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 :

S2031: *Lagenorhynchus acutus* - Atlantic White-sided dolphin

Please note that this is a section of the report. For the complete report visit http://www.jncc.gov.uk/article17

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S2031 *Lagenorhynchus acutus* Atlantic White-sided dolphin

Audit trail compiled and edited by JNCC and the UK Inter-Agency Marine Mammal Working Group

This document is an audit of the data and judgements on conservation status in the UK's report on the implementation of the Habitats Directive (January 2001 to December 2006) for this species. Superscript numbers accompanying the headings below, cross-reference to headings in the corresponding Annex B reporting form. This supporting information should be read in conjunction with the UK approach for species (see 'Assessing Conservation Status: UK Approach').

1. Range Information[2.3]

Around the British Isles, *Lagenorhynchus acutus* is most abundant along the shelf edge and the deeper waters beyond, especially in the north-west (Pollock *et al*. 1997, 2000; Weir *et al*. 2001; Reid *et al*. 2003; Stone 2003; Map 1.1). *L. acutus* is also seen in shelf waters around Scotland, in the North Sea and south-west Britain, mainly in summer (Evans *et al*. 2003). The species tends to be most abundant in the Faroe Bank Channel, Faroe-Shetland Channel and the Rockall Trough (Pollock *et al*. 1997, 2000; Weir *et al*. 2001)

L. acutus is found only in temperate and sub-arctic waters of the North Atlantic, with a similar latitudinal range to the white-beaked dolphin, but a more deep-water distribution (Reid *et al*. 2003). In the eastern Atlantic, this species occurs from the Barents Sea to the British Isles and occasionally in the Bay of Biscay and further south to Portugal, the western Mediterranean and the Azores (Northridge *et al*. 1997). There are no known local populations in UK waters.

1.1 Surface area of range[2.3.1]

Unknown

L. acutus is known to use only a portion of UK waters (see Map 1.1), and this is highly variable both seasonally and inter-annually. Because of the migratory nature of this species, it would be difficult to estimate UK surface area with any degree of accuracy or certainty. For this reason, range area has been reported as unknown.

Range is a difficult parameter to define for marine mammals since they are highly mobile and their distribution can vary considerably in time and space across Member States. While understanding the distribution of marine mammal species might be helpful in assessing their conservation status and while range can be subjected to qualitative assessment, the data do not enable a quantitative estimate of surface area at present.

