

UK Progress Report on Cetacean Research April 2007 to May 2008 with statistical data for the calendar year 2008.

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1. SPECIES AND STOCKS STUDIED

IWC common name	IWC recommended <i>scientific</i>	Area/stock(s)	Items referred to
Finless porpoise	<i>Neophocaena phocaenoides</i>	Pakistan	4.3
Harbour porpoise	<i>Phocoena phocoena</i>	UK, Ireland	2.1.1, 2.1.2, 4.3; 5; 6.3.1;
Atlantic spotted dolphin	<i>Stenella frontalis</i>	Dominican Republic	3.1.1
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>	Ireland	4.3
Bottlenose dolphin	<i>Tursiops truncatus</i>	UK (Scotland) Belize, Costa Rica - Caribbean coast, Dominican Republic, offshore European Atlantic Oman, Panama - Caribbean coast, Pakistan coast,	2.1.1; 2.1.2; 2.2; 3.1.1; 4.1; 4.3; 9
Costero	<i>Sotalia guianensis</i>	Colombia, Costa Rica	3.1.1; 9

Indo-Pacific humpback dolphin	<i>Sousa chinensis</i>	Oman, Pakistan	2.1.1; 3.1.1; 4.3
Short-beaked common dolphin	<i>Delphinus delphis</i>	Bay of Biscay, Ireland, Offshore European Atlantic, UK	2.1.1; 2.1.2; 4.1; 5
Chilean dolphins,	<i>Cephalorhynchus eutropia,</i>	Southern Chile	2.1.1; 3.1.1; 9
Peale's dolphins,	<i>Lagenorhynchus australis,</i>	Southern Chile	2.1.1; 3.1.1; 9
Burmeister's porpoises	<i>Phocoena spinipinnis,</i>	Southern Chile	2.1.1
Long-beaked common dolphin	<i>Dephinus capensis</i>	Oman	2.1.1; 4.3
Risso's dolphin	<i>Grampus griseus</i>	Ireland, Oman, UK	2.1.1; 3.1.1; 4.3
Rough toothed dolphin	<i>Steno bredanensis</i>	Dutch Antilles	3.1.1;
Spinner dolphin	<i>Stenella longirostris</i>	Oman,	2.1.1; 6.3.2;
Striped dolphin	<i>Stenella coeruleoalba</i>	Ireland	4.3;
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>	North Sea	2.1.2
Blainville's beaked whale	<i>Mesoplodon densirostris</i>	Tongue of the Ocean, Bahamas	9
Blue whale	<i>Balaenoptera musculus</i>	Oman, Indian Ocean,	2.1.1; 9
Bryde's whale	<i>Balaenoptera edeni</i>	South Africa, Oman	2.1.1, 4.3; 9;
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	Oman	2.1.1
False killer whale	<i>Pseudorca crassidens</i>	Oman	2.1.1
Fin whale	<i>Balaenoptera physalus</i>	Bay of Biscay, Offshore European Atlantic, West Atlantic	2.1.1; 2.1.2; 3.1.1
Humpback whale	<i>Balaenoptera novaeangliae</i>	Dominican Republic, Oman, Pakistan, UK (Scotland), South Africa.	2.1.1, 2.1.2; 6.3.2; 9
Killer whale	<i>Orcinus orca</i>	Oman, UK (Scotland),	2.1.1; 2.1.2; 3.1.1,
Long-finned pilot whale,	<i>Globicephala melas</i>	North-west Europe, Tongue of the Ocean, Bahamas	9
Minke whale	<i>Balaenoptera acutorostrata</i>	UK (Scotland), North Sea	2.1.1, 2.1.2; 3.1.1; 3.1.3; 6.3.2
Sei whale	<i>Balaenoptera borealis</i>	Oman	2.1.1
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	Canaries	9
Sperm whale	<i>Physeter macrocephalus</i>	Caribbean, Mediterranean, North-West Europe, Oman, Pakistan.	2.1.1; 4.3; 9

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

CCW continues to collect data on the distribution of cetaceans and boat traffic along the Marine Heritage Coast and Cardigan Bay SAC, Wales.

