

**European Community Directive  
on the Conservation of Natural Habitats  
and of Wild Fauna and Flora  
(92/43/EEC)**

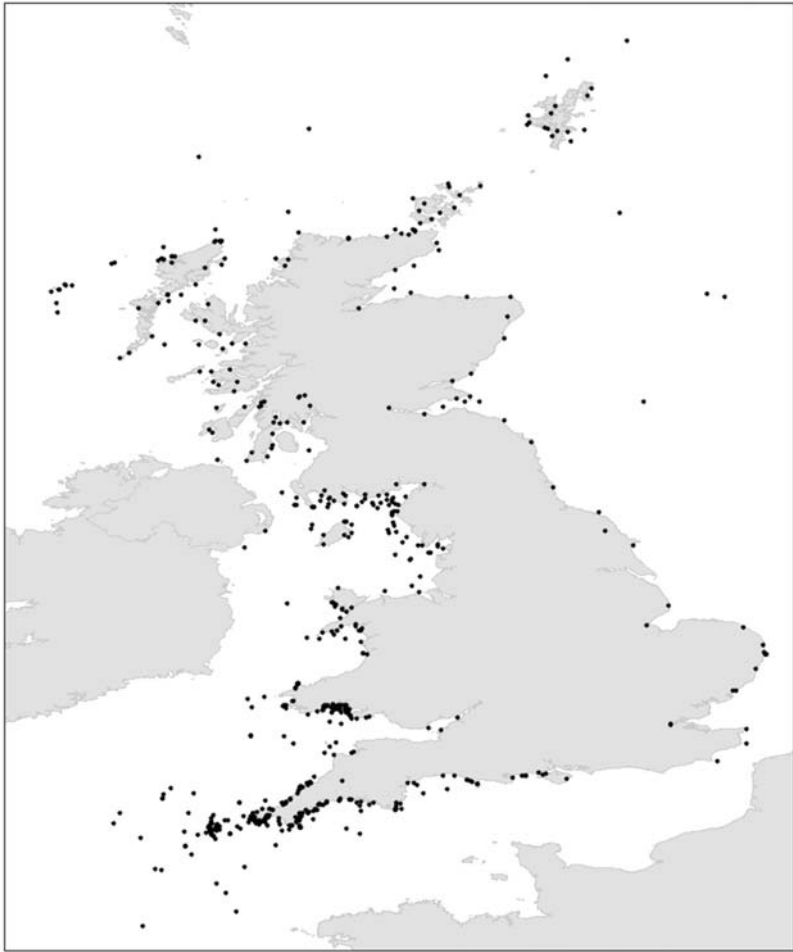
**Second Report by the United Kingdom under  
Article 17  
on the implementation of the Directive  
from January 2001 to December 2006**

**Conservation status assessment for  
Species:  
S1223 - *Dermochelys coriacea* - Leatherback  
turtle**

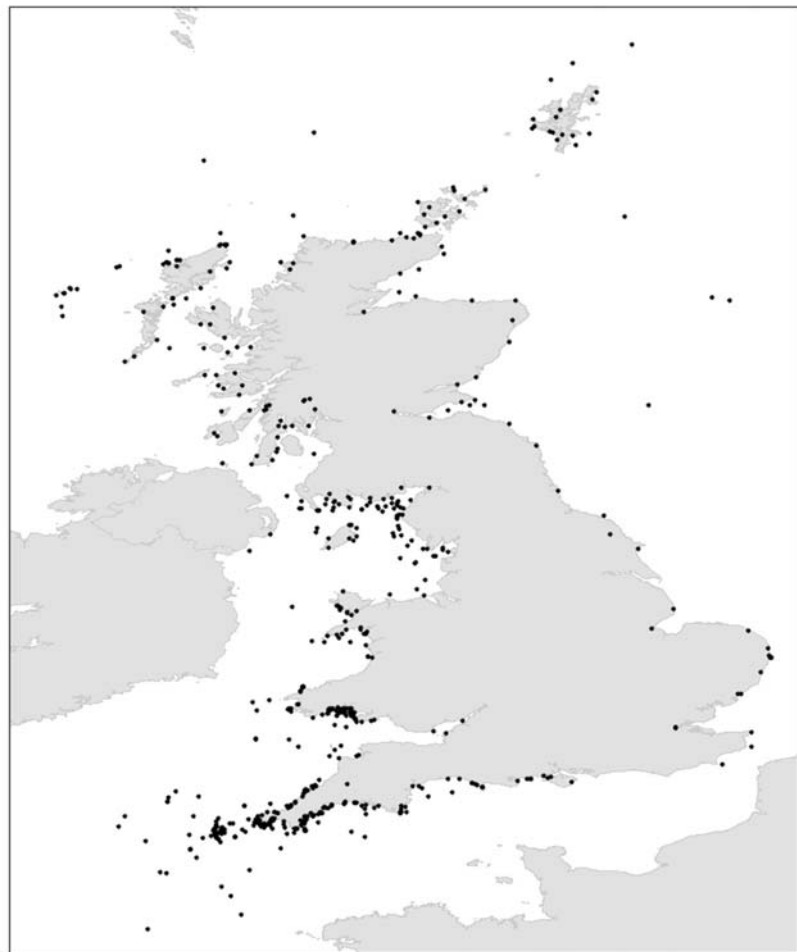
The information in this assessment corresponds to the "species fact sheet" submitted by the UK to the European Union in February 2008 (second and final submission). Please note that this is a section of the UK's report. For the complete report visit <http://www.jncc.gov.uk/article17>