1.2 Date of range determination[2.3.2]

Not applicable

1.3 Quality of range data[2.3.3]

Moderate

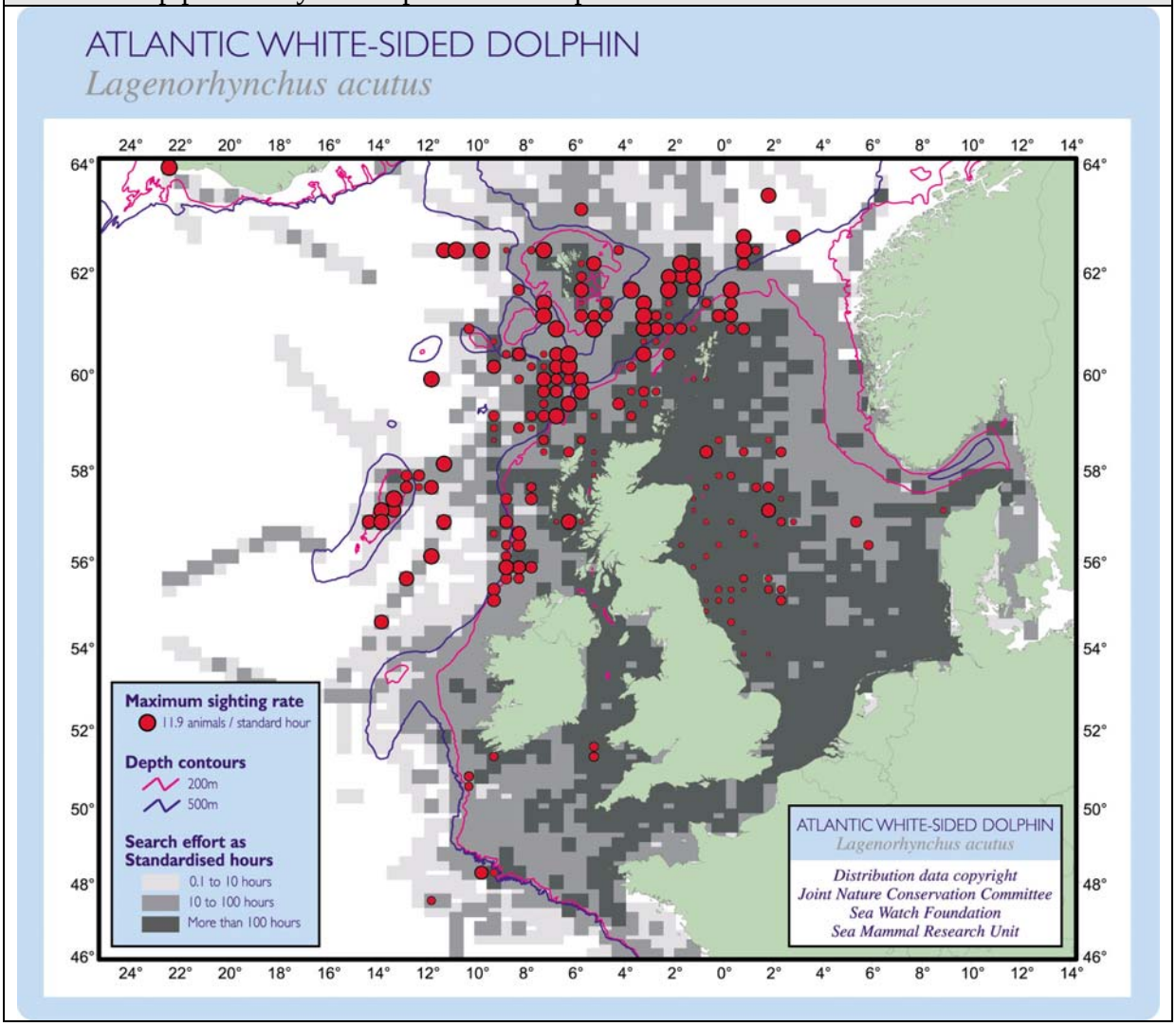
A national sightings database is run by the SeaWatch Foundation. This includes opportunistic sightings at sea by a large number of, mainly amateur, observers, together with some effort related data. Although such a large dataset is useful for showing distributional range,

coverage varies between areas and time of the year. The effort related sightings data to 1998 was incorporated along with other datasets (SCANS and European Seabirds at Sea (ESAS) records) to produce the *Atlas of Cetacean Distribution in North-West European Waters* (Reid *et al*. 2003; Map 1.1).

An area estimate for this species is not presented here. This could be done by modelling the area of occupancy using the data available, but it is considered that the effort involved in the modelling exercise would not justify the outcome (please see section six, Complementary information regarding the range parameter for marine species).

A new project, Cetacean Offshore Distribution and Abundance (CODA), will start survey work in 2007 on the offshore distribution and abundance of dolphins which will improve our knowledge of this species.

Map 1.1. Known distribution of *L. acutus* in the north-east Atlantic. Please note that this map potentially hides spatial and temporal variation. From *Reid et al. 2003.*



1.4 Range trend[2.3.4] and Range trend magnitude[2.3.5]

Stable

No evidence of decline in range in recent years nor historically. Marine mammals are wide-ranging, with large spatio-temporal variations in distribution and therefore it is very difficult

to detect trends in range, or to know if apparent changes are long-term changes in range or in distribution within their range.

1.5 Range trend period [2.3.6]

1994 – 2005

The reported trend has been informed by the cetacean Atlas (Reid *et al.* 2003) and latest SCANS survey, which encompass data from 1979 to 2005.

1.6 Reasons for reported trend in range[2.3.7]

Not applicable

1.7 Favourable reference range[2.7.1]

Unknown

Although a quantitative area estimate can not be provided, based on best expert judgement, current range has all significant ecological variations of the species included for a given biogeographical region, and is sufficiently large to be considered suitable for the survival of the species for the foreseeable future.