CRRU (Kevin Robinson) continues to conduct systematic surveys of the southern outer Moray Firth between the ports of Lossiemouth and Fraserburgh, Scotland. Studies primarily concentrated on coastal minke whales (*Balaenoptera acutorostrata*), bottlenose dolphins (*Tursiops truncatus*) and harbour porpoises (*Phocoena phocoena*), although opportunistic encounters with other cetacean species, turtles and basking sharks were further recorded.

IFAW conducted combined acoustic and visual surveys from the RV Song of the Whale in the Mediterranean between May and October 2007. The majority of the survey time was spent in the eastern basin (east of Longitude 14°E) with a focus on generating an abundance estimate for sperm whales from acoustic data. Just over 10,000km of pre-determined survey track was covered during around 850 hours of survey effort.

Marine Awareness North Wales (grant-aided by CCW from 2006-2009) are undertaking land and boat based visual surveys of harbour porpoise with the aim of identifying possible SAC sites for this species in Welsh waters.

CCW have grant-aided the WDSCS to survey Risso's dolphins and harbour porpoises in north Cardigan Bay, including Pen Llyn ar Sarnau SAC, 2005-2007. This study will result in a conservation plan for Risso's dolphins and data on harbour porpoise will be used to support selection of SACs for this species.

SMRU (Aaron Banks) in collaboration with the Centre for Dolphin Studies is conducting surveys to estimate the abundance of humpback whales off South Africa.

SMRU (Cormac Booth) is using visual and passive acoustic surveys to identify consistent areas of important for harbour porpoises across different temporal and spatial scales in the Inner and Outer Hebrides in collaboration with the Hebridean Whale Dolphin Trust and Scottish Natural Heritage. The sound propagation of Acoustic Harassment Devices (AHDs) in the marine environment is also being investigated and the potential effects on harbour porpoise considered.

SMRU (Philip Hammond & Kelly Macleod) coordinated the Cetacean Offshore Distribution and Abundance (CODA) project, which surveyed European Atlantic waters outside the continental shelf from 42°-62°N in July 2007, using double platform visual and acoustic methods (Macleod *et al.*, 2008). The project is supported by governments and institutions in France, Ireland, Spain and the UK. Focal species are bottlenose and common dolphin, fin whale and deep-diving species. Further development will be made on the management procedure to set safe bycatch limits for small cetaceans, focussing on the common dolphin. Preliminary abundance estimates are presented in SC/60/02

SMRU (Gwen Penry) in collaboration with the Centre for Dolphin Studies is conducting surveys to estimate the abundance of Bryde's whales off South Africa.

SMRU (Sonja Heinrich) and Chilean students/ collaborators continue to carry out systematic boat-based sighting, photo-ID and habitat surveys for small cetaceans in the Chiloé Archipelago in southern Chile with support from yaqupacha.

SMRU (Simon Northridge) has carried out a combined visual and acoustic survey for common dolphins and harbour porpoises along the south coast of England (Devon and Cornwall) in February 2008 for the second consecutive year.

UASBS (Simon Ingram) in collaboration with the Sea Mammal Research Unit (SMRU), Scottish Association of Marine Science (SAMS) and Hebridean Whale and Dolphin Trust (HWDT) continued to conduct boat-based photo-ID surveys of bottlenose dolphins along the west coast of Scotland. The project, which is due to report in September 2009 will provide information on the distribution, population structure and abundance of dolphins in this area. The project is also conducting surveys along the east coast of Scotland to investigate the winter distribution of bottlenose dolphins associated with the Moray Firth SAC.

UAZD (Nina Baumgartner) is studying the ecology and distribution of minke whales in the Moray Firth, Scotland.

UAZD (Emily Lambert) is studying climate change, cetacean distribution and whalewatching on the west coast of Scotland.

