheasey et al., 2021; Reyes-Lopez et al., 2021).