1.8 Range conclusion[2.8]

Favourable

There has been no evidence of decline in range, and the current range (although not quantified in km^2) is considered equivalent the favourable reference range based on best available information and expert judgement. Therefore, the conclusion for this parameter is Favourable.

2. Population of the species[2.4]

2.1 Population estimate[2.4.1]

Unknown

A transfrontier approach to population size reporting has been adopted. The abundance estimate was given for whole of Faroe-Shetland Channel, which includes UK waters.

An estimate of 74,626 individuals (CV=0.72, corrected for g(0)) was made for the Faroe-Shetland Channel and 21,371 individuals (CV=0.54, corrected for g(0)) for the West of Outer Hebrides (Macleod 2004). However the UK population estimate is currently not known; abundance estimates have been difficult to obtain due to difficulties in separating white-sided dolphin and white-beaked dolphin identification at long-range (Hammond *et al*. 1995).

2.2 Date of population estimate[2.4.2]

2004

2.3 Method of population estimate[2.4.3]

2 = extrapolation from surveys of part of the population, sampling

Ship survey using line-transect methods to collect distance sampling data to estimate the number of animals in the Faroe-Shetland Channel.

2.4 Quality of population data[2.4.4]

Moderate

Identification difficulties between *L. acutus* and *Lagenorhynchus albirostris* means that the quality of data for this species is moderate.

2.5 Population trend[2.4.5] and Population tend magnitude[2.4.6]

Unknown

There is currently no information on population trends.

2.6 Population trend period[2.4.7]

1994 – 2006

2.7 Reasons for reported trend in population[2.4.8]

Not applicable

2.8 Justification of % thresholds for trends[2.4.9]

Not applicable

2.9 Main pressures[2.4.10]

210 Professional fishing
230 Hunting
313 Exploration and extraction of oil or gas
420 Discharges
490 Other urbanisation, industrial and similar activities
520 Shipping
701 water pollution
710 Noise nuisance
971 Competition
990 Other natural processes

The Faroese drive fishery takes several hundred *L. acutus* (probably from the same population that uses UK waters) annually. Bycatches occur in the North Sea but the level is unknown and anticipated to be low. Bycatch in pelagic trawlers of *L. acutus* has been reported in the south-west of Ireland and seemed to be highly variable between years (Couperus 1997).

The use made of the seas around the UK has been described (see SEA reports) and assessed against possible future hydrocarbon development opportunities. *Lagenoryhnchus* species show the strongest avoidance of seismic activity of any cetacean species, with significant increases in fast swimming activity and declines in sightings rates during periods when airguns were firing. All operators in UK waters are required to operate in accordance with these guidelines which include conducting marine mammal observations prior to and during seismic activity and utilising procedures to reduce and avoid direct harm to animals.

From post mortem analysis on stranded animals, the greatest causes of death were live stranding (77.8%) and infection (11.1%) (Jepson, 2006; Sabin et al., 2006).

It is unlikely that any one of these pressures could affect this species long-term viability in UK waters, but the combined action of the pressures might possibly affect the species. Often with cetaceans it is difficult to link cause and effect and to distinguish natural from human impacts.

2.10 Threats[2.4.11]

210 Professional fishing
313 Exploration and extraction of oil or gas
701 water pollution
710 Noise nuisance
990 Other natural processes

Bycatch, water pollution and changes in prey availability and distribution may continue to affect this species but if controlled this should not threaten the long term viability of the species in UK waters.

2.11 Favourable reference population[2.7.2]

Unknown

Post-1994 population abundance trends are unknown. In addition, the estimated population size refers only to a small area of UK waters and of this species' range.

2.12 Population conclusion[2.8]

Unknown

There is currently insufficient information available on *L. acutus* numbers in UK and adjacent waters as well as on trends in abundance to assess their conservation status with any degree of confidence.