Target species	Date	Area	No. of sightings	Contact person/institute and references
Atlantic spotted dolphin		Dominican Republic	7 groups (1657.1 nm of transect line)	R. Sellares (FUND)
Common bottlenose dolphin	May – Aug 2007 Jan – March 2008	Turneffe Atoll, Belize	38 43	K.W.Patterson (MCCS, OS)
Common bottlenose dolphin		Dominican Republic	21 groups (51 surveys, 1657.1 nm of transect line)	R. Sellares (FUND)
Common bottlenose dolphin	March 2008	Bocas del Toro, Panama	165	L. J. May-Collado (MCCS); May-Collado et al. 2007 at www.delphinids.com
Marine cetaceans	Feb 2007	Sindh Coast of Pakistan Balochistan Coast of Pakistan	1786 1072	Mauvis Gore, CCP
Humpback whale, Spinner dolphin,, Long-beaked common dolphin, Risso's dolphin, Sperm whale, False killer whale, Sei whale, Blue whale, Indo-Pacific Humpback	Throughout 2006	Oman (Muscat & Gulf of Masirah)	102	L. S. Ponnampalam (ESO/UMBSM)

dolphin, Bottlenose dolphin sp., Killer whale and Cuvier's beaked whale				
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2.1.2 Opportunistic, platforms of opportunity

ORCA (<http://www.orcaweb.org.uk>) continues to conduct opportunistic surveys from ferries using experienced and trained observers collecting distance-sampling data, as on standard line transect projects. All data collected contributes to ORCA's database and are made available to conservation and education projects. Currently surveys are conducted on the southern England to northern Spain and the England to Norway ferry routes.

UAZD (Sarah Bannon) continues to collect data on the distribution of cetaceans on the west coast of Scotland using passenger ferries as research platforms.

Primary species	Area	Data type/ method	Collected by	Platform	Contact person/institute and refs.
Beaked whales	South Atlantic/ Antarctica	Opportunistic sightings	Field guides, passengers	Cruise ships	Dave Smith (ORCA) Morten Joergensen (Project Seamount) <i>Walker et al 2008</i>
Bottlenose dolphin	Clyde Sea Area, Scotland	WSLMV tagging, Observer network sightings	West Scotland Large Marine Vertebrate Group	Vessels & land-based	M Gore, MCI
Common dolphin, fin whales, beaked whales	Bay of Biscay	Line transect sightings data	Trained observers	Passenger ferry	Dave Smith (ORCA) <i>Smith et al 2008</i>
Harbour porpoise	Clyde Sea Area, Scotland	WSLMV tagging, Observer network sightings	West Scotland Large Marine Vertebrate Group	Vessels & land-based	M Gore, MCI
Harbour porpoise, white-beaked dolphin and minke whale	Northern North Sea	Line transect sightings data	Trained observers	Passenger ferry	Dave Smith (ORCA)
Humpback whale	Clyde Sea Area, Scotland	WSLMV tagging, Observer network sightings	West Scotland Large Marine Vertebrate Group	Vessels & land-based	M Gore, MCI
Killer whale	Clyde Sea Area, Scotland	WSLMV tagging, Observer network sightings	West Scotland Large Marine Vertebrate Group	Vessels & land-based	M Gore, MCI
Minke whale	Clyde Sea Area, Scotland	WSLMV tagging, Observer network sightings	West Scotland Large Marine Vertebrate Group	Vessels & land-based	M Gore, MCI

There are many other UK local and national organisations collecting opportunistic sightings records of cetaceans that are not reported here.