Please cite as: Joint Nature Conservation Committee. 2007. *Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006*. Peterborough: JNCC. Available from: [www.jncc.gov.uk/article17](http://www.jncc.gov.uk/article17)

**Species Name: *Dermochelys coriacea***

<b>1. National level</b>	
Species Code	S1223
Member State	United Kingdom
Biogeographic regions concerned within the Member state	MATL
1.1 Range map	 A map of the United Kingdom showing the distribution of <i>Dermochelys coriacea</i> . The map is shaded in light gray and features numerous black dots representing recorded locations. The dots are densely clustered in the southern and central regions, particularly in the south of England and the Midlands, and are more sparsely distributed in the north and west. There are also several isolated dots in the Scottish Highlands and the Shetland Islands.

## 1.2 Distribution map



## 2. Biogeographic level

### 2.1 Biogeographic region

MATL

### 2.2 Published sources and/or websites

BRONGERSMA, J. D. 1972. European Atlantic turtles. *Zoologische Verhandelingen (Leiden)*, 12, 1-318.

DAVENPORT J. 1998. Sustaining endothermy on a diet of cold jelly: energetics of the leatherback turtles *Dermochelys coriacea*. *British Herpetological Society Bulletin*, 62:4-8.

FERRAROLI S., GEORGES J.-Y., LE MAHO Y. 2004. Where leatherback turtles meet fisheries. *Nature*, 429, 521–522.

FRAIR W., ACKMAN R.G., MROSOVSKY N. 1972. Body temperature of *Dermochelys coriacea*: warm turtle from cold water. *Science*, 177, 791–793.

GODLEY B.J., GAYWOOD M.J., LAW R.J., MCCARTHY C.J., MCKENZIE C., PATTERSON I.A.P., PENROSE R.S., REID R.J., ROSS H.M. 1998. Patterns of marine turtle mortality in British Waters (1992-1996) with reference to tissue contaminant levels. *Journal of the Marine Biological Association of the United Kingdom*, 78, 973-984.

HAYS G. C., HOUGHTON J.D.R., ISAACS C., KING R.S., LLOYD C., LOVELL P. 2004a. First records of oceanic dive profiles for leatherback turtles, *D. coriacea*, indicate behavioural plasticity associated with long-distance migration. *Animal Behaviour*, 67, 733–743.

HAYS G. C., HOUGHTON J.D.R., MYERS A.E. 2004B. Pan-Atlantic leatherback turtle movements. *Nature*, 429, 522.

HOUGHTON J. D.R., DOYLE T.K., WILSON M.W., DAVENPORT J., HAYS G. C. 2006. Jellyfish aggregations and leatherback turtle foraging patterns in a temperate coastal environment. *Ecology*, 87, 1967–1972.

JAMES M.C., HERMAN T.B. 2001. Feeding of *Dermochelys coriacea* on medusae in the Northwest Atlantic. *Chelonian Conservation Biology*, 4, 202–205.

JAMES M.C., OTTENSMEYER C.A., MYERS R.A. 2005. Identification of high-use habitat and threats to leatherback sea turtles in northern waters: new directions for conservation. *Ecology Letters*, 8, 195–201.

LUSCHI P., SALE A., MENCACCI R., HUGHES G.R., LUTJEHARMS J.R.E., PAPI F. 2003. Current transport in leatherback sea turtles (*Dermochelys coriacea*) wandering in the ocean. *Proceedings of the Royal Society of London B Supplement*, 270, 129–132.

MCMAHON C.R., HAYS G.C. 2006. Thermal niche, large-scale movements and implications of climate change for a critically endangered marine vertebrate. *Global Change Biology*, 12, 1330–1338.

PALADINO F.V., O'CONNOR M.P., SPOTILA J.R. 1990. Metabolism of leatherback turtles, gigantothermy, and thermoregulation of dinosaurs. *Nature*, 344, 858–860.