3. Habitat for the species in the Biogeographic region or sea[2.5]

Cetacean habitats (e.g. feeding and breeding areas) vary temporally and spatially and are influenced by natural and anthropogenic factors (e.g. Ingram et al., 2007; MacLeod et al., 2007; Weir et al., 2007). It is often difficult to determine what features characterise cetacean habitats and in quantifying their extent.

This species lives mainly in cool waters (7-12^{o}C), particularly seaward or along the edges of the continental shelf in depths of 100-500 m (Reid *et al*. 2003). However, they can be numerous in much deeper, oceanic waters (Leopold and Couperus 1995; Pollock *et al*. 2000). In the western Atlantic, they often favour areas of high bottom relief and deep submarine canyons (Selzer and Payne 1988). They do, however, sometimes come onto the continental shelf such as those of the north western North Sea and also enter fjords and inlets (Reid *et al*. 2003). Little is known about the seasonal movements of *L. acutus*. They are found in deep waters around the north of Scotland throughout the year, but enter the North Sea mainly in the summer, possibly following prey species (Northridge *et al*. 1997; Reid *et al*. 2003; Evans *et al*. 2003).

3.1 Surface area of habitat[2.5.2]

Unknown

As with other cetaceans, the surface area of their habitat is difficult to quantify and may vary significantly seasonally and between years.

3.2 Date of estimation[2.5.3]

Not applicable

3.3 Quality of data on habitat area[2.5.4]

Poor

No information is available on habitat area.

3.4 Habitat trend[2.5.5]

Unknown

Habitat trend information is not available.

3.5 Habitat trend period[2.5.6]

1994 – 2006

3.6 Reasons for reported trend in habitat[2.5.7]

Not applicable

3.7 Suitable habitat for the species (in km^2)[2.73]

Unknown

3.8 Habitat conclusion[2.8]

Favourable

Although there is an acknowledged difficulty associated with defining habitats for cetaceans, the judgement of Favourable was based on the relatively high level of spatial and temporal variability in the behaviour and ecology of all cetaceans. Additionally, where range and/or population is considered to be in a Favourable condition, it has been assumed that habitat must also be considered to be Favourable.

4. Future Prospects[2.6]

Unknown

There is insufficient information to make a judgement on future prospects at this time.

Since 1994, conservation measures have been undertaken in the UK and adjacent waters, to protect, survey and monitor marine mammal abundance, health and distribution. These are discussed below. However, in the absence of current population trend data, it is not possible to make a confident judgement regarding their effectiveness in protecting this species, or likely success over the next 12 years. For this reason, despite the measures discussed below, prospects have been reported as unknown for this reporting round.

Threats, Legislation and Conservation Action

It is important to stress that many human activities that have the potential to affect the assessed species are already regulated with the conservation of marine mammals and other wildlife in mind. Assuming that these measures are maintained and further measures are taken should other pressures emerge, then the future prospects for cetacean species in UK waters should be favourable. However the effects of lesser understood impacts are hard to predict. Many cetaceans occurring in UK waters will also use waters of other Member States and those of non-Members, so coordination of conservation measures through, for instance ASCOBANS (Agreement on the Conservation of Small Cetaceans in the Baltic and North Seas) is essential to avoid activities in other waters affecting the animals occurring in UK waters.

Habitats Directive is being implemented by identifying and protecting appropriate sites and monitoring bycatch. To further implement the directive, a surveillance strategy for cetaceans is being developed linking to a proposed Joint Cetacean (data handling) Protocol that hopes

to get contributors from different countries in Europe in order to enable transboundary approaches to evaluating the conservation status of cetaceans. It is expected that an update of the "Atlas of cetacean distribution in north-west European waters", published by Joint Nature Conservation Committee (JNCC) in 2003, will result from this project. In 2005, the UK was a major supporter of the EU LIFE Nature project SCANS-II project which completed a survey for cetaceans in the European Atlantic continental shelf and will make recommendations for monitoring cetacean populations. A new project, CODA 2007 (Cetacean Offshore Distribution and Abundance) aims to estimate abundance of cetaceans, and investigate their habitat preferences in European Atlantic waters off the continental shelf to the north of Portugal.