2.2 Analyses/development of techniques

CREEM (Len Thomas) has initiated a research project to develop methods for estimating cetacean density from fixed passive acoustics (DECAF: see <http://www.creem.st-and.ac.uk/decaf/>)

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Marine cetaceans	As in 2.1.1	Pakistan coast	Line transect survey	Species, Habitat, Distribution; sighting	M Gore CCP

				frequency	
Bottlenose dolphin	May & Aug 2007, Jan & March 2008	Turneffe Atoll, Belize	Line transect survey	Mother/calf pair distribution; sighting frequency; proximity to mangroves	K.W.Patterson, MCCA, OS

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Atlantic spotted dolphin	Dorsal Fin	Dominican Republic	IP	Y	IP	R. Sellares, FUND
Bottlenose dolphin	Dorsal Fin	Belize	26 (IP)	Y	145	K.W.Patterson, MCCA, OS
Bottlenose dolphin	Dorsal fin	Costa Rica	82	82	82	L.J. May-Collado, MCCA SC/58/SM4
Bottlenose dolphin	Dorsal Fin	Dominican Republic	25 (IP)	Y		R. Sellares, FUND
Bottlenose dolphin	Dorsal fin	Panama	90	90	90	L.J. May-Collado, MCCA
Bottlenose dolphin	Dorsal fin	Scotland		Y		UASBS, SMRU, SAMS
Chilean dolphins	Dorsal Fin	Chiloe, Chile	30 (in progress)	Y (since 2001)	109	Sonja Heinrich ,SMRU
Fin whale	Dorsal Fin	W. Atlantic	IP	Y		J. Ambler, MCCA
Guyanese dolphin, Costero	Dorsal fin	Costa Rica	64	Y	64	L.J. May-Collado, MCCA, SC/58/SM4
Humpback dolphin	Dorsal fin	Pakistan	Not yet estimated	Y	Not yet estimated	M Gore, CCP
Minke whale	Dorsal fin	UK, Scotland		Y		CRRU, HWDT
Peale's dolphins	Dorsal Fin	Chiloe, Chile	Not yet estimated	Y (since 2001)	95	Sonja Heinrich ,SMRU
Rough toothed dolphins	Dorsal Fin	Dutch Antilles	IP	Y		J. Luksenburg, MCCA,

CRRU continues to conduct photo-ID of bottlenose dolphins, minke whales and Risso's dolphins in the southern Moray Firth, Scotland.

CRRU and HWDT continue to collaborate on a joint database of photo-ID of minke whales in Scotland.

CRRU continues to work on the joint SEERAD funded project with UASBS, and to assist in the assembly of a photo-identification archive for bottlenose dolphins off Aberdeen in collaboration with Ketos Ecology and UAZD.

SMRU (Sonja Heinrich) with students in Chile is using photo-ID to; estimate the abundance, using mark-recapture techniques, estimate survival rates, determine individual ranging and movement patterns and investigate association patterns of local populations of Chilean dolphins and Peale's dolphins. Sighting and habitat survey data are being used to refine and extend existing habitat use models developed by Heinrich in 2006.

SMRU (Vincent Janik) continues to collect photo-id of bottlenose dolphins in St Andrews Bay, Scotland and surrounding waters.

UASBS (Paul Thompson & Simon Ingram) continues to collect photo-ID data in Northeast Scotland for bottlenose dolphins, and have been used to underpin monitoring programs for the Moray Firth SAC.

UASBS (Andy Foote) continues to analyse photo-id data of killer whales from across the NE Atlantic as part of a collaborative study to examine population structure around the UK.

3.1.2. Artificial marking data

None reported

3.1.3 Telemetry data

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Minke whale	TDR	0	0	K.P. Robinson. CRRU, Scotland

CRRU continued an ongoing study on the diving ecology and foraging behaviour of coastal minke whales in northeast Scotland using TDR suction tagging. However, due to the very low number of encounters and inclement weather conditions, no deployments were successfully made during the 2007 field season.

3.2 Analyses/development of techniques

None reported

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples (summary only)

Species	Area/stock	Calendar year/season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Bottlenose dolphin	East of Scotland		Y	In progress		SMRU (Vincent Janik)

4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Harbour porpoise	UK	Various	1	Y	N/A	Rob Deaville (IoZ)

*e.g. liver, skin, blubber ovaries, etc.