PIERPOINT C., PENROSE R. 2002. 'TURTLE' A database of Marine Turtle Records for the United Kingdom and Eire. (Version 1.3 2002): Introduction, data summary and user notes. (Contractor: Marine Environmental Monitoring, Llechryd.)

PIERPOINT, C. 2000. Bycatch of marine turtles in UK waters. JNCC Report No.310

SPOTILA J.R., DUNHAM A.E., LESLIE A.J., STEYERMARK A.C., PLOTKIN P.T., PALADINO F.V. 1996. Worldwide population decline of *Dermochelys coriacea*: are leatherback turtles going extinct? *Chelon. Conserv. Biol.* 2, 209–222.

SPOTILA J.R., REINA R.D., STEYERMARK A.C., PLOTKIN P.T., PALADINO F.V. 2000. Pacific leatherback turtles face extinction. *Nature*, 405, 529–530.

WITT M. J., BRODERICK A. C., JOHNS D.J., MARTIN C., PENROSE R., HOOGMOED M.S., GODLEY B.J. 2006. Prey landscapes help identify

	potential foraging habitats for leatherback turtles in the northeast Atlantic. Mar. Ecol. Progr. Ser. in press.			
<b>2.3 Range of species in the biogeographic region or marine region</b>				
2.3.1 Surface range of the species (sq km)	Unknown			
2.3.2 Date of range determination	05/2007			
2.3.3 Quality of data concerning range	Poor			
2.3.4 Range trend	Unknown (X)			
2.3.5 Range trend magnitude (%)	Not applicable			
2.3.6 Range trend period	1994-2006			
2.3.7 Reasons for reported trend	Not applicable			
<b>2.4 Population</b>				
2.4.1 Population size estimation	Minimum	Unknown	Maximum	Unknown
	Units			
2.4.2 Date of population estimation	05/2007			
2.4.3 Method used for population estimation	1 - Based on expert opinion			
2.4.4 Quality of population data	Poor			
2.4.5 Population trend	Unknown (X)			
2.4.6 Population trend magnitude (%)	Not applicable			
2.4.7 Population trend period	1994-2006			
2.4.8 Reasons for reported trend	Not applicable			
2.4.9 Justification of % thresholds for trends (optional)	Not applicable			
2.4.10 Main pressures	210 - Professional fishing; 211 - fixed location fishing; 213 - drift-net fishing;			
2.4.11 Threats	210 - Professional fishing; 211 - fixed location fishing; 213 - drift-net fishing;			
<b>2.5 Habitat for the species in the biogeographic region or marine region</b>				
2.5 Habitats for the species	<p>Leatherback turtles visit UK waters during their foraging migrations. The wide-ranging extent of these migrations is only recently becoming apparent through tagging studies. They feed exclusively on jellyfish and other gelatinous zooplankton throughout their life cycle (Davenport, 1998) and UK waters offer a rich foraging habitat (Hays et al. 2004a). Associations between leatherback turtles and jellyfish concentrations have been reported and are the focus of current research interest (Houghton et al 2006, Witt et al 2006).</p> <p>Leatherback turtles exhibit physiological and anatomical adaptations (large body size, insulating thick fat deposits, counter-current heat exchangers) that are unique among reptiles and allows them to conserve heat and maintain a warm core even in cool surrounding waters (Frair et al. 1972, Paladino 1990). Nonetheless, cold temperatures remain an ultimate physiological barrier to their northerly distribution. Some individuals have been recorded</p>			

	<p>in much cooler waters such as in Iceland and Norway, but these are considered to be exceptions (McMahon and Hays 2006). Indeed recent studies have suggested that the waters of the UK represent the northerly limit of routine seasonal leatherback foraging migrations (McMahon and Hays 2006, Witt et al. 2006).</p> <p>Leatherback turtles breed in the tropics where females nest every two to three years.</p>
2.5.2 Area estimation (sq km)	Unknown
2.5.3 Date of estimation	05/2007
2.5.4 Quality of data	Poor
2.5.5 Trend of the habitat	Unknown (X)
2.5.6 Trend period	1994-2006
2.5.7 Reasons for reported trend	Not applicable
<b>2.6 Future prospects</b>	
2.6 Future prospects for the species	Unknown
<b>2.7 Complementary information</b>	
2.7.1 Favourable reference range (sq km)	Unknown
2.7.2 Favourable reference population	
2.7.3 Suitable Habitat for the species	Unknown
2.7.4 Other relevant information	
<b>2.8 Conclusions</b> <i>(assessment of conservation status at end of reporting period)</i>	
(2.3) Range	(XX) - Unknown
(2.4) Population	(XX) - Unknown
(2.5) Habitat for the species	(XX) - Unknown
(2.6) Future prospects	(XX) - Unknown
Overall assessment	(XX) - Unknown