The UK is implementing the European Council Regulation EC 812/2004, which lays down measures concerning incidental catches of cetaceans in fisheries, and more generally the bycatch obligations within the Habitats Directive. The *UK small cetacean bycatch response strategy* was published in 2003 and is being implemented through research and monitoring into the extent of bycatch and mitigation measures.

Legislation has been reviewed in order to provide these species with extra protection from disturbance. In addition, Scottish Natural Heritage (SNH) recently produced the *Scottish Marine Wildlife Watching Code*, designed to protect and promote enjoyment and to raise awareness about how best to watch marine wildlife with minimal disturbance.

JNCC has developed guidelines aimed at minimising the risk of acoustic disturbance to marine mammals from seismic surveys that are being implemented by the Department of Trade and Industry. Further guidance will be developed in 2007-2008 on other activities that disturb cetaceans. The UK Ministry of Defence (MOD) has undertaken a number of measures during 2005 to address the potential impact of military sonar and noise in the marine environment.

The UK government funds a national strandings scheme which aims to provide a coordinated approach to the investigation of cetacean strandings in order to assess the number and trends of stranded cetaceans, and potential causes of death.

As a response to the 1992 Convention on Biological Diversity the UK has developed biodiversity action plans (BAP) for all cetacean species. The long term goal of these plans is to increase the range and number of cetaceans in UK waters, ultimately via reducing anthropogenic mortalities and impacts. The UK has been committed to supporting several international agreements and conventions on the conservation of marine mammals and the marine environment in general (e.g. ASCOBANS, The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)).

The UK's position within the International Whaling Commission (IWC) has been, amongst others, to support the moratorium on commercial whaling, to work towards placing the issue of environmental threats to cetaceans permanently on the IWC agenda and to ensure that international trade in whale products is prohibited.

4.1 Future prospects conclusion[2.8]

Unknown

5. Overall Assessment[2.8]

Unknown

Range and Habitat have been reported as Favourable; Population and Prospects have been reported as Unknown. Therefore, in accordance with the guidance, the Overall Conclusion is Unknown.

Table 5.1 Summary of conclusions

Parameter	Judgement	Grounds for Judgement (in accordance with Annex C)	Reliability*
Range	Favourable	Current range is stable and not smaller than the favourable reference range	2
Population	Unknown	No or insufficient reliable information available	N/A
Habitat	Favourable	Area of habitat is sufficiently large and habitat quality is suitable for the long term survival of the species	2
Future Prospects	Unknown	No or insufficient reliable information available	N/A
Overall Assessment	Unknown	Two Favourable combined with two Unknown	N/A

*1=High, 2=Moderate, 3=Low

High – Expert opinion is that the concluding judgement accurately reflects the current situation based on a professional understanding of the species. For range, population, and habitat, quality of data used to establish the current estimate has been identified as "good"; data used to inform trends is comprehensive and up to date.

Moderate – A greater understanding of the feature, or the factors affecting it, is required before a confident concluding judgement can be made by experts. For range, population, and habitat, the current estimate and/or trend are based on recent, but incomplete or limited survey data; or alternately, a comprehensive, but outdated (pre-1994) review.

Low – Judgements, and comprising estimates, are based predominately on expert opinion.

N/A – Assessment conclusion is "unknown", on the basis of insufficient reliable information.

6. Other relevant information[2.7.4]

Range is a difficult parameter to define for marine mammals since they are highly mobile and their distribution can vary considerably in time and space across Member States. While understanding the distribution of marine mammal species might be helpful in assessing their conservation status and while range can be subjected to qualitative assessment, the data do not enable a quantitative estimate of surface area at present.

A transfrontier approach to population size reporting has been adopted. The abundance estimate was given for whole of Faroe-Shetland Channel, which includes UK waters.

CODA 2007 aims to estimate abundance, and investigate habitat preferences of dolphins in European waters outside the continental shelf.

Historically, between 1913 and 1966, recorded strandings of *L. acutus* were approximately 30% of those for white beaked dolphins. However, from 1967 to 1989, this increased to approximately 60% and more recently between 1990 and 2004 it has been 85%, with white-

sided strandings records outnumbering white-beaked dolphin strandings records in some years (Jepson, 2006).

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