4.3 Samples from stranded animals

Harbour porpoise	UK	Various	55	Y	N/A	Rob Deaville (IoZ)/Bob Reid (SACVSD)
Harbour porpoise	Wales	Skin, muscle, teeth	17	Y	N/A	Rod Penrose (MEM)
Short-beaked common dolphin	UK	Various	16	Y	N/A	Rob Deaville (IoZ)/Bob Reid (SACVSD)
Atlantic white-sided dolphin	UK	Various	10	Y	N/A	Rob Deaville (IoZ)/Bob Reid (SACVSD)
Bottlenose dolphin	UK	Various	5	Y	N/A	Rob Deaville (IoZ)/Bob Reid (SACVSD)
Striped dolphin	UK	Various	1	Y	N/A	Bob Reid (SACVSD)
Long-finned pilot whale	UK	Various	1	Y	N/A	Bob Reid (SACVSD)
Minke whale	UK	Various	1	Y	N/A	Rob Deaville (IoZ)
Northern bottlenose whale	UK	Various	1	Y	N/A	Bob Reid (SACVSD)

Sowerby's beaked whale	UK	Various	1	Y	N/A	Bob Reid (SACVSD)
Humpback whale	UK	Various	1	Y	N/A	Rob Deaville (IoZ)
White beaked dolphin	UK	Various	1	Y	N/A	Rob Deaville (IoZ)
Fin whale	UK	Various	1	Y	N/A	Bob Reid (SACVSD)
Atlantic white-sided dolphin	Ireland	Skull	2	Y	N/A	Jerry Herman, NMS
Bottlenose dolphin	Oman	Skin	5	Y	N/A	Louisa Ponnampalam, ESO
Bottlenose dolphin	Ireland	Skull	1	Y	N/A	Jerry Herman, NMS
Bryde's whale	Oman	Skin	2	Y	N/A	Louisa Ponnampalam, ESO
Common dolphin	UK	Skull	6	Y	N/A	Jerry Herman, NMS
Common dolphin	Ireland	Skull	7	Y	N/A	Jerry Herman, NMS
Finless porpoise	Pakistan	Skin, blubber	3	Y	N/A	M Gore, CCP
Harbour porpoise	UK	Skull	26	Y	N/A	Jerry Herman, NMS
Harbour porpoise	Ireland	Skull	3	Y	N/A	Jerry Herman, NMS
Indo-Pac humpback	Oman	Skin	2	Y	N/A	Louisa Ponnampalam, ESO
Long-beaked common	Oman	Skin	4	Y	N/A	Louisa Ponnampalam, ESO
Risso's dolphin	Oman	Skull	1	Y	N/A	Louisa Ponnampalam, ESO
Risso's dolphin	Ireland	Skull	1	Y	N/A	Jerry Herman, NMS
Sperm whale	Oman	Skin	2	Y	N/A	Louisa Ponnampalam, ESO
Striped dolphin	Ireland	Skull	4	Y	N/A	Jerry Herman, NMS

*e.g. liver, skin, blubber etc.

4.4 Analyses/development of techniques

UAZD (Graham Pierce) continues to investigate the life history and diet of cetaceans in Scotland in collaboration with SACVSD.

5. POLLUTION STUDIES

In 2007, tissue samples collected by the UK Cetacean Strandings Investigation Programme (CSIP) from 17 UK-stranded harbour porpoises were sent to the Centre for Environment, Fisheries & Aquaculture Science (CEFAS) and are currently being analysed for BDEs including BDE-209 (decabromodiphenyl ether). Additional BDE analyses of around 80 individuals will be conducted during 2008 to supplement these data. The researchers at CEFAS intend to look at spatial and temporal trends in concentrations post the EU ban on penta- and octa-mix PBDE formulations.

CEFAS have also conducted analyses of PCBs and organochlorine pesticides in 43 female common dolphins, as part of a SMRU investigation of potential links between contaminants and reproductive anomalies in this species.

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

None

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar year 2007

Not applicable to the UK

6.3 Anthropogenic mortality of large whales for the calendar year 2007

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

None reported.

6.3.2 Fishery bycatch of large whales

Whale species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Humpback whale	N/A	1	16/8/06	Azaiba, Batinah coast, Oman	R	Large pelagics	GN	Photos, rescue team	LSP
Humpback whale	Male	1	20/02/07	Auchmithie, Angus Scotland	D	Unk	NK	Stranded-entangled in lines from unidentified gear	Rob Deaville, IoZ
Fin Whale	Female	1	30/10/07	Raffin, Highlands, Scotland	D	Unk	NK	Diagnosed at post mortem-probable entanglement	Rob Deaville, IoZ
Minke whale	U	1	10/6/07	Scalloway, Shetland	D	NA	NA	Animal was entangled plastic packing straps	Rob Deaville, IoZ
Comments: Entangled in gear, freed alive.									

The Scottish Government recently commissioned a two-year study to investigating the occurrence and causes of entanglement of minke and other baleen whales in Scottish waters. The project is being undertaken by SMRU (Simon Northridge) in collaboration with SAC and HWDT, and will provide data on specific areas of the Scottish coast which have high levels of co-occurrence between fisheries and minke whales, will attempt to assess how frequently such events occur, and where appropriate, will suggest workable recommendations for mitigation. The research project will report in May 2009

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

None

7.2 Direct catches of small cetaceans for the calendar year 2007

Not applicable to the UK

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2007

7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)

None reported

7.3.2 Fishery bycatch of small cetaceans

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Common dolphins	-	22	Jan-March 2007	Western English Channel	D	<i>Sea Bass</i>	PTM	M	Simon Northridge, SMRU
Common dolphins	-	6	Jan-Dec 2007	Western English Channel	D	<i>Turbot, hake, Pollock, monkfish</i>	GEN	M	Simon Northridge, SMRU
Common dolphins	-	7	Jan-Dec 2007	UK	D	<i>unk</i>	unk	DA (strandings)	Rob Deaville, IoZ
Harbour porpoise	Male	1	26/7/07	Bridlington Yorkshire	D	<i>Skate</i>	GEN	M	Simon Northridge, SMRU
Harbour porpoise	-	5	2007	English Channel	D	<i>Sole, monkfish, hake, pollock</i>	GEN	M	Simon Northridge, SMRU

Harbour porpoise	-	10	2007	UK	D	<i>unk</i>	unk	DA (strandings)	Rob Deaville, IoZ
Bottlenose dolphin	Male	1	11/10/07	St Ives, Cornwall	D	<i>unk</i>	unk	DA (Diagnosed at post mortem)	Rob Deaville, IoZ
Comments:									

8. STRANDINGS

CSIP (consisting of IoZ, NHM, SACVSD and MEM) is contracted by Defra to record information on all UK stranded cetaceans and to retrieve 100 cetacean strandings per annum to allow the investigation of diseases and causes of death through standardised necropsies. IoZ maintains the national pathology database and IoZ and SACVSD maintain tissue archives derived from those UK stranded animals that have been necropsied.

Natural History Museum, Cromwell Road, London, SW7 5BD. Strandings co-ordinator for England; collation of strandings data for all of UK, archiving cetacean specimens in national research collection.

<http://www.nhm.ac.uk/research-curation/projects/strandings/>

In addition to the strandings co-ordination funded by Defra, the National Assembly for Wales is funding the Welsh Strandings Co-ordinator, Rod Penrose (MEM) in conjunction with the Countryside Council for Wales (CCW), while The Cornwall Wildlife Trust also maintains its own strandings database, with all information feeding into the NHM database.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Harbour porpoise	268	55	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Short-beaked common dolphin	92	16	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Atlantic white-sided dolphin	31	10	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Striped dolphin	14	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Long-finned pilot whale	12	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Minke whale	12	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Bottlenose dolphin	10	5	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Risso's dolphin	5	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Northern bottlenose whale	5	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Sowerby's beaked whale	4	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Humpback whale	4	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
White beaked dolphin	3	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Fin whale	3	1	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Killer whale	2	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Sperm whale	2	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list

Cuvier's beaked whale	1	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Pygmy sperm whale	1	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Cetacean (indeterminate species)	85	0	Richard Sabin (NHM)/ Rob Deaville (IoZ)/ Bob Reid (SACVSD)/ Rod Penrose (MEM)	NHM/IoZ/SACVSD/MEM- see contact list
Spinner dolphins (Oman)	2	0	Louisa Ponnampalam, UMBSM/ESO	louisa.ponnampalam@gmail.com

9. OTHER STUDIES AND ANALYSES

The UK Department for Business, Enterprise & Regulatory Reform (BERR) are currently compiling data on seismic and explosive use in UK waters for 2006 and 2007 (to continue the data series from earlier years).

CREEM (Danielle Harris) is developing methods of estimating whale abundance from sparse arrays of seabed-mounted hydrophones and are currently analysing blue whale vocalisations recorded near Diego Garcia in the Indian Ocean.

JNCC (Tim Dunn) has developed the Joint Cetacean Protocol (JCP) to address Favourable Conservation Status reporting requirements for the 2013 EC Habitats and Species Directive reporting round. This project is also envisaged to have a range of other conservation related applications. The JCP aims to create a common standard for the integration of cetacean abundance and distribution data, collected from different areas and time periods using a variety of methods. These data will be shared under a common agreement, probably through a web-based portal. The project is currently in an investigative phase with exploratory data analyses being carried out to determine how disparate data types might be integrated. This phase will also assess whether trends in range and abundance can be detected from analysis of the complete data resource. The project has received support from ASCOBANS and a growing number of European governmental and non-governmental organisations.

LEVISCI was involved in organising a 2½-day Global Scientific Workshop on Spatio-Temporal Management of Noise on a Regional Scale in Lanzarote between the 4th and 6th June, 2007, sponsored by Dokumente des Meeres as part of their current project on the issue of noise and marine mammals. This workshop resulted in development of a framework for identifying key cetacean habitat on a regional scale suitable for spatio-temporal regulation of noise producing activities. The final report (Agardy *et al.*, 2007) is available at www.sound-in-the-sea.org/download/str2007_en.pdf (also available in Spanish and French). The discussions from this workshop will be published in 2008 as a special issue of the International Journal of Comparative Psychology.

MCCS (Laura May-Collado) are conducting studies on the effect of engine noise by dolphin-watching boats on whistle structure of bottlenose dolphins from Gandoca-Manzanillo and Bocas del Toro, Panama.

SMRU (Ricardo Antunes) and a Chilean student obtained the first broad-band sound recordings of Chilean dolphins and Peale's dolphins. The acoustic repertoire of each species is currently being analysed.

SMRU (Aaron Banks) in collaboration with the Centre for Dolphin Studies is studying the migration, abundance and populations structure of humpback whales off South Africa

SMRU (Ian Boyd) in collaboration with Bahamas Marine Mammal Research Organization, NOAA, Cornell University and Woods Hole Oceanographic Institution conducted a behavioural response study to underwater man made sounds on beaked and pilot whales in the Tongue of the Ocean, Bahamas, in 2007. Behavioural responses of exposed animals were monitored using D-Tags as well as above surface observations. This study will continue in 2008. The Bahamas Marine Mammal Research Organization is responsible for photo-ID in this study.

SMRU (Salome Dussan-Duque) in collaboration with the Sarasota Dolphin Research Program continues to investigate the abundance, distribution, habitat use, foraging and vocal behaviour of the Costero dolphin and bottlenose dolphin in the south of the Gulf of Morrosquillo, Colombia. This study has been ongoing since 2002.

SMRU (Vincent Janik) has continued to collect biopsy samples of bottlenose dolphin off the East coast of Scotland.

SMRU (Vincent Janik) has begun a comparison of bottlenose dolphin signature whistle variability at different locations world wide, and have tested vision and its use in individual recognition in captive bottlenose dolphins.

SMRU (Vincent Janik) have developed a novel acoustic deterrent device and tested the reactions of harbour porpoise and minke whales to this stimulus.

SMRU (Simon Northridge) are operating a national fishery observer scheme to monitor and assess the level of cetacean bycatch in fisheries, and continue to work on measures to limit cetacean bycatch. Reports on UK bycatch levels are reported annually to the European Commission under European Council Regulation 812/2004 (<http://www.defra.gov.uk/marine/fisheries/conservation/cetaceans.htm>).

SMRU (Simon Northridge) has investigated the effects of a louder pinger on harbour porpoise and dolphin distribution on the south west coast of England as part of ongoing research into pingers funded by DEFRA.

SRMU (Simon Northridge) continues to monitor the effects of the installation process of a marine tidal turbine on harbour porpoise in Strangford Lough in Northern Ireland.

SMRU (Gwen Penry) in collaboration with the Centre for Dolphin Studies is studying the abundance, habitat use and population structure of Bryde's whales off South Africa.

SMRU (Luke Rendell) has continued sperm whale surveys and acoustic research in the Caribbean (in collaboration with Whitehead, Dalhousie University, Canada) and around the Balearic Islands of the western Mediterranean

SMRU (Antonella Servidio) is studying the social structure, distribution and habitat use of short-finned pilot whales in the Canary Islands.

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Appendix 1. FOA fishing descriptions and codes

FAO FISHING GEAR CATEGORIES:		FALLING GEAR	
SURROUNDING NETS		Cast nets	FCN
With purse lines	PS	Falling gear (not specified)	FG
One-boat operated purse seines	PS1	GILLNETS AND ENTANGLING GEAR	
Two-boat operated purse seines	PS2	Set gillnets (anchored)	GNS
Without purse lines (lampara)	LA	Driftnets	GND
SEINE NETS		Encircling gillnets	GNC
Beach seines	SB	Fixed gillnets (on stakes)	GNF
Boat seines	SV	Trammel nets	GTR
Danish seines	SDN	Combined gillnet-trammel nets	GTN
Scottish seines	SSC	Gillnets and entangling gillnets (not specified)	GEN
Pair seines	SPR	Gillnets (not specified)	GN
Seine nets (not specified)	SX	TRAPS	
TRAWLS		Stationary uncovered pounds nets	FPN
Bottom trawls	TBB	Pots	FPO
Beam trawl	OTB	Fyke nets	FYK
Otter trawls (side or stern)	PTB	Stow nets	FSN
Pair trawls	TBN	Barriers, fences, weirs, etc	FWR
Nephrops trawls	TBS	Aerial traps	FAR
Shrimp trawls (not specified)	TM	Traps (not specified)	FIX
Midwater trawls		HOOKS AND LINES	
Otter trawls (side or stern)	OTM	Handlines and pole-lines (hand operated)	LHP
Pair trawls	PTM	Handlines and pole-lines (mechanised)	LHM
Shrimp trawls	TMS	Set longlines	LLS
Midwater trawls (not specified)	TM	Drifting longlines	LLD
Otter twin trawls	OTT	Longlines (not specified)	LL
Otter trawls (not specified)	OT	Trolling lines	LTL
Pair trawls (not specified)	PT	Hooks and lines (not specified)	LX
Other trawls (not specified)	TX	GRAPPLING AND WOUNDING	
DREDGES		Harpoons	HAR
Boat dredges	DRB	HARVESTING MACHINES	
Hand dredges	DRH	Pumps	HMP
LIFT NETS		Mechanised dredges	HMD
Portable lift nets	LPN	Harvesting machines (not specified)	HMX
Boat-operated lift nets	LNB	MISCELLANEOUS GEAR	MIS
Shore operated stationary lift nets	LNS	RECREATIONAL FISHING GEAR	RG
Lift nets (not specified)	LN	GEAR NOT KNOWN OR NOT SPECIFIED	NK
		SHARK CONTROL NETS	NSC
		DERELICT FISHING GEAR	